

**U.P. CO-OPERATIVE SUGAR FACTORIES FEDERATION LTD.
9-A, RANA PRATAP MARG, LUCKNOW**

Telephone: (0522) 2200183
Email: upsugarfed@yahoo.co.in

Fax: (0522) 2627994 (0522)2628310
Website: www.upsugarfed.org

**COMPETITIVE e-bidding
FOR**

Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

- 1 Kisan Sahkari chini mills Ltd., Nanauta (Saharanpur)
- 2 Kisan Sahkari chini mills Ltd., Sarsawa (Saharanpur)
- 3 Kisan Sahkari chini mills Ltd., Sampurnanagar (Lakhimpur-kheri)
- 4 SKS chini mills Ltd., Nanpara (Bahraich)
- 5 Kisan Sahkari chini mills Ltd., Belrayan (Lakhimpur-kheri)
- 6 Kisan Sahkari chini mills Ltd., Bagpat (Baghpat)
- 7 Kisan Sahkari chini mills Ltd., Anoopshahr (Bulandshahr)
- 8 Kisan Sahkari chini mills Ltd., Semikhera (Bareilly)
- 9 Kisan Sahkari chini mills Ltd., Powayan (Shahjahanpur)
- 10 Kisan Sahkari chini mills Ltd.,Bisalpur (Pilibhit)

e-bid REFERENCE	:	UPSUGARFED/GMT/2018-19/709
e-Bid DOWNLOAD start date :	:	03/12/2018 6:55 PM ONWARDS
e-Bid SUBMISSION start date :	:	03/12/2018 6:55 PM ONWARDS
LAST DATE AND TIME FOR SUBMISSION OF e-Bids	:	20/12/2018 UPTO 6:55 PM
DATE AND TIME OF OPENING OF ON LINE TECHNICAL e-Bids	:	21/12/2018 AT 11:00 AM
DATE AND TIME OF OPENING OF ON LINE FINANCIAL e-Bids	:	22/12/2018 AT 11:00 AM
PLACE OF OPENING OF e-Bids	:	U.P.Co-operative Sugar Factories Federation Ltd. 9-A, Rana Pratap Marg, Lucknow
ADDRESS FOR COMMUNICATION	:	Managing Director U.P. Co-operative Sugar Factories Federation Ltd. 9-A, Rana Pratap Marg, Lucknow
e-Bid E.M.D	:	Rs.10.00 lacs for each Sugar Mill

It will be the responsibility of the e-Bidders to check U.P. Government e-Procurement website <https://etender.up.nic.in> for any amendment through corrigendum in the e-tender document. In case of any amendment, e-Bidders will have to incorporate the amendments in their e-Bids accordingly.

e-tender Document Processing fee /Cost : Rs.5,000+12% GST =Rs 5600 for each Sugar Mill

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Ref no. UPSUGARFED/GMT/2018-19/708

Fax:(0522)2627994,2628310

Website: www.upsugarfed.org

Dated : 30.11.2018

E-Tender Notice

E-tenders are invited for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

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- 10 Kisan Sahkari chini mills Ltd.,Bisalpur (Pilibhit)

The tender Document may be downloaded from portal <http://etender.up.nic.in> and Federation's website www.upsugarfed.org.

Schedule of Tenders:

1	Name of the department	UP Co-operative sugar factories federation ltd., 9-A, Rana Pratap Marg, Lucknow
2	Procedure for obtaining E-Bid	Tender form is to be down loaded from E-tender portal http://etender.up.nic.in and federation's website www.upsugarfed.org from dated 03/12/2018 at 6.55 PM onwards
3	Price of bid document(Tender fee)	Rs. 5000/- (Rs.Five thousands only) + 12% GST = Rs 5600/- separately for each Sugar Mill through DD (Non refundable) drawn on any Nationalised/Sechduled Bank in favour of UP Co-operative sugar factories federation ltd. payable at Lucknow.
4	E-Bid EMD	Rs. 10,00,000/- (Rs. Ten lacs only) separately for each Sugar Mill through DD drawn on any Nationalised/Sechduled Bank in favour of UP Co-operative sugar factories federation ltd. payable at Lucknow.
5	E-bid submission start date	03/12/2018 6:55 PM ONWARDS
6	Last date & time of submission of bids	20/12/2018 upto 6.55 PM
7	Opening of technical bid (date & time)	21/12/2018 at 11.00 AM
8	Opening of financial bid (date & time)	22/12/2018 at 11.00 AM

The tender fee (non refundable) and E.M.D. will be deposited in Federation office on or before the date & time specified. E-Tender without E.M.D. shall be rejected. The Federation reserves the right to cancel any or all bids or the e-bidding process without assigning any reason thereof. The decision of Federation will be final & binding upon bidders

(Bimal Kumar Dubey)
MANAGING DIRECTOR

INVITATION FOR e-Bids

Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

1. Kisan Sahkari chini mills Ltd., Nanauta (Saharanpur)
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9. Kisan Sahkari chini mills Ltd., Powayan (Shahjahanpur)
10. Kisan Sahkari chini mills Ltd.,Bisalpur (Pilibhit)

1. **Bidders are advised to study the tender document carefully and are advised to visit the concerned Sugar Mills to assess the actual work,**evaporator station jobs regarding bleeding scheme connection etc at the project site.,capacity of various equipments/systems, for getting desired results. Submission of e-Bid against this tender shall be deemed to have been done after site visit, careful study and examination of the procedures, terms and conditions of the tender Document with full understanding of its implications.
2. The e-Bid prepared in accordance with the procedures enumerated in ITB Clause 15 of Section-I should be submitted through e-Procurement website <https://etender.up.nic.in>.
3. **The tender document is available at e-Procurement website <https://etender.up.nic.in> or Federation's website www.upsugarfed.org from dated 03/12/2018 at 06:55 PM onwards. Interested bidders may view, download the e-Bid document, seek clarification and submit their e-Bid online up to the date and time mentioned in the table below:**

1	Name of the department	UP Co-operative sugar factories federation ltd., 9-A, Rana Pratap Marg, Lucknow
3	Procedure for obtaining & submission of E-Bid	Tender form is to be down loaded from E-tender portal http://etender.up.nic.in and federation's website www.upsugarfed.org from dated 03/12/2018 at 6.55 PM onwards
4	Price of bid document(Tender fee)	Rs. 5000/- (Rs. Five thousands only) + 12% GST = Rs 5600/- separately for each Sugar Mill through DD (Non refundable) drawn on any Nationalised/Sechduled Bank in favour of UP Co-operative sugar factories federation ltd. payable at Lucknow.
5	E-Bid EMD	Rs. 10,00,000/- (Rs. Ten lacs only) separately for each Sugar Mill through DD drawn on any Nationalised/Sechduled Bank in favour of UP Co-operative sugar factories federation ltd. payable at Lucknow.
6	Last date & time of submission of bids	20/12/2018 upto 6.55 PM
7	Opening of technical bid (date & time)	21/12/2018 at 11.00 AM
8	Opening of financial bid (date & time)	22/12/2018 at 01.00 PM
9	Contact officer	Name: Mr. Vinod Kumar, General Manager (P) Mob:- 7880888809 Mr S.k.Agrawal GM(Proj Fin)Mob-7880888813

	Mr. Sunil Ohri, G.M.(Proj.) +91788088890
	Mr. R.K. Jain G.M.(T) +91788088812

4. The bidders need to submit the proof of submission of cost of e-Bid document as stated in the above table through Demand Draft drawn on any nationalized/scheduled bank in favour of U.P. Co-operative Sugar Factories Federation Ltd (hereinafter referred as the Federation / the Purchaser) payable at Lucknow. The scanned copy of Demand Draft must be enclosed along with the e-Bids but the original Demand Draft should reach the office of the Federation / the Purchaser at Lucknow before opening of Technical e-Bid.
5. All e-Bid must be accompanied by e-Bid Earnest Money Deposit (EMD) in the form of Demand Draft, drawn on any nationalized/scheduled bank in favour of U.P. Co-operative Sugar Factories Federation Ltd., payable at Lucknow. The scanned copy of the demand draft for e-Bid EMD must be submitted along with the e-Bid and the original should reach the Federation's office at Lucknow before opening of Technical e-Bids. No Interest would be payable on e-Bid Earnest Money deposited with the Federation.
6. The e-Bids will be electronically opened in the presence of bidder's representatives, who choose to attend the venue on the date and time mentioned in the above table. An authority letter of bidders' representative will be required to be produced.
7. The Federation reserves the right to accept or reject any or all the e-Bids/annul the e-Bid process without assigning any reason thereof. The decision of the Federation will be final and binding on bidders.
8. In the event of date specified for e-Bids opening being declared a holiday for the Federation's office then the due date for opening of e-Bids shall be the following working day at the appointed time and place.
9. **All the required documents including Price Schedule/BOQ should be uploaded by the e-Bidder electronically in the PDF/XLS format. The required electronic documents for each document label of Technical (Fee details, Qualification details, e-Bid Form and Technical Specification details) schedules/packets can be clubbed together to make single different files for each label.**
10. The Prospective bidders may bid for any number of the Sugar Mills from 1 to 10 .
11. The companies/firms who are registered at e-Procurement portal for e-tendering with UP Electronics Corporation Ltd, 10 Ashok Marg, Lucknow-226002, would only be eligible for participating in this e-tender as well as in e-tendering system of U.P. Govt. departments. All companies/firms who have not registered themselves with UPLC Ltd, Lucknow for e-tendering till date can get their registration done by depositing a filled in form issued by UPLC Ltd, Lucknow along with registration fee of Rs. 6000.00 (Rupees Six thousand only) for participating in this e-tender. The companies/firms, who are not having digital signature, can also get their digital signature on deposit of processing fees of Rs.1500.00 (Rupees One thousand Five Hundred only). The companies/firms may contact the officials on phone numbers (0522) 4130303 Extn 305 & 307, 09721451211, for their Registration/Digital Signature Certificate related queries. The registration fee may also be deposited through RTGS. The details of RTGS are as under:

M/s U.P. Electronics Corporation Ltd, Lucknow
Indian Bank
Ashok Marg, Lucknow
A/C No. 772819168
IFC code- IDIBOOOL002
CBS code- 00527

Rs.6000/-

For E-bid submission process Enquiry Please Contact Following Persons

Sri Rritvik Saxena - 09415526023, 7880888823 Federation

SECTION I : INSTRUCTIONS TO BIDDERS (ITB)

(A) THE BID DOCUMENT

1- Cost of e-Bid

- a) The bidder shall bear all costs associated with the preparation and submission of its e-Bid and U.P. Co-operative Sugar Factories Federation Ltd, Lucknow(hereinafter referred to as "the Purchaser"), will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the e-Bid process.
- b) This tender document is available on the web site <https://etender.up.nic.in> and www.upsugarfed.org to enable the bidders to view, download the e-Bid document and submit e-Bids online up to the last date and time mentioned in e-Tender notice/e-tender document against this e-Tender. The bidders shall have to pay e-Tender document fee of Rs.5000/- (Rs.Five thousand only)+12%GST = Rs 5600/- for each Sugar Mill through Demand Draft drawn on any nationalized/scheduled bank payable in favour of U.P. Co-operative Sugar Factories Federation Ltd, Payable at Lucknow. The scanned copy of the Demand Draft must be enclosed along with the e-Bid but the original Demand Draft should reach the Purchaser's office before opening of the technical e-Bid. This e-tender document fee Rs.5000/- (Rs. Five thousand only) +12% GST = Rs 5600/- for each Sugar Mill will be non-refundable.

2- Contents of e-Bid Document

- 2.1 The goods required to be supplied; e-Bid procedure and contract terms and conditions are prescribed in the e-Bid document. The e-Bid document includes:
Invitation for e-Bid
 - Section I : Instruction to bidders (ITB);
 - Section II : Conditions of E-tender/ Contract (CC),
 - Section III : Technical e-Bid;
 - Section IV : Financial e-Bid;
- 2.2 The bidder is expected to examine all instructions, forms, terms and specifications in the e-Bid document. Failure to furnish all information required as per the e-Bid document or submission of e-Bid not responsive to the e-Bid document in every respect will be at the bidder's risk and may result in rejection of the said e-Bid.

3- Clarification of e-Bid Document

A prospective bidder requiring any clarification of the e-Bid document may raise his/her point of clarification through Bid Management Window after successfully login to the e-Procurement website <https://etender.up.nic.in>. The bidder may seek clarification by posting query in the relevant window after clicking "Seek Clarification" option in the view e-tender details window for e-tender which can be selected through my tender option of e-Bid submission menu. The clarification will be replied back by the Purchaser through the e-Procurement website which can be read by the bidder through the "Clarification" option under Bid Submission menu. The Purchaser may also respond to clarifications raised by the prospective bidders on Purchaser's e-mail address upsugarfed@yahoo.co.in.

4- Amendment of e-Bid Document

- 4.1 At any time prior to the deadline for submission of e-Bid, the Purchaser may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, modify the e-Bid document by amendments. Such amendments shall be uploaded on the e-Procurement website <https://etender.up.nic.in> and Purchaser's web site www.upsugarfed.org through corrigendum and shall form an integral part of e-Bid document. The relevant clauses of the e-Bid document shall be treated as amended accordingly.
- 4.2 It shall be the sole responsibility of the prospective bidders to check the web site <https://etender.up.nic.in> and www.upsugarfed.org from time to time for any amendment in the e-tender document. In case of failure to get the amendments, if any, the Purchaser shall not be responsible for it.
- 4.3 In order to allow prospective e-Bidders a reasonable time to take the amendment into account in preparing their e-Bids, the Purchaser, at his discretion, may extend the deadline for the submission of e-Bids. Such extensions shall be uploaded on the e-Procurement website <https://etender.up.nic.in> and Purchaser's web site www.upsugarfed.org.

(B) PREPARATION OF e-Bid

5- Language of e-Bid

- 5.1 The e-Bid prepared by the bidder, as well as all correspondence and documents relating to the e-Bid exchanged by the bidder and the Purchaser shall be written either in English or Hindi language. The correspondence and documents in Hindi must be accompanied by embedded/separate Hindi font files. Only English numerals shall be used in the e-Bid.

6- Documents Constituting the e-Bid

- 6.1 The e-Bid prepared by the bidder shall comprise the following components:

- (a) **Technical e-Bid** - Technical e-Bid will be common for all the ten Sugar Mills .It will comprise of:
- (i) **Fee Details** - includes copies of e-tender document processing/Cost and e-Bid Earnest Money Deposit furnished in accordance with ITB Clause 12 in PDF format.
 - (ii) **Qualification Details** – includes copies of required documents as per ITB Clauses 10 and 11 in PDF format justifying that the bidder is qualified to perform the contract if his/her bid is accepted and that the bidder has financial, technical and production capability necessary to perform the contract and meets the criteria outlined in the Qualification Requirement and Technical Specification and fulfill all the conditions of the Contract and that the goods and ancillary services to be supplied by the bidder conform to the e-Bid document and Technical Specifications.
 - (iii) **e-Bid Form** – includes copy of filled in e-Bid Form as per Section-III(A) of e-tender document in PDF format justifying that the bidder is complying with all the conditions of the Contract and Technical Specifications of the e-Bid Document as no deviation will be acceptable to the Purchaser.
 - (iv) **Technical Specification Details** – includes copy of filled in Technical Specifications as per Annexure-II of Technical e-bid. HMBD will be submitted in technical bid.
- (b) **Financial e-Bid** – Financial e-Bid will comprise of:
- (i) **e-Bid Form** – includes copy of filled in e-Bid Form as per Section-IV (A) of e-tender document in PDF format.
 - (ii) **Price Schedule/BOQ** -_includes Price Schedule/BOQ as per Section-IV (B) in XLS format to be filled in separately for each Sugar Mill after downloading from the e-Procurement website for this e-tender.

7- e-Bid Form

- 7.1 The bidder shall complete the e-Bid Form and the appropriate Price Schedule/BOQ furnished in the e-Bid document, including the goods to be supplied, their quantities and prices in the format given in the e-Bid document.

8- e-Bid Price

- 8.1 The bidder may quote for one or more than one Sugar Mill separately in the down loaded spread sheet file for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve

technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

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8.2 The price is F.O.R Destination including all duties and other taxes/GST.

The price quoted as above as 8.1 will be inclusive of basic rate, packing & forwarding, freight charges, Loading/Unloading charges, custom duty/GST, insurance, all other taxes & duties levied by Central/State Government and other relevant miscellaneous expenses etc. , including civil construction of foundation,structural work etc, operation of newly supplied,erected and commissioned equipments/systems during season 2019-20 on EPC basis to get the desired results

8.3 Prices quoted by the bidder shall be fixed (during the bidder's performance period of the Contract) and not subject to variation on any account subject to ITB Clause. E-Bid submitted with an adjustable price quotation unless asked for shall be treated as non-responsive and rejected.

9- e-Bid Currencies

Prices shall be quoted in Indian Rupees only.

10- Documents Establishing bidder's Qualification

- 10.1 Pursuant to ITB Clause 6, the bidder shall furnish, as part of its Technical e-Bid, documents establishing the bidder's qualification to perform the Contract if its e-Bid is accepted. The documentary evidence should be submitted by the bidder electronically in the PDF format.
- 10.2 The documentary evidence of bidder's qualification to perform the Contract if its e-Bid is accepted shall be as per Pre Qualification Requirements given in section II (2) and shall be submitted as specified in e-tender document.

11- Documents Establishing Good's Conformity to e-Bid Documents

- 11.1 Pursuant to ITB Clause 6, the bidder shall furnish, as part of its e-bid, documents establishing the conformity to the e-Bid documents of all goods and services which the bidder proposes to supply under the contract. The documentary evidence should be in form of the PDF file format.

12- e-Bid Earnest Money Deposit (EMD)

- 12.1 Pursuant to ITB Clause 6, the bidder shall furnish, as part of its e-Bid, an e-Bid EMD of Rs. 10.00 lakhs (Rs.Ten lakhs only) for each Sugar Mill in form of Demand Draft of any nationalized/ scheduled bank in favour of U.P. Co-operative Sugar Factories Federation Ltd., Lucknow . The scanned copy of the demand draft for e-Bid EMD must be submitted along with the e-Bid and the original should reach the Purchaser's office at Lucknow before opening of technical e-Bid. No Interest on EMD will be paid.

The technical bid should accompany a demand draft/ pay order of nationalized/ Scheduled reputed Bank drawn in favour of U.P. Cooperative Sugar Factories Federation Ltd. payable at Lucknow for an amount of Rs 10,00,000/- (Rs Ten lakhs only) as EMD for each Sugar Mill.

- (A) EMD furnished by all unsuccessful bidders will be returned to them (except successful and L2 bidder) without any interest whatsoever at earliest but not later than 30 days of issue of LOI. EMD of L2 will be refunded, without any interest after execution of Agreement with successful bidder. EMD of the successful bidder will be adjusted into security, without any interest whatsoever.

The scanned copy of the demand draft for e-Bid EMD must be submitted along with the e-Bid and the original should reach the Purchaser's office at Lucknow before opening of technical e-Bid. No Interest on EMD will be paid.

- 12.2 The e-Bid E.M.D is required to protect the Purchaser against the risk of bidder's conduct which would warrant the EMD's forfeiture, pursuant to ITB Clause 12.7.
- 12.3 The e-Bid E.M.D shall be in Indian Rupees and shall be in the following forms only:
A demand draft/Pay order payable in favour of U.P. Co-operative Sugar Factories Federation Ltd at Lucknow.
- 12.4 Any e-Bid not secured in accordance with ITB Clauses 12.1 and 12.3 above shall be treated as non-responsive and rejected by the Purchaser.
- 12.5 Unsuccessful bidder's e-Bid E.M.D will be returned upon the written request through cheque or DD in original submitted at the time of E-bid as promptly as possible after the expiration of the period of e-Bid validity prescribed by the Purchaser, pursuant to ITB Clause 13.
- 12.6 The e-Bid E.M.D may be forfeited:
- (a) if a bidder (i) withdraws its e-Bid during the period of e-Bid validity specified by the bidder on the e-Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 22.2; or (iii) modifies its e-Bid price during the period of e-Bid validity specified by the bidder on the e-Bid form or
- (b) in case of a successful bidder, if the bidder fails:
- (i) to sign the Contract with the Purchaser in accordance with ITB Clause 28; or
- (ii) to furnish performance security in accordance with ITB Clause 29
- 12.7 The successful bidder's e-Bid E.M.D will be converted into security deposit which shall be 5% of the Contract Price. The balance amount shall be deducted from the bills on prorata basis.

13- Period of Validity of e-Bid

- 13.1 e-Bid shall remain valid for 90 days from the opening of financial bid pursuant to ITB Clause 19.B-2. An e-Bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.
- 13.2 In exceptional circumstances, the Purchaser may solicit the bidder's consent to an extension of the period of e-Bid validity. The request and the response thereto shall be made in writing. A bidder may refuse the request without forfeiting its e-Bid security. A bidder granting the request will not be required nor permitted to modify its e-Bid.

14- Format and Signing of e-Bid

- 14.1 The bidder shall prepare one electronic copy each of the Technical e-Bid and Financial e-Bid separately.
- 14.2 The e-Bid document shall be digitally signed, at the time of uploading, by the bidder or a person or persons duly authorized to bind the bidder to the Contract. The letter authorization shall be indicated by a scanned copy of written power-of-attorney accompanying the e-Bid. All the pages/

documents of the e-Bid that are to be uploaded shall be digitally signed by the person authorized to sign the e-Bid.

15- Submission of e-Bid

The Bid Submission module of e-Procurement website <https://etender.up.nic.in> enables the bidders to submit the e-Bid online in response to this e-tender published by the Purchaser. Bid Submission can be done only from the Bid Submission start date and time till the Bid Submission end date and time given in the e-tender. Bidders should start the Bid Submission process well in advance so that they can submit their e-Bid in time. The bidders should submit their e-Bid considering the server time displayed in the e-Procurement website. This server time is the time by which the e-Bid submission activity will be allowed till the permissible time on the last/end date of submission indicated in the e-tender schedule. Once the e-Bid submission date and time is over, the bidders cannot submit their e-Bid. For delay in submission of e-Bid due to any reasons, the bidders shall only be held responsible.

The bidders have to follow the following instructions for submission of their e-Bid:

- 15.1 For participating in e-Bid through the e-tendering system, it is necessary for the bidders to be the registered users of the e-Procurement website <https://etender.up.nic.in>. The bidders must obtain a User Login Id and Password by registering themselves with U.P. Electronics Corporation Limited, Lucknow if they have not done so previously for registration. Refer to details given in Invitation for e-Bid Clause 10.
- 15.2 In addition to the normal registration, the bidder has to register with his/her **Digital Signature Certificate (DSC)** in the e-tendering system and subsequently he/she will be allowed to carry out his/her e-Bid submission activities. Registering the Digital Signature Certificate (DSC) is one time activity. Before proceeding to register his/her DSC, the bidder should first log on to the e-tendering system using the User Login option on the home page with the Login Id and Password with which he/she has registered as per clause 15.1 above.

For successful registration of DSC on e-Procurement website <http://etender.up.nic.in> the bidder must ensure that he/she should possess Class-2/ Class-3 DSC issued by any certifying authorities approved by Controller of Certifying Authorities, Government of India, as the e-Procurement website <https://etender.up.nic.in> is presently accepting DSCs issued by these authorities only. The bidder can obtain User Login Id and perform DSC registration exercise as described in clauses 15.1 and this clause 15.2 above even before e-Bid submission date starts. The Purchaser shall not be held responsible if the bidder tries to submit his/her e-Bid at the last moment before end date of submission but could not submit due to DSC registration problem.

- 15.3 The bidder can search for active tenders through "Search Active tenders" link, select a tender in which he/she is interested in and then move it to 'My Tenders' folder using the options available in the e-Bid Submission menu. After selecting and viewing the tender, for which the bidder intends to e-Bid, from "My Tenders" folder, the bidder can place his/her e-Bid by clicking "Pay Offline" option available at the end of the view tender details form. Before this, the bidder should download the e-tender document and Price Schedule/Bill of Quantity (BOQ) and study them carefully. The bidder should keep all the documents ready as per the requirements of e-tender document in the PDF format except the Price Schedule/Bill of Quantity (BOQ) which should be in the XLS format (Excel sheet).
- 15.4 After clicking the 'Pay Offline' option, the bidder will be redirected to the Terms and Conditions page. The bidder should read the Terms & Conditions before proceeding to fill in the Tender Fee and EMD offline payment details. After entering and saving the Tender Fee and EMD details, the bidder should click "Encrypt & Upload" option given in the offline payment details form so that "Bid Document

Preparation and Submission" window appears to upload the documents as per Technical (Fee details, Qualification details, e-Bid Form and Technical Specification details) and financial (e-Bid Form and Price Schedule/BOQ) schedules/packets given in the tender details. The details of the Demand Draft or any other accepted instrument which is to be physically sent in original before opening of technical e-Bid, should tally with the details available in the scanned copy and the data entered during e-Bid submission time otherwise the e-Bid submitted will not be accepted.

- 15.5 Next the bidder should upload the Technical e-Bid documents for Fee details (e-tender fee and EMD), Qualification details as per "ITB Clause 10 and 21", e-Bid Form as per "Section-III(A) to III(I)" and Technical Specification details as per "Section-III(C):Technical Specifications" and Financial e-Bid documents as per "Section-IV(A):e-Bid Form" and "Section-IV(B):Price Schedule/BOQ" of e-tender document. Before uploading, the bidder has to select the relevant Digital Signature Certificate. He may be prompted to enter the Digital Signature Certificate password, if necessary. For uploading, the bidder should click "Browse" button against each document label in Technical and Financial schedules/packets and then upload the relevant PDF/XLS files already prepared and stored in the bidder's computer. The required documents for each document label of Technical (Fee details, Qualification details, e-Bid Form and Technical Specification details) and financial (e-Bid Form and Price Schedule/BOQ) schedules/packets can be clubbed together to make single different files for each label.
- 15.6 The bidder should click "Encrypt" next for successfully encrypting and uploading of required documents. During the above process, the e-Bid documents are digitally signed using the DSC of the bidder and then the documents are encrypted/locked electronically with the DSC's of the bid openers to ensure that the e-Bid documents are protected, stored and opened by concerned bid openers only.
- 15.7 After successful submission of e-Bid document, a page giving the summary of e-Bid submission will be displayed confirming end of e-Bid submission process. The bidder can take a printout of the bid summary using the "Print" option available in the window as an acknowledgement for future reference.
- 15.8 Purchaser reserves the right to cancel any or all e-Bids without assigning any reason.

16- Deadline for Submission of e-Bid

- 16.1 e-Bid (Technical and Financial) must be submitted by the bidders at e-Procurement website <https://etender.up.nic.in> not later than 20/12/2018 upto 06:55 PM (as the server time displayed in the e-Procurement website).
- 16.2 The Purchaser may, at its discretion, extend this deadline for submission of e-Bid by amending the e-Bid document in accordance with ITB Clause 4, in which case all rights and obligations of the Purchaser and bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

17- Late e-Bid

- 17.1 The server time indicated in the Bid Management window on the e-Procurement website <https://etender.up.nic.in> will be the time by which the e-Bid submission activity will be allowed till the permissible date and time scheduled in the e-tender. Once the e-Bid submission date and time is over, the bidder cannot submit his/her e-Bid. Bidder has to start the Bid Submission well in advance so that the submission process passes off smoothly. The bidder will only be held responsible if his/her e-Bid is not submitted in time due to any of his/her problems/faults, for whatsoever reason, during e-Bid submission process.

18- Withdrawal and Resubmission of e-Bid

- 18.1 At any point of time, a bidder can withdraw his/her e-Bid submitted online before the bid submission end date and time. For withdrawing, the bidder should first log in using his/ her Login Id and Password and subsequently by his/her Digital Signature Certificate on the e-Procurement website <https://etender.up.nic.in>. The bidder should then select "My Bids" option in the Bid Submission menu. The page listing all the bids submitted by the bidder will be displayed. Click "View" to see the details of the e-Bid to be withdrawn. After selecting the "Bid Withdrawal" option, the bidder has to click "Yes" to the message "Do you want to withdraw this bid?" displayed in the Bid Information window for the selected bid. The bidder also has to enter the bid Withdrawing reasons and upload the letter giving the reasons for withdrawing before clicking the "Submit" button. The bidder has to confirm again by pressing "Ok" button before finally withdrawing his/her selected e-Bid.
- 18.2 The bidder has to request the Purchaser with a letter, attaching the proof of withdrawal and submission of e-Bid EMD in the office of Purchaser, to return back the e-Bid security/EMD as per the manual procedure.
- 18.3 No e-Bid may be withdrawn in the interval between the deadline for submission of e-Bids and the expiration of period of e-Bid validity. Withdrawal of an e-Bid during this interval may result in the bidder's forfeiture of his/her e-Bid E.M.D, pursuant to ITB Clause 12.8.
- 18.4 The bidder can re-submit his/her e-Bid as and when required till the e-Bid submission end date and time. The e-Bid submitted earlier will be replaced by the new one. The payment made by the bidder earlier will be used for revised e-Bid and the new e-Bid submission summary generated after the successful submission of the revised e-Bid will be considered for evaluation purposes. For resubmission, the bidder should first log in using his/her Login Id and Password and subsequently by his/her Digital Signature Certificate on the e-Procurement website <https://etender.up.nic.in>. The bidder should then select "My Bids" option in the Bid Submission menu. The page listing all the bids submitted by the bidder will be displayed. Click "View" to see the details of the e-Bid to be resubmitted. After selecting the "Bid Resubmission" option, click "Encrypt & Upload" to upload the revised e-Bid documents by following the methodology provided in clauses 15.4 to 15.7.
- 18.5 The bidders can submit their revised e-Bids as many times as possible by uploading their e-Bid documents within the scheduled date & time for submission of e-Bids.
- 18.6 No e-Bid can be resubmitted subsequently after the deadline for submission of e-Bids.

(C) e-Bid OPENING AND EVALUATION OF e-Bid

19(A)- Opening of Technical e-Bid by the Purchaser

- 19.A-1 The Purchaser will open all technical e-Bids on 21/12/2018 at 11:00 AM, in the presence of bidders' representatives who choose to attend in the meeting hall of U.P. Co-operative Sugar Factories Federation Ltd, 9-A, Rana Pratap Marg, Lucknow. The bidder's representatives who are present shall sign a register evidencing their attendance. In the event of the specified date of e-Bid opening being declared a holiday for the Purchaser, the e-Bids shall be opened at the appointed time and place on the next working day.
- 19.A-2 The bidder's names and the presence or absence of requisite e-Bid security and such other details as the Purchaser at its discretion may consider appropriate, will be announced at the opening. The name of such bidders not meeting the Technical Specifications and qualification requirement shall be notified subsequently.
- 19.A-3 The Purchaser will prepare minutes of the e-Bid opening.
- 19.A-4 Managing Director reserves the right to postpone the date and time of opening of Technical & Financial E-Bid in unavoidable circumstances and all the bidders will be informed accordingly.

19(B)- Opening of Financial e-Bid

- 19.B-1 After evaluation of technical e-Bid, the Purchaser shall notify those bidders whose technical e-Bids were considered non-responsive to the Conditions of the Contract and not meeting the technical specifications and Qualification Requirements indicating that their financial e-Bids will not be opened. The Purchaser will simultaneously notify the bidders, whose technical e-Bids were considered acceptable to the Purchaser. The notification may be sent by letter, fax or by e-mail.
- 19.B-2 The financial e-Bids of technically qualified bidders shall be opened on 22/12/2018 at 11:00 AM in the presence of bidders who choose to attend the bid opening. The date for opening of financial bids will be communicated to the technically qualified bidders subsequently after completion of technical e-bid evaluation. The name of bidders and quoted F.O.R. Price will be announced at the meeting.
- 19.B-3 The Purchaser will prepare the minutes of the financial e-Bid opening.

20- Clarification of e-Bid by Purchaser

- 20.1 During evaluation of e-Bid, the Purchaser may, at its discretion, ask the bidder for a clarification of his/her e-Bid. The request for clarification and the response shall be in writing.

21- Evaluation of technical e-Bid and Evaluation Criteria

The Purchaser will examine the e-Bid to determine that they are complete, whether they meet all the conditions of the Contract as per prequalification of bidder that required e-tender fee, e-Bid EMD, experience of similar projects and plant balancing details and other required documents have been furnished, that the documents have been properly digitally signed, and whether the e-Bids are generally in order. Any e-Bid or e-Bids not fulfilling these requirements shall be rejected.

- 21 The bidders shall submit the scanned copies of following as documentary proof for evaluation of their technical e-Bids:-

- 21.1 The bidder shall submit required documentary proof,HMBD,, failing which the tender shall be rejected.
- 21.2 The bidder shall submit the copies of the detail of E.M.D.
- 21.3 The bidder shall submit the copies of the Authorization letter by the competent authorities for the authorized person.
- 21.4 Bidder's may be any one of the following: - Company (registered as per Indian Companies Act) or Group of Companies (Companies owned by the promoters of a Single Industrial Group and the Companies must be registered as per Indian Companies Act) or Limited Liability Partnership – LLP (registered as per Limited Liability Partnership Act, 2008) or Partnership Firm (registered as per Indian Partnership Act, 1932) or Firm.
- 21.5 The bidder shall submit the copies of registration certificate of industries department of the state.
- 21.6 The bidder shall submit the copies of documentary proof for experience of projects executed along with successful performance certificate of similar type of work.
- 21.7 The Bidder during the last five years must have successfully completed similar type of upgradation,modernization/expansion work related with energy saving, reduction in steam consumption sugar quality improvement and over all efficiency improvement in two existing sugar mills on Turnkey/EPC basis including Designing, Engineering, manufacture / procurement, supply, erection and commissioning with satisfactory performance in India with target steam consumption@42 % on cane or lower in executed projects.
The bidder will submit the documentary certificate about reduction in steam consumption and over all improvement after upgradation work from the purchaser.The bidder will also submit the HMBD fuel-steam-power balance, evaporator bodies configuration (including additional and existing heating surface) in order to achieve the steam consumption @45 % on cane in concerned coop sugar mills and to avoid periodic cleaning of evaporator set.
- 21.8 In case of Foreign Bidder bidding through its Indian Representing Company the parent's company authorization is to be submitted.
- 21.9 The average turnover of the bidder during last five financial years i.e., 2013-14, 2014-15, 2015-16, 2016-17 & 2017-18 should be not less than Rs. 04 crores to bid for each Sugar Mill. If any bidder bids for more than one mill, he has to prove his turnover as Rs. 04.00 crore (Four crore) multiplied by number of mills bid for. In proof of it, the bidder will submit the detail of last five years turnover duly certified by Chartered Accountant, along with last five years Balance Sheet.
- 21.10 The bidder shall submit the copies of the last three years submitted Income Tax Return i.e. for the financial year, 2015-16, 2016-17 & 2017-18 with copy of PAN card (copy self attested).
- 21.11 The bidder shall submit the copies of the details of GST Registration.**
- 21.12 The bidder shall submit the documentary proof of the Status of the company along with names of Directors/ Partners/ Proprietor along with documents.

- 21.13 The e-Bids found to be not responsive to and not fulfilling all the conditions of the contract and not meeting Technical Specifications and Qualification Requirements to the satisfaction of Purchaser shall be rejected and may not be subsequently made responsive by the bidder by correction of the non-conformity. The e-Bids of bidders mentioning any of their conditions which are not mentioned in the e-tender document or are not in conformity with the conditions of the contract shall be rejected.
- 21.14 The bidders are advised not to mix financial bid documents with the PDF documents submitted for technical bid. The e-Bids of the bidders having financial bid document in the technical bid will out rightly be rejected.
- 21.15 The Net Worth of the bidder should be atleast Rs. 05 crores for each Sugar Mill project as on the date of bidding duly certified by banker as per performa given in technical Bid. If any bidder bids for more than one mill, he has to prove his networth as Rs. 05.00 crore multiplied by number of mills bid for. The Bank networth of the Bidder shall be atleast Rs.05 crores (Rupees Five crores) for each Sugar Mill duly issued by the banker (Nationalized/Scheduled bank) and Chartered Accountant not earlier than 3 months from the bidding date, as per proforma below:

TO WHOM IT MAY CONCERN

This is to certify that M/s.....having its registered office at.....is maintaining.....account in our bank at.....Branch. The average monthly transaction in this account is Rs.....(in words). M/s..... is also availing credit facility from this bank upto the limit of Rs.....(in words).

It is further certified that M/s..... is valuable customer of our bank and it's net worth is a sum of Rs.....Crores.

Signature of Bank Manager
 Manager ID No.
 Seal of Bank

- 21 The bidder shall submit the copies PAN, GSTIN, certificates in true copies / photocopies duly attested by authorised signatory
- 21.16 The bidder shall submit the documentary proof of the Status of the company along with names of Directors/Partners/Proprietor along with documents.
- 21.17 The e-Bids found to be not responsive to and not fulfilling all the conditions of the contract and not meeting Technical Specifications and Qualification Requirements to the satisfaction of Purchaser shall be rejected and may not be subsequently made responsive by the bidder by correction of the non-conformity. The e-Bids of bidders mentioning any of their conditions which are not mentioned in the e-tender document or are not in conformity with the conditions of the contract shall be rejected.
- 21.18 It shall be the discretion of the Purchaser to decide as to whether an e-Bid fulfils the evaluation criterion mentioned in this e-tender or not.
- 21.19 The bidders are advised not to mix financial bid documents with the PDF documents submitted for technical bid. The e-Bids of the bidders having financial bid document in the technical bid will out rightly be rejected.

21.20 It shall be the discretion of the Purchaser to decide as to whether an e-Bid fulfils the evaluation criterion mentioned in this e-tender or not.

22- Financial Evaluation and Comparison of e-Bid

22.1 The Purchaser will evaluate and compare the financial rates of (Total price) quoted in the price schedule/BOQ of each mill of e-Bids of those bidders whose technical e-Bids are found responsive as per the conditions of the e-tender only for those items of the bidders which have been technically accepted by the Purchaser.

22.2 No additional payments shall be made for completion of any contractual obligation beyond the quoted prices. If the Seller does not accept the correction of errors if any, its e-Bid shall be rejected and its e-Bid security may be forfeited.

22.3 No weightage/preference shall be given to the bidder quoting any higher technical specifications against the technical specifications of the items asked in the e-tender.

22.4 The Purchaser's evaluation of a Financial bid shall be based on in terms of rate quoted including GST , other taxes/duties if any, packing forwarding, insurance etc (Total Price), by the bidder for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:.
The bidder shall quote total price as mentioned in para 8.2 of ITB.

22.5 The Financial Bids will be opened by Tender committee in the presence of Bidder's representatives who choose to attend the Financial Bid opening on date and time to be communicated to all the technically qualified Bidders. The Bidder's representatives who are present shall sign a register evidencing their attendance.

- a) The name of Bidder, Bid Prices etc shall be announced at the meeting. The commercial quotes of the lowest Bidder shall be notified as L-1. The rate offered by the L-1 shall be first taken into consideration.
- b) In case successful bidder fails to execute Agreement, his EMD will be forfeited and shall be black listed from participating in any future bidding in Federation and legal action may be taken by the Federation for recovery of losses which may have sustained by federation on this account. Under these circumstances the Purchaser may award contract to other bidders at the same rate or cancel the tender & invite the bid again.

23- Contacting the Purchaser

23.1 Subject to ITB Clause 20, no bidder shall contact the Purchaser on any matter relating to his/her e-Bid, from the time of the e-Bid opening to the time the Contract is awarded. If the bidder wishes to bring additional information to the notice of the Purchaser, he/she can do so in writing.

23.2 Any effort by a bidder to influence the Purchaser in its decisions on e-Bid evaluation, e-Bid comparison or contract award may result in rejection of the bidder's e-Bid.

(D) AWARD OF CONTRACT

24- Award Criteria

- 24.1 The Purchaser will determine to its satisfaction whether the bidder(s) that is selected as having submitted the lowest rate (L-1) evaluated responsive bid meets the criteria specified in ITB Clause 10 and is qualified to perform the contract satisfactorily.
- 24.2 Subject to ITB Clause 26, the Purchaser will award the contract to the lowest rate (L-1) evaluated successful Bidder whose bid has been determined to be responsive to all the conditions of the contract and meeting the Technical specification and qualification requirement of the Bidding Document.
- 24.3 After awarding contract to the successful bidder, Agreements as per Section III (C), will be executed within 15 days of issue of Letter of Intent (LOI). Draft Agreements regarding supply, Erection & Commissioning are enclosed in the bid form.

25- Purchaser's right to vary Quantities at the Time of Award

The bidders can bid for all the ten Sugar Mills, however, due to constraint of time period for completion of the project, one bidder will not be awarded contract for more than four Sugar Mills. In the event of any bidder found L-1 for more than four Sugar Mills, he will be awarded contract for four Sugar Mills of his choice and out of the remaining Sugar Mills four Sugar Mills will be allotted to L-2 bidder of its choice and remaining two Sugar Mills will be provided to L-3 bidder provided L-2 & L-3 accepts rates quoted by L-1 bidder. If L-2 bidder does not accept the rate quoted by L-1 bidder, L-3 bidder will be given chance if L-3 bidder accepts the rate quoted by L-1 bidder & so on.

In case, the number of bidders is less or the other bidders (L-2, L-3 etc.) do not agree to accept the rate given by L-1 bidder and the tender committee finds that the L-1 bidder has capability to execute more than four contracts, the committee may award contract for more than four Sugar Mills to L-1 bidder.

L-1 bidder shall be selected separately for each Sugar Mill.

26- Purchaser's right to accept any e-Bid and to reject any or all e-Bids

- 26.1 The Purchaser reserves the right to accept or reject any e-Bid, and to annul the e-Bid process and reject all e-Bids prior to contract award at any time without assigning any reasons thereof, without thereby incurring any liability to the affected bidder or bidders.

27- Issue of Letter of Intent (LOI)

- 27.1 The Purchaser will issue LOI to the successful bidder in writing by letter/e-mail/fax.

28- Signing of Contract

The successful bidder is required to submit Performance Bank Guarantee and Timely Delivery Bank Guarantee as per provision of ITB Clause 12.2 to sign the Agreements as per draft Agreements provided in the bid document within 15 days from the date of issue of Letter of Intent(LOI).

SECTION II: CONDITIONS OF E-Tender/ CONTRACT (CC)

On line E-bidding for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning

including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

Definition of Bidder

The bidder may be a single entity or a group of companies (the “consortium”), coming together to implement the project. However, no bidder applying individually or as a member of Consortium, as the case may be, can be member of another bidder. The term bidder used herein would apply to both a single entity or a Consortium.

In case of consortium, the members to the consortium will decide the lead member who will be majority stakeholder. The percentage of stake of majority stakeholder should be mentioned in the MOU for the Consortium.

Pre-qualification of the bidder

1. The Bidder during the last five years must have successfully completed similar type of upgradation, modernization/expansion work related with energy saving, reduction in steam consumption, sugar quality improvement and overall efficiency improvement in two existing sugar mills on Turnkey/EPC basis including Designing, Engineering, manufacture / procurement, supply, erection and commissioning with satisfactory performance in India with target steam consumption @42 % on cane or lower in executed projects. The bidder will submit the documentary certificate about reduction in steam consumption and overall improvement after upgradation work from the purchaser. The bidder will also submit the HMBD fuel-steam-power balance, evaporator bodies configuration (including additional and existing heating surface) in order to achieve the steam consumption @45 % on cane in coop sugar mills and to avoid periodic cleaning of evaporator set..
2. Bidder blacklisted with U.P. Cooperative Sugar Factories Federation, Lucknow/NCDC/NFCSF or by any Central/State Government organisations are not eligible.
3. Foreign Company can participate through its Indian Representing Company and the parent’s company experience shall be considered.
4. The average turnover of the bidder during last five financial years i.e., 2013-14, 2014-15, 2015-16, 2016-17 & 2017-18 should be not less than Rs. 04 crores to bid for each Sugar Mill. If any bidder bids for more than one mill, he has to prove his turnover as Rs. 04.00 crore (Four crore) multiplied by number of mills bid for. In proof of it, the bidder will submit the detail of last five years turnover duly certified by Chartered Accountant, along with last five years Balance Sheet.
5. The bidder shall submit the copies of the last three years submitted Income Tax Return i.e. for the financial year., **2015-16 , 2016-17 & 2017-18** with copy of PAN card (copy self attested).
6. The Net Worth of the bidder should be atleast Rs. 05 crores for each Sugar Mill project as on the date of bidding duly certified by banker as per performa given in technical Bid. If any bidder bids for more than one mill, he has to prove his networth as Rs. 05.00 crore multiplied by number of mills bid for. The Bank networth of the Bidder shall be atleast Rs.05 crores (Rupees Five crores) for each Sugar Mill duly issued by the banker (Nationalized/Scheduled bank) and Chartered Accountant not earlier than 3 months from the bidding date.
7. Other conditions which are necessary to be fulfilled by the Bidder
 - a) EMD for each System for each Sugar Mill will be Rs. 10,00,000/- (Rs. Ten lacs only) in form of Demand Draft of any Nationalised/scheduled bank in favour of U.P. Co-operative Sugar Factories Federation Ltd. Payable at Lucknow. Tender without EMD will be rejected.
 - b) Price of e-bid document for each System for each Sugar Mill will be Rs 35000/- (Rupees Thirty Five Thousands only)+GST as demand draft (non-refundable) of any nationalized /scheduled bank drawn in favour of U P Co-operative Sugar Factories Federation Ltd., payable at Lucknow.
 - c) All required documents as per tender document.
8. An Applicant may be disqualified if the information provided does not meet any one of the above criteria.

9. **The bidders are advised to visit the Sugar Mill/ Sugar Mills to assess the actual work** at the project site, capacities of equipments, **evaporator station configuration and bleeding scheme** , before submitting their bids. The bidder must also assess the dismantling work of structures/buildings, if any, at the site, which is included in the scope of work of the Seller.
10. The bid proforma, the model draft Agreement comprising specifications, clarifications, terms and conditions and formats for Bank guarantees are enclosed.
11. The price quoted should be valid upto 24 months after commissioning of equipments/system. There shall be no increase/escalation of total Contract Price till the successful Performance Trial of the equipments.
12. (a) The Sellers EMD will be converted in to security deposit which is 5% of Contract Price. The balance amount of Security deposit shall be deducted from the bills on prorata basis,which will be released after successful performance of new equipments/systems for 24 months from commissioning date.
(b) Timely delivery & Performance bank guarantee shall be 10% each of the contract price.
12. **Bid price will include timely supply of various equipments/systems,modification in system,erection & commissioning including civil work and operation / maintainence for two years after commissioning of equipments with performance given in bid document.**
13. The information given in the bid documents and the plans and drawings forming part thereof is merely intended as general information without any undertaking on the part of the Purchaser as to their accuracy and without obligation relative thereto upon the Purchaser. Before submitting bid, the bidders are advised to inspect the Sugar Mill plant & site of work and the environments and be well acquainted with the actual working and other prevalent conditions, facilities available, rules and regulations of Central and State Government Act governing the construction and operation of the Sugar Mill plant etc. No claim will be entertained later on the grounds of lack of knowledge.
14. All staging, structure, staircase & platform will be provided by the party to suit the working facility. Seller shall supply the critical / important equipments among the choices given in Annexures of Draft Agreement, subjected to Purchaser's approval.

A Pre-bid conference meeting will be held with interested parties on the date mentioned in the Time Schedule of Bid Process at Meeting hall of UP Coop. Sugar Factories Federation Ltd., 9-A Rana Pratap Marg, Lucknow to answer prospective bidder's clarifications/queries and any suggestions relating to the Bidding. After Pre-bid conference if UP Coop. Sugar Factories Federation Ltd. may consider to amend Technical and Financial Bid document based on the suggestions of interested parties, and then the amended Technical and Financial Bid will be uploaded at e-tender site <https://etender.up.nic.in>. as corrigendum.
15. Valid PAN, GST Registration No., certificates in true copies / photocopies duly attested by authorised signatory.
16. Power of Attorney of the person who has signed the tender documents.
17. Affidavit of bidder that he has not been blacklisted.
18. Networth certificate of the banker in the following format.

TO WHOM IT MAY CONCERN

This is to certify that M/s having its registered office at is maintaining current A/c in our bank at Branch. The average monthly transaction in this account is Rs. (in words). M/s is also availing credit facility from this bank upto the limit of Rs. (in word).

It is further certified that M/s Is valuable customer of our bank and it's networth is a sum of Rs. Crores.

Signature of Bank Manager
Manager ID No
Seal of Bank

Signature of the representative
Of the machinery Seller
Name and address of the Bidder
(Seal)

Date _____

19. If the bidder deliberately gives wrong information in the bid especially wrong performance certificate of successful execution of his earlier work, the Purchaser reserves the right to reject such bid at any stage or to cancel the contract, if awarded and forfeit Earnest money / Security Deposits.

20. Disqualification

Notwithstanding anything to the contrary contained in this Technical and Financial Bid documents and without prejudice to any of the rights or remedies of the UP Coop. Sugar Factories Federation Ltd., the UP Coop. Sugar Factories Federation Ltd. at any stage of the process and its participation in the process and/or its TECHNICAL & FINANCIAL BID and subsequent submissions be dropped from further consideration for any of the reasons including without limitations those listed below:

- a) Failure to produce proof documents given under prequalification of bidder under section-II of conditions of e-tender regarding execution of similar type of works including appropriate HMBD fuel-steam-power balance to achieve the desire results
- b) Bidder blacklisted with U.P. Cooperative Sugar Factories Federation, Lucknow/NCDC/ NFCSF and by any Central/State Government organisations are not eligible; or
- c) Failure to comply with other material requirement of this Technical & Financial Bid; or
- d) UP Coop. Sugar Factories Federation Ltd. is not satisfied with credit worthiness/ownership structure of the Prospective Bidder; or
- e) Failure to comply with the reasonable requests of UP Coop. Sugar Factories Federation Ltd. in relation to the EPC Process; or
- f) If it is discovered at any time that the Prospective Bidder is subject matter of winding up or insolvency or other proceedings of similar nature; or
- g) Any information regarding the Prospective Bidder which becomes known to UP Coop. Sugar Factories Federation Ltd. and which is detrimental to proposed process and/or the interests of UP Coop. Sugar Factories Federation Ltd.; or

- h) Initiation or existence of any legal proceedings, by or against the Prospective Bidder in respect of UP Coop. Sugar Factories Federation Ltd., which proceeding may be prejudiced by the participation of the Applicant in the short listing of Prospective Bidder; or
 - i) Any restrictions or limitations have been put on the Prospective Bidder pursuant to any regulatory or statutory guidelines to participate in the process; or
 - j) The Prospective Bidder has been convicted for an offence under any legislation designed to protect the members of the public from financial loss due to dishonesty, incompetence or malpractice; or
 - k) The Prospective Bidder has been disqualified from participating in any tender either by Government of India or any of the State Governments/ Union Territory Governments, mere pendency of an appeal against the order of disqualification, if any, passed by Government of India or any of the State Governments/ Union Territory Governments will have no effect on the disqualification of Prospective Bidder; or
 - l) If information becomes known after the Prospective Bidder has been qualified at any stage to proceed with the process, which would have entitled UP Coop. Sugar Factories Federation Ltd. to reject or disqualify the relevant Prospective Bidder, at that time, or at any time, such information becomes known to the UP Coop. Sugar Factories Federation Ltd..
 - m) UP Coop. Sugar Factories Federation Ltd.'s determination that one or more of the events specified above have occurred shall be final and conclusive.
26. All pages of the Bid document including drawing shall be initialed with seal at the lower right hand corner or signed with seal wherever required in the Bid documents by the Bidder or by a person holding power of attorney authorizing him to sign on behalf of the Bidder before submission of tender. All signatures in Bid documents shall **be dated as well.**

27. **DECLARATION** (to be submitted by the Bidder)
(to be submitted on Bidders letter head)

To
The Managing Director
UP Co-operative Sugar Factories Federation Ltd.
9-A, Rana Pratap Marg
Lucknow, Uttar Pradesh

Ref: Tender No. UPSUGARFED//435

Date:

This has reference to your Tender Notice. Accordingly we are submitting our offer. I/We declare that I/We have gone through and carefully examined the scope of supply, erection and commissioning of equipments/systems as per scope of work in bid document, terms and conditions, technical specifications and other details enclosed with this Agreement. We hereby confirm that the scope of supply & the other technical details of our offer conform strictly to your technical specifications. We have enclosed all technical details, drawings & other information as required in your requisition.

Authorized signature with
Co. Rubber Stamp.

We have read and understood the above terms & conditions of this tender and hereby agree to abide by them and the same are acceptable to us.

Date:

Place:

SECTION III: TECHNICAL E-BID

- III(A) e BID FORM**
- III(B) SCHEDULE OF REQUIREMENTS**
- III(C) DRAFT AGREEMENT FOR SUPPLY**
- III(D) DRAFT AGREEMENT FOR ERECTION & COMMISSIONING**
- III(E) CAPABILITY STATEMENT**
- III(F) DRAFT M.O.U. FOR CONSORTIUM**
- III(G) DRAFT AFFIDAVIT**

SECTION III(A): e-BID FORM

e-bid Ref. No UPSUGARFED/GMT/2018-19/709

Date:

To:

The Managing Director,
U.P. Co-operative Sugar Factories federation Ltd,
9-A, Rana Pratap Marg Lucknow (U.P)-226001

Dear Sir,

Having examined the e-Bid Documents, we, the undersigned, offer to deliver Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document with targeted performance parameters of each sugar mill given in bid document. The Seller will also operate the newly supplied, erected and commissioned equipments/ system for one crushing season 2019-20.However the warranty of all new equipments/systems will be for 24 months from commissioning date and all non performing parts/equipments will be rectified/replaced free of cost during this period. We undertake to supply,erect and commission the machinery/equipments as per desired specifications **within specified time of 08 months after the date of agreement** to achieve targeted parameters of each mill given in bid document. The equipments/systems will be commissioned and trialed by 30 sept 2019.

In addition to this, the particulars of our organization such as legal status, details of experience & past performance, capability statement & required e-bid EMD* for Rs. ----- in the form of demand draft in favour of U.P. Co-operative sugar factories fed. Ltd., Lucknow is furnished with this e-bid form.

Until a formal contract is prepared and executed, this e-Bid, together with your written acceptance thereof and your Letter of Intent shall constitute a binding contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption inforce in India namely "Prevention of Corruption Act 1998".

We understand that you are not bound to accept the lowest or any e-Bid you may receive.

Dated this.....day of.....20.....

Signature

(in the capacity of)

Duly authorized to sign e-Bid for and on behalf of.....

Note –* Details of D.D. and Name of the Sugar Mill should be mentioned.

SECTION III (B): SCHEDULE OF REQUIREMENTS

Item Code	Brief Description	Destination	Time for Completion	e-Bid E.M.D.
	<p>for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-</p>	<p>Name of Sugar Mill/ Sugar Mills</p> <hr/> <hr/>	<p>8 months from the date of agreement</p>	<p>Details of D.D. with name of the Sugar Mill.</p>

SECTION III (C)- DRAFT AGREEMENT FOR SUPPLY

(on Rs. 100/- non-judicial stamp paper)

THIS AGREEMENT MADE on the day of between The Kisan Sahakari Chini Mills Ltd., Sugar Mill unit -----, Uttar Pradesh through Sri-----,----- (hereinafter referred to as the 'Purchaser' which expression shall, unless repugnant to the subject or context include their successors) of the One Part and, a company registered under the Companies Act, 1956, having its registered office at, and work place of business at, represented by Shri (hereinafter referred to as the "Seller" which expression shall unless repugnant to the subject or context include their legal representatives, administrators, successors).

WHEREAS the Bid of the 'Seller' contained in their bid document dated as modified after subsequent techno commercial discussion with the 'Purchaser' in the meeting of the Tender Committee, held on to supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document. Trial of system to norms in accordance with the delivery schedule specified in the Schedule of Requirements (Section III (B) at ----- **(name of the Sugar Mill)** ----- , Uttar Pradesh has been accepted by the Purchaser and the Seller has been awarded the Letter of Intent No. dated....., according to specifications etc. given in **Annexure I to VI** forming part of this Agreement on the terms and conditions hereinafter appearing.

AND WHEREAS the Contract Price hereinafter mentioned is based on the Seller's undertaking to supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document. The date of completion of project is _____ and the Seller will give trials by ----- in which respect time is the essence of contract & if the Sellers fails to do so, the Seller shall pay liquidated damages as hereinafter provided, as per terms of this Agreement, subject to the Purchaser fulfilling the obligation in time except under force majeure conditions.

NOW THEREFORE, the parties hereto have agreed on the following terms for procuring, manufacturing, supplying the said Machinery and Equipment & performance and other matters connected therewith referred to herein.

1.0 DEFINITION

- (a) **Site:** Site shall mean the location of Sugar Mill where the aforesaid plant & machineries of system are to be set up.
- (b) **Machinery and Equipment:** The Machinery and Equipment shall mean the equipment and machineries required for upgradation/modification of existing plant of the Sugar Mill & establishment of new system.
- (c) **Purchaser:** Purchaser means (-----full name of the Sugar Mill-----) and their legal successors in title to the Purchaser but not (except with the consent of the Seller) any assignee of the Purchaser.

- (d) **Seller:** Seller means successful bidder M/s._____ (name of Sugar Mill plant & machinery Seller) India, whose bid has been accepted by the Purchaser and legal successor in title to the Sellers but not any assignee of the Sellers.
- (e) **Contract Price:** Contract Price means the sum stated in the Contract mentioned in clause 3.1.2.
- (f) **Bid:** Bid means the price offered by the successful bidder to the Purchaser for the supply of system for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document
- (g) **Completion Time: Completion time means 8 months from the date of agreement.** Completion clearly means that all supplied equipments/systems will be ready in all respect to run.
- (h) **Basic Price** means price stated in clause 3.1(i).

2.0 SCOPE OF SUPPLY IN TOTALITY

- 2.1 Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of system on for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document (Name of Sugar Mill: ----- , Uttar Pradesh as detailed here under for achieving the guaranteed performance parameters specified for each section (according to specifications etc. given in bid document forming part of this Agreement). The Seller shall also need to complete all associated electrical, mechanical, instrumentation work including all control rooms required for installation, commissioning of entire equipment within 8 months from the date of execution of Agreement.

The Seller will be responsible for providing an efficient, reliable and state of art technology equipment. The specifications in this Agreement, attempt to define the scope and specifications. However, the onus of providing the appropriate equipment and auxiliaries for successful commissioning, proving performance and operation, entirely rests with the Seller, both for modification and units.

The scope of work for the machineries and equipments and associated systems covered under the specifications will include, but not limited to the following;

- i. Design, engineering, giving necessary details of each and every station, manufacture, procurement and supply including fabrication, assembly, shop testing and inspection at manufacturer's works/site as required. (according to specifications etc. given in bid document forming part of this Agreement).**Drawing and design will be validated by mill specially for evaporator configuration and bleeding arrangement to get the desired results.**
- ii. Providing all labourers, materials and equipment for testing at shop / site, as required.
- iii. All spare parts required for the erection and commissioning

- iv. Performance parameters during the crushing season will be achieved as per given in bid document. Spare parts required for 24 months of trouble free operation from date of commissioning of system. The party will be responsible for overall working/maintenance and performance for 24 months and will also operate the equipments/system **for crushing season 2019-20**.The warranty of equipments/systems will be for 24 months and all non performing /defective parts/equipments will be rectified/replaced during this period.
- v. Special tools and tackles required for operation and maintenance, inspection, and repair of the equipment / systems offered.
- vi. Painting, lagging,aluminium cladding of new equipments/tubular vesslles/exhaust pipes/desuper etcheater shall be of Sellers scope of work
- vii. The specifications are intended to cover the design, engineering layout, manufacture /procure, supply, erection, testing and commissioning of entire process modification and package units equipment, associated systems, electrical distribution system, necessary piping /supports / valves / instruments, PLC based control & instrumentation system, necessary structures and supervision of work of erection, commissioning and civil & structural works.**Provision of platforms, ladders etc will be in the seller scope for trouble free oeration of the equipments/vessles.**
- viii. Supplies and services shall be rendered in conformity with proven engineering principles, taking into account the current state of the art technology. The requirements of the contract must be fulfilled in its entirety.
- ix. The supplies and services within the scope shall be rendered inclusive of all appliances and interconnecting arrangements, necessary for installation of all accessories and for satisfactory operation, maintenance and repair.
- x. The scope of supply and services shall include all necessary work and supply of equipment and material whether mentioned in these specifications or not, but which are necessary for the satisfactory, reliable, safe operation, maintenance and required for achieving guaranteed performance parameters. **The specifications of equipments will be at par with the specifications laid down by national federation and best standard practices in sugar industry.**
- xi. Any equipment, devices or material even if not included in specifications, but found necessary for the safe and satisfactory functioning of the unit, shall be supplied by the Seller at no extra cost to the Purchaser, as though, such equipment, material or work were not originally specified and formed part of the scope of work.
- xii. Design and drawing of machinery, foundation, building and all other related civil works shall be in scope of Seller. Seller should provide above mentioned design/drawings duly signed by authorized person to Factory/Federation for vetting and approval.
- xiii. The Seller will also dismantle old structure, foundation/building present at the site, if required.
- xiv. All civil work including all machinery foundations and structure as required.

xv. Erection and commissioning of all machinery and equipment.

xvi. **Services - Design and Engineering**

Preparation of design calculations and detailed drawings.

Preparation of load data, coordinating drawings etc. along with foundation drawing to Purchaser for the purpose of approval of design and construction of machinery foundations

Preparation of Price Break-up, Billing Schedule, Delivery Schedule, Time Schedule for preparation of foundations

Preparation of Bills of Quantity

Preparation of manufacturing drawings

Preparation of quality assurance and inspection plans and implementation schedule.

Preparation of schedule for site testing and commissioning including system auditing.

Machinery layout

xvii. To various statutory requirements and guidelines of various Act/Statute/Rules.

xviii. Erection & Commissioning

- Unloading, unpacking, shifting to locations, positioning, aligning and fixing of equipment which are included in contract
- Pre-commissioning checks.
- Commissioning , testing and trials runs and performance proving
- Completion of documentation and records.

xix. Testing of materials

Testing of materials shall be carried out in Government authorized laboratories apart from manufacturer's laboratories at the cost of the Seller.

Inspections / Review Meetings

Making the arrangements for periodical and final inspection of all major equipment at own or sub-contractor's works.

Attending the periodical review meetings at site or at the agreed locations.

2.2 While preparing the delivery schedule, the Seller shall ensure that the machinery and equipment are delivered in sequence of priority for erection so that the items which are to be erected first as per erection schedule shall be sent first and with the same order of priority the progress of delivery shall be maintained thereafter accordingly.

2.3 The said monthly delivery schedule shall also indicate the approximate value of the major equipments The Seller may send some critical items with the written consent of the Purchaser before the due date of delivery. However, if the delivery of any of the item as per delivery schedule is delayed, the delivery of the subsequent items shall not be held up on this Account.

2.3 The performance of the equipments to be demonstrated as per details given in **Annexure – VI** of this Agreement.

2.4 Provided further that in case the Purchaser requires any additional items related to the machinery & equipment or ask for any major changes in the specifications as given in bid document forming part of this Agreement, the Seller hereby agree to make such supplies, additions, modifications, alterations or changes and the Purchaser shall bear the cost of the same.

- 2.5 The makes of the critical equipments to be supplied by the Seller will be strictly according to the alternative given in the bid document.
- 2.6 The Seller shall furnish month-wise (approx.) money requirement towards supply of machinery and equipment within one month from the date of signing of this Agreement.
- 2.7 The equipments/system is to be commissioned on the desired date finalized by the Purchaser without any price escalation. The price and date of delivery and commissioning of the machinery is firm.
- 2.8 The equipments/stms in ten mills shall be designed, manufactured, supplied erected and commissioned & performed as per term & conditions of the Bid document
- 2.9 The system shall be erected on the available land/ dismantled and levelled land within / outside the existing premises.

3.0 CONTRACT PRICE

3.1 Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document, in accordance with the delivery schedule specified in the Schedule of Requirements (Section II of technical e-bid document at -----(name of the Sugar Mill) ----- from our manufacturing works/units as per specifications and scope of work.

The Seller shall also need to complete all associated electrical, mechanical, PLC system, instrumentation work including all control rooms required for installation, commissioning of entire equipment and proving performance other related works herein mentioned at a total price of Rs lacs (Rs only) (hereinafter referred to as the 'Contract Price') subject to terms and conditions, hereinafter, provided.

The above price offered will be "F.O.R. destination i.e. site price" according to the specifications and details given in Annexures _____ and includes Ex-works (Ex-Bidders or their sub-contractors workshop or place of supply loaded on trucks including packing and forwarding charges) price, necessary facilities, freight to site, all taxes and duties viz. GST and other leviable taxes/duties (as applicable) and insurance as per the break-up give below:

Sl.No.	Particulars	Amount (in lakhs)
i)	Basic Price Ex-works (ex-bidder's or their sub-contractor's workshop or place of supply) price of the plant and machinery in accordance with specifications & details of Draft Agreement excluding following	
ii)	GST	
iii)	Freight to Sugar Mill site	
iv)	Packing and forwarding charges	
v)	Insurance	
	Total Contract Price 3.1 (i) to (v) above	

3.1.2 **Total of 3.1 (i) to (v) above** : **Rs.....**

Total Contract Price Rs. _____ Lacs _____)

3.2 It is to be clearly understood that the total Contract Price is Rs..... lakhs

(Rupees only) which includes the following:

- i) Foundation bolts and packing plates
- ii) Cost of all other items which are necessary for completing supply as per scope of supply.
- iii) All other taxes, duties and octroi paid by the Sellers or their sub-contractors on raw materials, components and other material for their own manufacturer of finished equipments or part of finished equipments.
- iv) Custom duty on imported machinery, equipment, raw material and finished goods.
- v) Freight and insurance costs.
- vi) Lagging, Painting materials, cost of pipeline etc.

Note:

Purchaser shall be entitled for the GST Credit benefits wherever legally permissible as per applicable provision relating to GST from time to time. Sellers shall ensure, in time, the requisites from their end to this effect.

- 3.3 The total Contract Price amounting to Rs..... lakhs above at 3.1.2 is firm upto satisfactory performance of the equipment and machinery. However, any increase or decrease in statutory taxes or duties will be made applicable to both the Purchaser & Seller subject to the authenticated proof. The increase in the amount of taxes and duties will be on Seller's account if the material is not supplied within the schedule time period.

The total price offered at above is inclusive of the total amount in respect of CGST/SGST, and other taxes which shall be payable by the Purchasers from time to time. The total price offered is also inclusive of GST and other duties at the destination point, on finished bought out items supplied directly to site from sub-contractors works. The goods will be sent duly insured by a Insurance Companies regulated by IRA as mentioned in clause 4.0.

All the above details of GST/taxes, duties actually paid by the Sellers shall be shown separately for own manufactured items and for bought out items and claimed by the Sellers from the Purchasers as a reimbursement of the same, in each invoice/bills to be submitted by the Sellers limited to the amount shown against column no. 3.1 (ii) and (vi). The amount shown in Seller's bill for payment of all such taxes, sur-charges and duties will be computed on the basis of relevant statutory provisions in force on the date of despatch and shall be the actual amount as paid by the Sellers. The Sellers shall furnish to the Purchasers with their bills excise duty gate pass in support of excise duty and special excise duty paid.

In order to pass on the GST benefits to the Purchaser, the Seller will have to deliver the transport copy of invoice along with relevant documents to the Purchaser as per timely requirement of CGST/SGST/IGST. The Seller shall also provide the relevant documents to claim GST Credit benefits as required by concerned authorities. The Seller shall supply necessary documents as may be deemed necessary in this regard.

- 3.3.1 PROVIDED ALWAYS THAT the Purchaser or their authorised representatives shall be shown all original documents and accounting records in support of CGST/SGST/IGST, customs duties on imported machinery/components and original bills of the sub-contractors for satisfying that the CGST/SGST/IGST and other taxes as aforesaid has actually been paid to the sub-contractors including taxes and duties charged in bills.

- 3.4 Provided that not later **than 15 days of the date** of signing of this Agreement, the Seller shall furnish to the Purchaser a statement for price breakup subject approval of the seller as per which the Purchaser shall pay to Seller.

- 3.5 Likewise Seller shall also furnish to Purchaser, Billing Schedule **within 30 days of signing** of this Agreement with details along with month wise cash flow requirement.
- 3.6 The sale of Machinery and Equipment under this Agreement shall be governed by Sales of Goods Act/Goods and Services Act and all necessary documents for claiming GST credit will be exchanged between the Purchaser and Seller.

4.0 INSURANCE

The Contract Price mentioned in clause 3.1.2 is inclusive of the charges for comprehensive risk insurance of all Machinery and Equipment and other consumables including Transit Insurance. Machinery and Equipments shall be directly despatched to the Purchaser's Sugar Mill plant site from Seller/sub-contractors or sub-Sellers respective places of manufacture and despatch and the transit insurance policy in respect thereof shall be arranged by the Seller at such premium rates with such insurance company as may be approved by the Purchaser and kept in full force and effect until commissioning of the said project.

The Sellers shall have the interest of the Purchasers noted upon such policies of insurance. The insurance policies shall be taken by the Sellers in the joint name of the Sellers and the Purchaser.

If any consignment is received at the place of destination in damaged condition or is lost in transit, the representative of the Purchaser will take open delivery from the carriers and will give suitable remarks in the delivery book maintained by the Station Master or other carriers about the loss or breakage in transit. The representative of the Seller shall lodge claims with the Railways or other carriers on behalf of the Purchaser in time with a copy to the Sellers Head Office to enable them to lodge claim with the insurance company. All realisation of claims from the carrier/railway and insurance company, whether in the name of the Seller or the Purchaser, shall be to the account of the Seller. The Seller shall supply the replacement of Machinery and Equipment, goods or parts lost or damaged in transit, free of cost delivered at 'site' to the Purchaser within the time so as to adhere to the date of Performance Trial i.e.

It shall be responsibility of the Sellers to lodge the claims, if any, with the Insurance Company and to replace the items of plant and machinery lost or damaged. Such replacement to be done by the Sellers free of cost delivery at site within stipulated time so as to suit the date of Performance Trial. All moneys received against claims shall be to the account of the Sellers. In case of replacement no amount either in form of price or duty or tax or anything shall be paid to the Sellers, and GST, if again paid by the Sellers/their sub-contractors/sub-Sellers on replacement shall not be reimbursed.

5.0 DELIVERY

- 5.1 Seller agree for technical upgradation/modernization work in the field of energy conservation & improvement of sugar quality for achieving specifically identified qualitative parameters for enhancement of working efficiency in each sugar mill on EPC basis for Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of Cooperative Sugar Mills under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow as per specifications and scope of work given in the bid document at-----as per specifications and scope of work given in the bid document in accordance with the delivery schedule specified in the Schedule of Requirements (Section III (B) at -----**(name of the Sugar Mill)** ----- **from our manufacturing works/units as per specifications and scope of works outlined in bid document.**

The Seller agree start the supply of Machinery and Equipments, construction of foundations & buildings and erection and commission of machinery and Equipments specified,so that the supply of Machinery and Equipment and construction of foundations, and commissioning of Machinery and Equipments are completed within eight months from the date of

agreement. agreement will be made between the concerned sugar mill and the seller within 7 days after issue of letter of intent.

- 5.2 The Seller shall prepare and submit following to the Purchaser within 25 days from date of signing of this Agreement,
- a) Finalise the drawings, with Purchaser's approval. Evaporator bodies lay out and bleeding connection details will be approved by mill.
 - b) A time schedule for construction of foundations, if any in the sequence required for the erection of the Machinery and Equipment to ensure commissioning of Machinery and Equipment. The price break up of all equipments.
 - c) A delivery schedule of Machinery and Equipments, the Seller shall ensure that the machinery and equipment are delivered in sequence of priority for erection so that the items which are to be erected first as per erection schedule shall be sent first and with the same order of priority the progress of delivery shall be maintained thereafter accordingly.
- 5.3 The Seller shall place orders and furnish to the Purchasers the order acceptance copies from respective sub-vendors (on their official letter heads) in case of bought out items for supply progressively of long delivery items, subject to the approval of Purchaser, before claiming the 1st installment of advance and shall keep the Purchaser informed about the same.
- 5.4 The Seller shall provide to the Purchaser load data, coordinating drawings etc. along with foundation drawing to Purchaser for the purpose of approval of design and to enable the Purchaser to inspect/check machinery foundations according to schedule referred to therein to ensure commissioning of all equipments & machineries.
- 5.5 The foundation drawings of machinery equipments prepared by the Architect of the Seller shall be vetted by the Purchaser before execution. The purchaser's civil engineer with their stamp of approval or comments, shall return the drawings within 5 days of submission by the Seller.
- 5.6 The checking of the machinery foundations shall be done jointly by the Seller and the Purchaser at Sugar Mill plant site.
- 6.0 The Sellers shall supervise the erection, commissioning & performance work to be carried out to the satisfaction of Purchasers. Since time is the essence of the contract, Seller shall ensure that erection work is completed in such a manner that Machinery & Equipment is commissioned by.....

7.0 VISIT TO WORKSHOP AND INSPECTION:

- 7.1 The quality and design features and workmanship of the system equipments and machineries shall be strictly in accordance with bid document forming part of this Agreement and standard engineering practices. The Purchaser shall inspect the items, as per inspection procedure laid down in bid document .
Inspection team will visit the place of manufacture, assembly of the machinery and also Purchaser plant site and inspect the same.
The Seller and their sub-contractors for bought out items shall offer the plant and machinery for inspection during the course of manufacture as well as before dispatch. Scheduled visits

may be fixed by the Inspection team. The Seller shall give at least 7 days clear notice to the Purchaser and their nominated consultant before the dispatch of the machinery to the site. In case the Inspection Agency feels that inspection will be delayed before despatch, they will accordingly send a certificate to the Seller with an instruction to despatch the material attaching the certificate itself. Such materials will be inspected at site. The Seller shall supply necessary details of designs with calculations and drawings wherever required by the inspection agency for the verification of the details of specifications and for the purpose of inspection as incorporated in the Agreement. Details of items to be inspected and procedure there of etc.. The Purchaser or their Inspection Agency shall have the right to reject any material or assemblies or sub-assemblies if these are not of the specified quality and workmanship on the ground that they cannot be rectified.

- 7.2 The Purchaser or their nominee shall be within their rights to bring to the notice of the Seller any deviation observed from the specifications or standard engineering practices and the Seller shall be required to rectify such defects and deviations, if any, at their own cost. Such inspection by the Purchaser or their nominees shall not absolve the Seller from their responsibility of supplying the plant and machinery in accordance with the **Annexures** and terms of this Agreement. Seller shall provide the necessary facilities to the inspecting agency for proper inspection and testing of the equipment at Seller's or his sub-contractors works.

PROVIDED THAT in case of any major change in procedure, the Inspection Agency shall give sufficient advance intimation to the Seller. The Seller shall also provide inspection facilities normally available at the plant site for machinery inspection.

- 7.3 The Seller or their sub-contractors shall also satisfy the Purchaser and/or their Inspection Agency that adequate provisions have been made (a) to carry out instructions of the Purchaser and/or the Inspection Agency fully and with promptitude (b) to ensure that parts or materials required to be inspected are not used before inspection and (c) to prevent rejected materials or parts from being used.
- 7.4 Where parts, assemblies or sub-assemblies not approved/passed by the Inspection Agency have been rectified or altered, such parts, assemblies or sub-assemblies shall be segregated for separate inspection and approved before being incorporated in the plant and machinery.
- 7.5 The Purchaser or their Inspection Agency shall have the right to give their inspection mark on all items inspected by them.

8.0 TRIALS

- 8.1 The water, steam and vacuum and other trials shall be conducted by the Seller, before the commissioning of the Machinery and Equipment after complete delivery and the erection by the Seller to the entire satisfaction of the Purchaser.
- 8.2 On completion of the steam, water and vacuum trials to the entire satisfaction of the Purchaser and to that effect the Purchaser furnishes a certificate to the Seller that all the Machinery and Equipment mentioned in **Annexure I to VI** have been inspected and approved by the Inspection Agency, delivered as per detailed part list of material referred to above, erection and trials have been conducted satisfactorily under the supervision of Seller in accordance with the terms and condition of this Agreement.

9.0 PERFORMANCE TRIAL AND GUARANTEE:

9.1 The Seller hereby guarantee:

9.1.1 That all the Machinery and Equipment are supplied as specified in **Annexure I to II** under scope of work and technical specifications forming part of this Agreement.

9.1.2 The capacity and efficiency of the Machinery & Equipment supplied by the Sellers have to be achieved after successful running for crushing season 2019-20 average target steam consumption % cane @45 % on cane on rated capacity of the plant . **All newly equipments/systems,supplied , erected and commissioned as scope of work , will be complete in all respect to run during crushing season and to deliver the desired results.**

The performance parameters shall be achieved as a average figure for one crushing season detailed in **Annexure-III A**.

9.1.3 That all the machinery and equipment will be brand new of latest design and state of art technology,standard specifications and first class material and workmanship. Any part found defective within Twenty four months from the date of commissioning of the plant, shall be replaced fully or satisfactorily rectified by the Seller free of cost.

9.1.4 Entire Machinery and Equipment shall perform to establish the parameters detailed, under specifications and **Annexure-III A** (Performance Parameters.) In effect of the same the Seller shall issue to the Purchaser bank guarantees as detailed **at 16.1.(iv)**

9.2 To get the above performance guarantee released, the Seller shall conduct the performance tests of the equipments as per terms of this Agreement. The Purchaser shall give Ten days clear notice to the Seller for witnessing the performance trial. The performance trial should be conducted for three days in the presence of representative of:

1. Purchaser
2. Seller
3. Uttar Pradesh Coop. Sugar Factories Federation Ltd.
4. National Federation of co-operative sugar factories fed ltd, New Delhi

Out of the said four authorized representative minimum three of them shall be necessary to form quorum for the said committee to conduct the performance trial. Although the average data regarding the performance parameters should be achieved during the crushing season.The equipments and systems will give the performace as per entire satisfaction of mill.

The above said committee would tabulate the results achieved during the trial period of three consecutive days for the Machinery and Equipment indicating clearly whether performance has been achieved or not (reference performance parameters is given under **Annexure-III A and Annexure-VII of technical e-bid document (Performance Parameters and Certificate)**).

9.3 If the trials referred to in clause 9.2 are completed according to Clause 9.1.2 and to the satisfaction of the representatives mentioned above, or in their absence to the satisfaction of Committee constituted of persons mutually agreed upon by the Purchaser and the Seller, a certificate to that effect shall be issued by the Purchaser to the Seller. On furnishing of such a certificate by the Purchaser, the Machinery and Equipment shall be deemed to have achieved the guaranteed performance.

10.0 PURCHASER'S RESPONSIBILITIES:

- a) The Purchaser shall handover the site after clearance for installation of the plant within 10 days from the date of this Agreement.
- b) The Purchaser may, on the request of Seller, provide suitable area for site fabrication of items provided that the details of essential fabrication works to be done at factory site shall be furnished by the Seller to the Purchaser well in advance.
- c) Timely approval of layout, drawings, PERT/CPM, price breakup, delivery schedule, payment schedule etc. subject to timely submission by the Seller.
- d) The Purchaser shall provide an electricity and water for erection and commissioning of equipments.
- e) The Purchaser shall provide adequate water supply free of cost to the Seller at factory site. The necessary pipeline connection shall be arranged by the Seller.
- f) The Purchaser shall provide, electricity for start up of machinery and equipment/systems.
- g) The Purchaser shall provide 'C' forms and all necessary forms required for the concessional sales tax purpose.

11.0 SELLER'S RESPONSIBILITIES:

- a) Within 15 days of the signing of this Agreement, the Seller shall provide the equipment-wise break-up prices for major items of equipments mutually agreed between Purchasers & Sellers. The quarterly billing schedule should also be submitted within 15 days of signing of this Agreement. The Seller will get price break-up and billing schedule approved from the Purchaser within 20 days.
- b) The Seller undertake to hand-over within 10 days from the date of signing of this Agreement, a time schedule of deliveries relating to major equipment's and erection work as detailed in bid document
- c) The Seller undertake to hand-over to the Purchaser 6 copies of the drawings and maintenance manuals with description and detailed instruction
- d) A PERT/CPM/Composite bar chart shall be finalised, with the mutual consultation between the Purchaser and Seller and authorized agency, within 10 days after signing of this Agreement. The Seller will get PERT/CPM/Composite bar charts approved from the Purchaser within 15 days.
- e) An insurance coverage by a insurance company regulated by IRDA for the transit safety of equipment from place/s of concerned manufacturer/s works to the Purchaser site at ----- **name of the Sugar Mill** , Uttar Pradesh. This insurance coverage shall be valid till 30 days of receipt of the entire Machinery and Equipment at Site.
- f) The Seller shall adhere to schedules, submission of drawings, manual and other documents as mentioned
- g) The Seller shall ensure that all the major and important machinery items, equipments, plant and machinery dispatched from the Sellers works/their sub-contractors works are encased in packing boxes to prevent from any losses, damage etc. Any equipment, devices or material even if not included in specifications, but found necessary for the safe and satisfactory functioning of the unit, shall be supplied by the Seller at no extra cost to the Purchaser, as though, such equipment, material or work were not originally specified and formed part of the scope of work.
- h) The Sellers shall provide comprehensive risk insurance of all Machinery and Equipment and other consumables including Transit Insurance.

12.0 PATENT:

Patent and/or Copyrights

The Seller shall hold and save the Purchaser, its officers, agents, servants and employees from liability of any nature or kind including costs and expenses for or on account of any copyright or uncopyright, composition, secret processes, patented or appliance unpatented, articles or manufactured or used in the performance of this contract including their use by the Purchaser unless otherwise specifically stipulated in this Agreement.

In the event of any claim or demand being made or action being brought against the Purchaser for infringement of patent in respect of any machine, plant used or supplied by the Seller under this Agreement or in respect of any method of using or working by the Purchaser or such machine, plant or thing, the Seller will indemnify the Purchaser against such claims or demand and all costs and expenses arising from or incurred by reason or such claim or demand.

PROVIDED THAT the Purchaser shall notify in writing the Seller immediately if any claim is made and that they shall be at liberty, if they so desire with the assistance of the Purchaser, if required, but at the Seller's own expenses, to conduct all negotiations for the settlement of the same or any litigation that may arise there from; and

PROVIDED THAT no such machine, plant or thing shall be used by the Purchaser for any purpose or in any manner other than that for which they have been supplied by the Seller as specified in this Agreement.

13.0 FORCE MAJEURE:

The right of the Seller to proceed with the work shall not be terminated as provided in Clause 27.2 because of any delay in the completion of the work due to unforeseen causes beyond the control and without the fault or negligence of the Seller or their sub-contractors including (but not restricted to) act of God or Public, enemy, action of Government in its Sovereign Capacity, floods, epidemics, quarantine, strike, lock-outs, fires, explosives, accident, civil commotion, riots etc. In the event of any of the aforesaid contingencies, unusual or extraordinarily prolonged, the Purchaser will be promptly kept informed by the Seller by FAX/E-Mail followed by Confirmation in writing through a registered letter with AD, with documentary proof within 10 days of the commencement and completion of force majeure circumstances.

- a) Force majeure clause shall be applied only to the machinery equipment fall in the period as per delivery schedule.
- b) Extension of Time – Any period within which the Seller shall, pursuant to this Agreement, complete any action or task, shall be extended by the Purchaser if satisfied, for a period equal to the time during which the Seller was unable to perform such action as a result of Force Majeure.
- c) Measures to be taken – Seller affected by an event of Force Majeure shall take all reasonable measures to remove such Seller's inability to fulfil its obligation hereunder with a minimum of delay. The parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.
- d) If the seller even after extension of time by the purchaser as per provision of clause 13 (c) of this Agreement did not fulfill the contract even during such extended time ,then the purchaser may,if deem fit, rescind this contract and take such penal action as provided in this Agreement.

14.0 TERMS OF PAYMENT:

The Purchaser shall pay the Contract Price in the following manner:-

14.1 1st advance 10% (Ten percent) of the Basic Price amounting to Rs..... lakhs (Rupees only) will be paid within 10 days of signing of this Agreement subject to furnishing a bank guarantee of any Nationalised/Scheduled Bank for the said amount by the Purchaser in the format detailed at Annexure-XIII (Draft of bank guarantee for I and II advance). The advance given shall carry interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills.

14.2 IInd advance 10 % (Ten percent) of Basic price amounting to Rs..... lakhs (Rupees only) will be paid within 30 days (thirty Days) of signing of this Agreement subject to furnishing of a bank guarantee of any Nationalised/ Scheduled Bank by the Seller for the said advance in the format detailed at Annexure—XIII (Draft of bank guarantee for I and II advance) on fulfilling the following obligations by the Seller. The advance given shall carry interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills. However, if the Seller fulfills his contractual obligations, the release of above advance can be preponed accordingly.

a) Submission of drawings and layout of Sugar Mill by Seller and approval of the same by Purchaser as per clause 11.0 (a)

b) Proof of placement of order of bought out long delivery items and the order acceptance by the concerned party on whom the orders are placed to the satisfaction of the Purchaser, for the following items.

The proof of order and acceptance by the parties for supplying long delivery items should indicate clearly the items of order placed on them with major technical specifications, agreed date of delivery and should also confirm that the said items are for ----- name of the Sugar Mill, Uttar Pradesh only. The above proof need not contain the commercial aspects of the items concerned.

c) Submission of Price Break-up, Delivery Schedule of machinery and Equipment, Time Schedule of construction of foundation and approval of the same by the Purchaser.

d) Submission of Billing schedule as per clause 11.b and approval of the same by the Purchaser.

e) Complying all other contractual obligations which have become due upto that time.

f) A utilization certificate signed by Chief Executive Officer of the Seller for the advance paid as per clause 14.1 that the said advance has been utilized exclusively for purchase of machinery and equipments for ----- name of the Sugar Mill. Seller has also to provide documentary proof to the satisfaction of the Purchasers that the said advance had been utilised exclusively for Purchase of machinery & equipment.

14.3 All the above instalments of advance payment shall be utilised by the Seller for the purpose of procurement of materials/equipment required for the said Machinery and Equipment only. The

Seller shall produce an utilisation certificate of the second advance, within 30 days of receiving it, for placement of orders of all bought out items as envisaged in clause 14.2(b). They shall also furnish the proof and confirmation by the sub Sellers of Seller with details mentioned as at 14.2(b) above, in respect of bought out items.

If the Seller fails to receive payment of any instalment(s), of any advance for non-compliance of any contractual obligation on their part, the Seller shall not be entitled to any extension of time, for supply of equipment for making the Machinery and Equipment ready for commissioning by

The bank guarantee referred to at 14.1 to 14.2 above shall be automatically adjusted and get reduced with the progress of delivery of materials to the extent of total value of Machinery and Equipment related items despatched by the Seller upto that time.

- 14.4 The Sellers EMD will be converted in to security deposit which is 5% of Contract Price. The balance amount of Security deposit shall be deducted from the bills on prorata basis, which will be released after successful performance of new equipments/systems for 24 months from commissioning date.
- 14.5 After adjusting proportionate amount of advances & interest on advances as per clause 14.1 & 14.2 from the bills the balance 75% (Seventy Five percent) of the Contract Price as mentioned in clause 3.1.2 including 100% CGST/SGST/IGST actually paid by Seller shall be paid to the Seller. Following documents are to be presented by the Seller with the invoice;
- i) Inspection report of the Inspection Agency in respect of items which are required to be inspected before dispatch.
 - ii) Invoices, dispatch list and Railway Receipt/ goods receipt to be presented by the Seller against full part of the machinery supplied. In every invoices, the Seller shall give reference of the detailed billing list against each items of Machinery and Equipment supplied.
 - iii) GST invoices and gate pass showing the actual amount of CGST/SST/IGST and other taxes and paid on all bills for base price so as to ensure the Purchaser gets GST credit

Any wharfage or demurrage attributable to the Seller shall be borne and payable by the Seller and shall be the responsibility of the Seller only. In case the machinery is transported by road, the same shall be duly insured before transportation.

- 14.6 The Seller shall not sell or divert any material, sub-assemblies, machinery and equipment meant for the Sugar Mill Plant of the Purchaser, after the same have been inspected by the Purchaser, or an authorised representative of the Purchaser, under any circumstances, without prior written consent of the Purchaser as per terms of this Agreement.
- 14.7 The Contract Price as at 3.1.2 is firm and holds good till the Performance Trial of equipments. No price escalation will be given. However, any increase or decrease in statutory taxes or duties will be made applicable to both the Purchaser & Seller subject to the authenticated proof. The increase in the amount of taxes and duties will be on Seller's account if the material is not supplied within the schedule time period.

In case the Sellers fail to supply and delivery all the said equipment within the time agreed herein as per Annexure –I to IV, the Sellers shall be liable to pay to the Purchasers interest at the rate on PLR of State Bank of India on the amount of unadjusted amount paid to the Sellers reckoned from the stipulated date of completion of delivery of the said equipments as specified in Annexure-I to IV, the date of payment in respect thereof is made to the Sellers by the purchasers then interest at

State bank lending rate shall be paid by the Sellers to the Purchasers from the date of payment as aforesaid is made till the date the material or equipment concerned is received at site.

14.8 All taxes & duties such as CGST/SGST/IGST etc. are to be paid at actual as charged in Invoices & proof of payment is furnished subject to the maximum amount as specified in clause 3.1 (i) & 3.1 (vi).

14.9 The advance given under clause 14.1 and 14.2 shall carry interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills under clause 14.5. The date of adjustment of bills means the date on which duly inspected machinery / equipment / material is received at site.

15.0 PENALTIES

15.1 To secure the contractual obligations under this Agreement, the Seller shall be liable to pay the following penalties, if the Sellers

- a) Fail to deliver any or all the machinery & equipment within the delivery scheduled time specified in the contract, they shall pay liquidated damages by an amount equal to 0.5% (half per cent) per week or part thereof, of the Contract Price of any or all equipments but not exceeding 10% (ten percent) of the total Contract Price mentioned as at clause 3.1.2
- b) Fail to supervise the construction of Foundations & Buildings as per scheduled dates. The Seller shall be liable to liquidated damages to Purchaser equal to 0.5% (half per cent) per week subject to the maximum of 10% (ten percent) of supervision charges provided in clause 3.1.2
- c) Fail to supervise the erection & commissioning as per scheduled dates. The Seller shall be liable to liquidated damages to Purchaser equal to 0.5% (half per cent) per week subject to the maximum of 10% (ten percent) of supervision charges provided in clause 3.1.2

16.0 BANK GUARANTEE

16.1 To secure the contractual obligations as per this Agreement the Seller at their own cost shall furnish to the Purchaser, the following bank guarantees, by a Nationalised/Scheduled bank. All the guarantees shall be in the formats enclosed as Annexures XIII, XIV and XV respectively.

- (i) A bank guarantee against receiving the first advance of 10% of the Basic price amounting to Rs..... lakhs (Rupees only). This guarantee will be adjusted and reduced with the progress of supply of Machinery and Equipment after written consent of Purchaser. The advance given shall carry interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills.
- (ii) A bank guarantee for receiving the second advance and on fulfilling the obligation entioned at 14.2 (a), (b), (c) ,(d) & (e) (within 30 days from the date of signing of the Agreement) for 10% of the Basic price amounting to Rs.....lakhs (Rupees only). This guarantee will be adjusted and reduced with the progress of supply of Plant and machinery after written consent of Purchaser. The advance given shall carry interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills.
- (iii) A bank guarantee on or before signing of the Agreement for 10% (ten percent) of the total Contract Price mentioned at clause 3.1.2 amounting to Rs.....lakhs (Rupees.....only).This guarantee shall be against timely delivery of

machinery & equipment This guarantee will be valid upto 6 months after the schedule date of completion of supply & commissioning of entire machinery and equipment.

- (iv) (iv) A bank guarantee on or before signing of the Agreement for 10% (ten percent) of the total Contract Price mentioned at clause 3.1.2 amounting to Rs.....lakhs (Rupees.....only). This guarantee shall be in respect of guaranteed performance of machinery and equipment as detailed at Annexure I to IV) and shall be valid upto 60 days after the end of 24 months from the date of Commissioning Date of the equipments/machinery/system.
- 16.2 If the Seller shall abandon this contract or otherwise fail to supply and deliver the Machinery and Equipment within the scheduled period or any extension thereof granted by the Purchaser, or if the work or any part thereof failed to be performed due to Force Mejeure mentioned in Clause 13.0 and in any such case the Seller shall refund to the Purchaser within 30 days of demand such part of the advance payments there under made to them. The Purchaser shall have the right to proceed in any manner, as deemed fit, to protect it's interest.
- 16.3 The bank guarantee or guarantees required to be furnished by the Seller under the provision hereof to secure establishment of performance parameters of Machinery and Equipment supplied by them or for any other purpose under the provisions hereof shall be in the form of the Purchaser, as at Annexures –xiii , xiv & xv which form(s) shall invariably include the provision that the decision of the Purchaser as to whether there has been any loss or damage or default and or negligence on the part of the Seller will be final and binding on the guarantor, that the right of the Purchaser shall not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the Seller with regard to their liability or that proceedings are pending before any tribunal, arbitrator(s) or court with regard thereto or in connection therewith, that the guarantor shall pay to the Purchaser the sum under the guarantee(s) without demur on first demand and without requiring the Purchaser to invoke any legal remedy that may be available to them, that it shall not be open to the guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any facts affecting the demand or to require proof of the liability of the Seller before paying the amount demanded by the Purchaser under the guarantee(s). In case of invocation of any bank guarantee/s by the Purchaser. The invocation letter need to be counter signed by the Managing Director, Uttar Pradesh Coop. Sugar Factories Federation Ltd., 9-A, RanaPratap Marg, Lucknow – 226 001
- 16.4 The bank guarantee or guarantees required to be furnished by the Sellers under the provisions hereof to secure the performance of the Plant, equipment and machinery supplied by the Seller or for any other purpose under the provisions hereof shall be for such period as may cover establishment of performance parameters respectively as stipulated under this Agreement. If, however, the period of Agreement is extended due to force majeure or for any other reasons whatsoever under the provisions of this Agreement, Seller shall have such guarantees extended upto the corresponding extended period. Failure of the Sellers to do so will amount to a breach of the contract and in no case the extension of the period of the contract shall be construed as waiver of the right of the Purchasers to enforce the guarantee.
- 16.5 All guarantees will be irrevocable except with the written consent of the Purchaser.

The Bank guarantee required to be furnished by the Sellers under the provisions hereof to secure the advance payment or bank guarantee to secure the timely delivery of machinery or the bank guarantee for any other purpose under the provisions hereof shall be in the form (s) approved by the Purchasers which form (s) shall inter-alia invariably include the provisions that the decision of the Purchasers as to whether there has been any loss or damage or default and /or negligence on the part of the Sellers will be final and binding on the guarantor, that the right of the Purchaser to

recover from Guarantor any amount due to the purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Sellers with regard to their liability or that proceedings are pending before any Tribunal Arbitrator(S) or Court with regard thereto or in connection therewith and that the guarantor shall pay to the Purchasers the sum under the guarantee without demur on first demand and without requiring the Purchasers to invoke any legal remedy that may be available to them and that it shall not be open to guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any facts affecting the demand or to require proof of the liability of the Sellers before paying the amount demanded by the Purchaser under the guarantee (s) and that the guarantee shall be invoked only when the invocation letter is signed by the Purchasers, countersigned by the Managing Director, Uttar Pradesh Coop. Sugar Factories Federation Ltd. The guarantee required to be furnished by the Sellers under the provisions hereof to secure the advance payment, performance of expansion of Plant & Supervision of timely erection, the guarantee or any amount due to the Purchaser shall not be affected for any other purpose under the provisions hereof shall be for such period as may cover the period of supply, or the guaranteed performance respectively as the case may be, as stipulated under this Agreement and shall also provide a minimum of three months invocation period after expiry of date of validity of the guarantee. If, however, the period of this Agreement is extended under provisions hereof or due to Sellers not fulfilling their obligations under this Agreement, the Sellers shall have such guarantees extended upto the corresponding extended period at their cost and in no case the extension of the period of the contract shall be construed as waiver of the right of the Purchasers to enforce the guarantees.

17.0 PACKING MATERIALS

Since the cost of packing materials will be borne by the Purchaser, all containers (including packing cases, boxes, tins, drums and wrapping, etc.) in which machinery and equipment and stores will be supplied shall be considered non-refundable to the Seller.

18.0 EXCESS MATERIALS

Not to hamper the erection work, the Seller may bring on the site materials such as piping, valves fittings, consumables, cables, and wires, hardwares, insulation materials, refractory bricks, lubricants, paints, electrodes, gases, emery papers, kerosene oil, grease, cotton waste, asbestos rope, red/white lead, shims etc. for completion of work as per this Agreement. Such material as are found surplus after completion of erection shall be treated as the property of Seller and shall be taken back with prior approval of the Purchaser. Any material including tools & tackles etc., brought by the Seller at the site and not paid for by the Purchaser can be taken out by the Seller after the Purchaser's approval.

19.0 ARBITRATION

If at any time there should be any question, dispute or difference between the parties in respect of any matter arising out of or in relation to this Agreement, either party may give to the other party notice in writing of the existence of such question, dispute or difference and the same shall be referred to arbitration of a single arbitrator, when the parties may agree upon, otherwise two arbitrators, one to be nominated by each party. The two arbitrators appointed by the parties shall before proceeding with the reference, appoint a third arbitrator with mutual consent, who will act as the presiding Arbitrator. The arbitrator should not be associated with either of the parties to the agreement in any of the capacities as mentioned in the 7th Schedule of the The Arbitration and Conciliation Act 1996. The award of the arbitrators shall be final and binding on the parties and be accepted by them.

This reference to the arbitrators shall be deemed to be a reference, under the provision of The Arbitration and Conciliation Act 1996 and the rules made there under and any statutory modifications or re-encashments thereof that may be made from time to time and actually in force at the time of reference.

The cost of arbitration shall be borne by the parties as may be decided upon by the arbitrators. Jurisdiction for arbitration will be Lucknow, Uttar Pradesh.

The place of arbitration shall be Lucknow.

20.0 TRANSFERABILITY OF THE CONTRACT

Either party shall not transfer their right and obligations arising out of or in relation to this Agreement except with the written consent of the other party.

21.0 NEGLIGENCE OF THE SELLER

If the Seller shall neglect to manufacture or supply the all plant, machinery and equipment and factory buildings with due diligence and expedition or refuse or neglect to comply with any reasonable orders given to them in writing by the Purchaser in connection therewith, the Purchaser may give notice intimating to the Seller to make good within a reasonably specified time, the failure, neglect or contravention complained of, and if the Seller still without reasonable cause fails to comply with the notice within the time specified in the notice to be reckoned from the date of receipt of notice by the Seller, the Purchaser may take over the work of manufacture and supply of the Machinery and Equipment as a whole or in part out of the Seller's hands and/or may give it to another person on contract at a reasonable price and are entitled to recover any excess cost thus incurred by the Purchaser or make it good from any bills or dues of the Seller pertaining to this Agreement or recover such amount from the Seller.

22.0 MAINTENANCE / WARRANTY

22.1 The period of warranty shall be Twenty four months from the date of commissioning of the equipments/systems. All Sugar Mill Machineries and Equipments shall be deemed to be under maintenance/warranty period and the Seller shall remain liable to rectify/replace any Machinery and Equipment or parts thereof, such may be found to be defective or below the rated capacity under proper use and arising due to faulty design, materials or workmanship during the warranty period. The Purchaser shall give the Seller notice in writing setting out the particulars of the defects or failures and the Seller shall thereupon make good the defective or underrated equipments or replace the same free of cost to make it comply with the requirements of the Agreement. If the Seller fails to do so within a period of 10 days so as to reduce the production loss to the minimum as required by the Purchaser, the Purchaser may rectify/replace at the cost of the Seller the whole or any portion of Machinery and Equipment, as the case may be, which is defective or under rated or fails to fulfil the requirements of the Agreement and may recover the actual cost thereof from the Seller or adjust the same from any balance payment to be made to the Seller or adjust it against the amount of security deposit. The Purchaser shall also have the right to charge an additional amount upto maximum of 50% of the actual cost of replacement. Such rectification/replacement shall be carried out by the Purchaser within as short a time as possible and at a reasonable price and under advice to the Seller. In case of such rectification/replacement by the Purchaser, the Seller shall be liable to pay the Purchaser the whole cost of such rectification/replacement done and The Purchaser shall also have the right to charge an additional amount upto maximum of 50% of the actual cost of replacement the defective equipments on being replaced shall be taken away by the Seller at their own cost. The Purchaser shall have the right to operate the Machinery and Equipment after the commissioning date except that this shall not be considered to permit operation of any part which may be materially damaged by such operation before any required rectification or alteration have been carried out.

- 22.2 If it becomes necessary for the Seller to replace or renew any defective part of the machinery under this clause, the provisions of the first paragraph of this clause shall apply to the parts of the machinery and equipments so replaced or renewed until the expiration of six months from the date of such replacement or renewal or until the end of the aforesaid maintenance period whichever is later. (To be checked)
- 22.3 The rectification of new parts will be delivered F.O.R. Purchaser's factory site. The Seller shall also bear the cost of rectification/replacement carried out on their behalf by the Purchaser as mentioned above at the plant site. At the end of the maintenance period, Seller's liability shall cease. In respect of machinery and equipment not covered by the first paragraph of this clause, the Purchaser shall be entitled to the benefit of any guarantee given to the Seller by the original Sellers of the manufacturer of such machinery and equipment
- 22.4 The responsibility of the Seller for rectification/replacement under this clause shall extend to the actual cost of rectification/replacement of the defective items of machinery and equipment and shall not be in any way be deemed to be limited to the amount of performance guarantee and security deposit. The Security Deposit (after deducting the cost of repair/replacement if any of the machinery/equipment of the expansion of plant carried out by the Purchaser during the warranty period) with the Purchaser shall be refunded by the Purchaser to the Seller within 30 days of expiry of the warranty period.
- 22.5 The Seller shall operate the commissioned equipments and systems for crushing season 2019-20.

23.0 FOREIGN EXCHANGE

Any foreign exchange required for import of raw materials or equipment shall be arranged by the Seller. Non-availability of foreign exchange shall not entitle the Seller any extension of time for delivery of the Machinery and Equipment.

24.0 RIGHTS UNDER THE AGREEMENT

Unless otherwise specifically agreed, any concession shown by the parties to the Agreement to one another shall not prejudice their individual rights under this Agreement.

25.0 GROUNDS ENTITLING THE SELLER FOR EXTENSION OF TIME FOR DELIVERY OF THE MACHINERY AND EQUIPMENT

The Seller shall not be entitled to any extension of time mentioned in Clause 5.1 for any reason whatsoever except the following:

- 25.1 If the Purchaser expressly in writing for the supply and/or execution of the work by the Seller to be suspended for a substantial period of time for no fault of the Seller, the Seller shall be entitled to a reasonable extension of time.
- 25.2 If the Purchaser fail to fulfill the responsibility as detailed at clause 10.0 for a substantial period the Seller shall be entitled to a reasonable extension of time.
- 25.3 If the Purchaser fails to make financial arrangements as detailed at Clause 14.0 for making payments for a substantial period, the Seller shall be entitled to a reasonable extension of time, provided the Seller have complied with all contractual obligations which have become due upto that time.
- 25.4 The Seller shall be entitled to a reasonable extension of time due to Force Majeure Clause 13.0 of this Agreement.

25.5 If the Purchaser fail to make payment of 1st and 2nd advance to the Seller within the time stipulated in this Agreement and the Seller have fulfilled all their due contractual obligations, the extension of time as may be mutually agreed upon will be granted to the Seller by the Purchaser.

26.0 POWER TO CLOSE WORK

27.1 If at any time after signing this Agreement, the Purchaser shall, in order to comply with any directives of the Government of Uttar Pradesh not require the whole or any part of the work relating to designing, preparing engineering lay out, manufacturing, procuring, supplying of the proposed machineries & equipments for the said project system under the terms of this Agreement , to be carried out, the Purchaser shall give notice in writing of the fact to the Sellers who shall have no claim to any payment by way of compensation or otherwise on account of any profit or advantage which they might have derived from the execution of the said work in full but which they could not derive in consequence of the giving up of the work before completion. The Sellers shall be paid at contract rates for the full amount of work, any labour and material collected at site or arrangement made for execution of the work which could not be utilised either fully or partially on the work on account of the giving up of work as aforesaid. Where partial utilisation of material and arrangements as aforesaid have been made, the payment will be made in proportion to the value of the work done to the satisfaction of the Purchaser to the value of the whole work covered by the contract.

In the event of the closing of the work as above the Sellers undertake to refund within 120 days all outstanding unutilised and unadjusted amount of the advance payment, if any, thereafter with interest at the lending rate of State Bank's prevailing at that time.

27.0 Termination of Contract

The Purchaser reserves the right to terminate the whole or part of this Contract due to any or all the following conditions :

27.0.1 If the Seller assigns the contract, or sub-let the the Contract without the consent of the Purchaser and Sellers has failed or refused to take remedial steps, or the Seller :

- a) Has abandoned the contract, or
- b) has without reasonable excuse suspended performance of the contract for 30 days after receiving from the Purchaser written notice to proceed, or
- c) Despite previous warnings in writing from the Purchaser is not manufacturing/ supplying/ erecting the Plant and equipment in accordance with the Contract, or is failing to proceed with due diligence or is neglecting to carry out his obligations so as to affect adversely the Performance of the Contract.

27.0.2 The Purchaser may give 21 days' notice to the Sellers of its intention to proceed in accordance with the provisions of this Clause. Upon the expiry of such notice the Purchaser may without prejudice to any other remedy under the contract and without affecting the rights and powers conferred by the contract on the Purchaser, terminate this Agreement. Upon such termination the Purchaser shall be entitled to purchase Plant and equipment in substitution for the Plant and equipment at seller's expense or may itself complete the Plant and equipment.

27.0.3 As soon as practicable after the Purchaser has terminated the Agreement the Purchaser shall, by or after reference to the Parties and after making such enquiries as he thinks fit, determine the amount then due to the Sellers as at the date of termination and certify the amount thereof. The amount so certified is herein called 'Termination Value'.

27.0.4 **Payment and termination** - The Purchaser shall not be liable to make any further payments to the Sellers until the costs of completing the Plant and equipment or obtaining substitute Plant and equipment elsewhere and all other expenses incurred by the Purchaser have been ascertained and the amount payable certified by the Purchaser (herein called 'the Cost of Completion'). If the Cost of Completion when added to the total amounts already paid to the Seller as at the date of termination exceeds the total amount which the Purchaser certifies would have been payable to the Sellers under the Contract on completion the Purchaser shall certify such excess and the Sellers shall upon demand pay to the Purchaser the amount of such excess. Any such excess shall be deemed a debt due by the Sellers to the Purchaser and shall be recoverable accordingly. If there is no such excess the Sellers shall be entitled to be paid the difference (if any) between the Termination Value and the total of all payments received by the Sellers as at the date of termination.

27.0.5 If the Purchaser have any information that the Seller has become bankrupt or insolvent, or Receiver has been appointed, or compound with his creditors, or being a corporation commence to be wound up, not being a members' voluntary winding up for the purpose or amalgamation or reconstruction, or have an administration order made against him or carry on his business under an administrator or a receiver or manager for the benefit of his creditors or any of them, the Purchaser may be entitled to:

- a) To terminate the Agreement forthwith by 21 days' notice to the Sellers or to the receiver, manager, administrator or liquidator or to any person in whom the contract may become vested, or
- b) To give such receiver, manager, administrator or liquidator or other person the option of carrying out the Contract subject to his providing a guarantee for the due and faithful performance of the Contract up to an amount to be agreed.

28.0 DEATH, BANKRUPTCY ETC.

If the Sellers shall die or commit any act of bankruptcy, or being a corporation commenced to be wound up except for re-construction purposes or carry on its business under a Receiver, the executors, successors, or other representatives in law of the state of the Sellers or any such receiver, liquidator, or any person in whom the Contract may become vested shall forthwith give notice thereof in writing to the Purchasers and shall for one month during which he shall take all reasonable steps to present stoppage of the execution of this contract have the option of carrying out the contract subject to his or their providing such guarantee as may be required by the Purchaser but not exceeding the value of the Sugar Mill Plant for the time being remaining unexecuted. In the event of stoppage of the manufacturer of the Sugar Mill Plant the period of the option under this clause shall be 14 days only. Provided that, should the above option not be exercised, the Contract may be determined by the Purchaser by notice in writing to the Sellers and the Purchasers may exercise the same power which they could exercise and will have the same rights which they would have under the clause 21 if the work had been taken out of the Sellers hands under the clause. Further the claims of the Purchaser shall be preferred over the claims of other secured and unsecured creditors.

29.0 PARTIES TO INFORM THEMSELVES FULLY

Either Party shall be deemed to have noted that time is the essence of the contract and have carefully examined and satisfied themselves as to the terms and conditions, specifications, schedules, appendices and drawings etc. mentioned in Annexure -XI, other formats and appendices attached to this Agreement.

30.0 EFFECT AND JURISDICTION OF THE CONTRACT

30.1 The laws applicable to this contract shall be the laws in force in India.

For the purpose of jurisdiction, the courts at Lucknow have the jurisdiction to entertain suit or legal proceedings arising of this Agreement, subject to the arbitration clause 19 under this Agreement.

31.0 LIMITATION OF LIABILITY

The liquidated damages and replacement shall be limited to the Performance Guarantee under Clause 16.1(iv) of this Agreement and the Warranty under Clause 22.1 of this Agreement and beyond this, the Purchaser shall have no right to any other claims.

32.0 COMPLETION OF CONTRACT

Unless earlier terminated under the provisions of this Agreement shall be deemed to have been completed at the expiration of the warranty period as provided for under the warranty clause 22.

33.0 This Agreement including the Annexures, formats and appendices annexed hereto has been executed in two copies, the original remains with the Purchaser and the second copy will remain with the Seller. By signing this Agreement, both the parties -the Purchaser and the Seller agree to abide by its Clauses. Any alterations amendments or changes in this Agreement or its Annexures etc. will be valid only if agreed to by and between the Purchaser and the Seller in writing.

34.0 Stamp duty leviable on this Agreement shall be borne by the Seller

35.0 This document consists of the following Annexures:-

<u>Annexures No.</u>	<u>Contents</u>
Annexure I	Scope of Work.
Annexure II	Technical Specifications of Equipments & Machinery.
Annexure III A	Performance Parameters
Annexure III B	Working Parameters for HMBD and Plant Balancing Calculation.
Annexure III C	Detail of existing Boilers, Turbines and Evaporators Bodies Heating surface.
Annexure IV	List of approved makes for critical brought out items.
Annexure V	Inspection procedure.
Annexure VI	Parameter for inspection at manufacturers works.
Annexure VII	Performance Certificate.
Annexure VIII	Draft of Bank Guarantee against first & second advance payments.
Annexure IX	Draft of Bank guarantee for timely delivery.
Annexure X	Draft Bank Guarantee for performance.

IN WITNESS HEREOF THE PARTIES HEREUNTO HAVE SET THEIR RESPECTIVE HANDS ON THE AFORESAID DATE.

FOR AND ON BEHALF OF
THE PURCHASER

FOR AND ON BEHALF OF
THE SELLER

THE KISAN SAHAKARI CHINI MILLS LTD.

.....

-----,
UTTAR PRADESH –

(**General Manager**)

()

WITNESS _____

WITNESS _____

SCOPE OF WORK

Technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targeted identified qualitative parameters for each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis including design, engineering, manufacturing, procurement, supply, erection and commissioning including civil and structural works. As per technical specifications (Annexure –II) and scope of work mentioned below, the bidder shall also operate and maintain the newly installed system and equipment/machinery for crushing season 2019-20. The warranty of the equipments/systems will be for 24 months from commissioning date and the non performing/defective parts/equipments will be replaced free of cost during this period. The performance parameters shall be achieved as mentioned in **Annexure III-A** of this bid document.

The bidder will give details of schemes including complete Heat and Mass balances (HMBD's) showing Fuel, steam, power, water and condensate balance in order to achieve desired steam consumption @ 45 % on cane (maximum) and other performance parameters as per Annexure IIIA. Mill wise working parameters and other details are given in Annexure - III B and III C. The exhaust steam generation should match the exhaust steam consumption (including De-super heating gains). Main aim is to achieve desired steam consumption and in order to avoid periodic cleaning of evaporator set.

Following equipments/systems to be supplied erected and commissioned including civil work required in 10 sugar mills as specified below.

1. Name of the mill: ANOOPSHHR

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	Cane preparation improvement : 1.one no hydraulic grab for cane unloading of suitable capacity 2.Fibrizer to be converted into swing hammer type with 76 hammers by utilizing its existing shaft/bearings/drives by removing the old hubs and fitting of new hubs suitable for swing hammers of 2000 mm swing dia with suitable Anvil Plate (Pocket Type) 160° Angle to suit at existing location with proper matching of drives without any major changes. 3.centralized lubrication (dual line) system to be installed for all the four mills with grease lubrication.
1.2	Mill House automation - (a) VFD on cane carriers (primary &, secondary) (b) Chest pressure/motor RPM control on first and fourth mills. (c) Chute level sensors on first and fourth mills. (d) Auto imbibition water and temp control system
1.3	Existing 400 HP AC motor at mill no 2 to be provided with VFD panel
2.	Steam Generation
2.1	To provide AC VFD at existing motors for ID and FD fans on 20 TPH 2 boilers and 30 TPH one no boiler. All boilers having pressure of 21 kg/sqcm. All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Soot blowers to be provided at all the boilers. Boiler drum water level control.
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
2.3	Horizontal super heater coils to be changed to vertical coils in Boiler 1 and Boiler 2.
3.	Power Generation
3.1	Automated Power factor control system 800 kvar 02 numbers.
3.2	At mill/power turbines,its high speed gear boxes to be modified to get 1 kg per sq cm exhaust pressure

	to increase its power output.
4.	Process house
4.1	Juice Flow stabilization system with mass flow meter with VFD on raw juice and sul juice pumps along with other accessories and centralized controlled PLC system. NSI type juice sulphitor 180 HL capacity as per designated crush rate and as per standard specification of National federation.
4.2	Suitable size non-lube type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement complete with motor cable, starter etc.
4.3	Automatic controlled De super heating system for exhaust steam.
4.4	Addition of 1850 sq meter semiketner and 2000 sq meter vapour cell along with 2 nos direct contact heaters , two nos 200 sq meter vapour line juice heaters,one no juice heater 170 meter square heating surface complete in all respect on designed crush rate to achieve the desired steam consumption and adequate pan boiling.The new evaporator bodies and juice heaters to be equipped in all respect. Head of juice pump should be in accordance with DCH or new juice pump with motor to be added. The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run cycle.
4.5	Modification of existing Cooling and condensing system 1) Modification/rectification of all existing condensers and spray system to reduce water consumption. 2) Operation of condenser water inlet valves through automation.
4.6	Mechanical Circulator on 1 no. 40 ton capacity pan. Circulators to be provided with mechanical seal and variable drive motors.
4.7	Flow meters for water line at pan flow and integrator of suitable capacity.
4.8	1500/30 ⁰ one number continuous Centrifugal machine complete with SS Basket, suitable HP A.C. motor, control panel, local push button station, discharge chute, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging.
4.9	Planetary gear box for two number crystallizers to be Installed.
4.10	Pneumatic type discharge valve on 3 nos 60 ton and 6 nos 40 ton pans.
4.11	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5 ⁰ C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
4.12	Sugar bin to be shifted from ramala chini mill and erection at site including civil work and required modification.
5	Plant Automation
	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
6.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.

2. Name of the mill: BAGHPAT

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	1.one no hydraulic grab for cane unloading of suitable capacity 2. Fibrizer to be converted into swing hammer type with 76 hammers by utilizing its existing shaft/bearings/drives by removing the old hubs and fitting of new hubs suitable for swing hameers of 2000 mm swing dia with suitable Anvil Plate (Pocket Type) 160 ⁰ Angle to suit at existing location with proper matching of drives without ant major 3.Modification in exiting fibrizor if required to get the desired PI
1.2	Centralized lubrication(dual line) system to be installed for all the four mills with greese lubrication.
1.3	Mill House automation - Chute level sensors on first and fourth mills.
2.	Steam Generation

2.1	To provide AC VFD at existing motors for ID, FD fans for one no. 30 ton boiler, boilers having 21 kg/sq cm pressure. Soot blowers to be provided/modified at all the boilers All boiler instrumentation to be rectified for proper working.
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3.	Power Generation
	NA
4.	Process house
4.1	Juice Flow stabilization system with mass flow on raw juice with VFD on sul juice pumps along with other accessories and centralized controlled PLC system.
4.2	One new vacuum filter of 10 ft x 20 ft size along with all accessories and vacuum pump as prescribed in specification.
4.3	Suitable size non-lube type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement complete with motor cable, starter etc.
4.4	Addition of 1400 sq mtr semi kestner, 1400 sq mtr radial flow vapour cell, one no 200 sq mtr dynamic juice heater, two nos direct contact heaters for designated crush rate to achieve desired steam consumption in addition to modification in bleeding scheme and adequate pan boiling. The new evaporator bodies and juice heaters to be equipped in all respect. Head of juice pump should be in accordance with DCH or new juice pump with motor to be added. The scope of work will include all structure, civil work, pipeline, interconnections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes, all types of valves, vapour bleeding connections, condensate withdrawl system including pipeline and pumps, aluminum cladding, platforms, ladders, condenser if required etc. Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run cycle. TWO NOS 240 sq meter heating surface vapour line juice heaters for designed crushing capacity to be added on both evaporator sets with condenser and accessories, if required.
4.5	Modification of existing Cooling and condensing system 1. Modification of all existing condensers to reduce water consumption. one number vertical injection pump 2700 cu meter capacity with AC VFD with motor. 2. Operation of condenser water inlet valves through automation.
4.6	01 number mechanical Circulator on 60 Ton pan. Circulator will be provided with mechanical seals and variable drive motors.
4.7	Flow meters for water line at pan flow and integrator of suitable capacity.
4.8	1500/30 ⁰ one no. continuous Centrifugal Machine complete with SS Basket, 150 HP A.C. motor, control panel with push button station, discharge chute, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging. Complete in all respects.
4.9	Pneumatic type discharge valve on 5 no 60 ton pan, two nos 40 ton pans.
4.10	Super heated wash water system complete with pumps & valves etc for A centrifugal machines to maintain wash water temperature at 120 ±2 ⁰ C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
5	Plant Automation
	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
6.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strengthening of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.

03Name of the mill: BELRAYAN

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	1.one no hydraulic grab for cane unloading of suitable capacity. 2.centralized lubrication (dual line) system to be installed for all the four mills with greese lubrication
1.2	Mill House automation - (a) VFD on cane carriers (primary &, secondary)

	<p>(b) Chest pressure/motor RPM control on first and fourth mills. (c) Chute level sensors on first and fourth mills. (d) Mill no. 4 GRPF system with drive to be installed civil foundation provision already given at the mill.</p>
2.	Steam Generation
2.1	<p>To provide AC VFD at existing motors for ID and FD fans. for following boilers: Boiler 1&2 ; 20 TPH 21 kg/cm2(g). Boiler 3 ; 30 TPH 21 kg/cm2(g) Boiler 4&5 ; 40 TPH 45 kg/cm2(g)</p> <p>Auto drum water level control. Boiler drum water level control. All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control. Soot blower at old boilers (20/30 TPH) are to be provided.</p>
2.2	<p>Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.</p>
3.	Process house
3.1	<p>Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.</p>
3.2	<p>Suitable size non lube type screw type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement.</p>
3.3	<p>Automation of De super heating system and PRDS system repairing.</p>
3.4	<p>Addition of 2200 sq meter semiketner and TWO NOS 2200 sq meter vapour cell Robert bodies along with 2 no direct contact heaters for designated crush rate, two nos 250 sq mtr vapour line juice heaters with condenser/accessories, , one no 170 sq meter tubular juice heater on designed crush rate to achieve the desired steam consumption. The new evaporator bodies and juice heaters to be equipped in all respect. . Head of juice pump should be in accordance with DCH or new juice pump with motor to be added.The system will be well equipped to run during season.</p> <p>The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run cycle.</p>
3.5	<p>Modification of existing Cooling and condensing system</p> <p>1) Modification of all existing condensers to reduce water consumption. Operation of condenser water inlet valves through automation 4 nos.</p> <p>2) Vertical pump for injection water 3000 cumtr/hr 20 mtr head with ACVFD with motor.</p>
3.7	<p>Mechanical Circulator on 1 nos. 60 ton pan. Circulators to be provided with mechanical seal and variable drive motors with VFD.</p>
3.8	<p>1500/30⁰ one numbers continuous Centrifugal machines complete with SS Basket, suitable HP A.C. motor, control panel, local push button station, discharge chute, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging.</p>
3.9	<p>Pneumatic type discharge valve for 2 nos 50 ton pan,1 no 60 ton and 2 nos 80 ton pans .</p>
3.10	<p>Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5⁰C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.</p>
3.11	<p>12 point Sugar Dust collector</p>
4	Plant Automation
4.1	<p>Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.</p>
5	Piping & Structure
5.1	<p>All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.</p>

4 Name of the mill: BISALPUR

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	<p>Cane preparation improvement :</p> <p>1) One number hydraulic grabs for cane unloading of suitable capacity.</p> <p>(2)Fibrizer to be converted into swing hammer type with 76 hammers by utilizing its existing shaft/bearings/drives by removing the old hubs and fitting of new hubs suitable for swing hammers of 2000 mm swing dia with suitable Anvil Plate (Pocket Type) 160^o Angle to suit at existing location with proper matching of drives without any major changes..</p> <p>(3)Increase cane cutting knives from 36 to 40 numbers.</p>
1.2	<p>Mill House automation -</p> <p>(a) VFD on cane carriers (primary &, secondary)</p> <p>(b) Chest pressure/motor RPM control on first and fourth mills.</p> <p>(c) Chute level sensors on first and fourth mills.</p> <p>(d) Auto imbibition water control.</p> <p>(e) centralized lubrication (dual line) system to be installed for all the four mills with grease lubrication</p>
2.	Steam Generation
2.1	<p>To provide AC VFD at existing motors for ID and FD fans on 2 numbers 20 TPH boiler and 01 number 30 TPH boiler, all boilers having pressure of 21 kg/sqcm.</p> <p>All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control.</p>
2.2	<p>Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.</p>
3.	Power Generation
3.1	<p>Automated Power factor control system 800 KVAR-02 SETS.</p>
4.	Process house
4.1	<p>Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.</p>
4.2	<p>Suitable size non-lube type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement complete with motor cable, starter etc.</p>
4.3	<p>Automatic De super heating system for exhaust steam.</p>
4.4	<p>Addition of two nos 2000 sq meter vapour cell Robert bodies along with 1 no 170 sq meter vapour line juice heater with condenser etc , 2 nos 170 sq mtr juice heaters on designed crush rate to achieve the desired steam consumption. The new evaporator bodies and juice heaters to be equipped in all respect.</p> <p>The scope of work will include all structure, civil work, pipeline, interconnections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawal system including pipeline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run cycle.</p>
4.5	<p>Modification of existing Cooling and condensing system</p> <ol style="list-style-type: none"> 1. Modification of all existing condensers to reduce water consumption. Operation of condenser water inlet valves through automation. 2. New 10 mm thick MS header and PVC branch pipes of spray ponds.
4.6	<p>Mechanical Circulator on 1 no 60 ton pan. Circulators to be provided with mechanical seal and variable drive motors.</p>
4.7	<p>Flow meters for water line at pan flow and integrator of suitable capacity.</p>
4.8	<p>Pneumatic type discharge valve on 5 nos 40 ton and 2 nos 60 ton pans.</p>
4.9	<p>Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5^oC. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.</p>
4.10	<p>Sugar bins suitable for 08 hours holding capacity along with auto weighing and stitching system.</p> <p>Required modification in existing sugar graders, elevators and hoppers, if required, to install sugar bins.</p> <p>Installation of elevators and belt conveyors for sugar feeding to bins.</p>
4.11	<p>Twelve point dust collector with wet scrubber type ,ID fan,piping etc</p>

5	Plant Automation
5.1	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
6.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strengthening of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.

5. Name of the mill: NANAUTA

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	Cane preparation improvement - (a) Fibrizer Anvil Plate (Pocket Type) 160° Angle and any other modification to get desired PI.
1.2	Mill House automation - (a) An operated old model PLC system is to be rectified (b) Chest pressure/motor RPM control on first and fourth mills. (c) Chute level sensors on first and fourth mills. (d) Auto imbibitions and temp water control. (e) centralized lubrication (dual line) system to be installed for all the four mills with greese lubrication
2.	Steam Generation
2.1	To provide AC VFD at existing motors for ID and FD fans on 05 number boilers (20 TPHx02, 30 TPHx01, 40 TPHx02). All 20 TPH and 30 TPH boilers having pressure of 21 kg/sqcm and 40 TPH boilers having 45 kg/sqcm g pressure. New shoot blowing system is to be provided on all boilers. All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control..
2.2	(a) Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity. (b) Replacement of 20 TPH capacity boiler's economizers from fin type to coil type to increase outlet temperature of feed water from 100°C to 130°C.
3.	Process house
3.1	Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.. New raw juice two number pumps of 400 cu meter per hour, 70 meter head will be provided with suitable S.S. pipelines and S.S. popup valves.
3.2	Suitable size non lube screw type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement.
3.3	Automation of De super heating and PRDS system.
3.4	Addition of one no 2200 sq mtr semi kestner ,2200 sq mtr Robert type vapor cell, three nos direct contact juice heaters suitable for 5000 T.C.D. plant. Two nos 300 sq meter tubular juice heaters. to achieve the desired steam consumption. The new evaporator bodies and juice heaters to be equipped in all respect. . Head of juice pump should be in accordance with DCH or new juice pump with motor to be added. The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run cycle.
3.5	Modification of existing Cooling and condensing system 1. Modification of all existing condensers to reduce water consumption. 2. Operation of condenser water inlet valves through automation. 3. Replacement/rectification of injection header of required size with proper slope,uniform distribution of water to all pans/evaporators to get adequate vaccum.
3.6	Mechanical Circulator on 01no. 80 ton pan. Circulators to be provided with mechanical seal

3.7	01 numbers 1750 Kg/Charge fully automatic, flat bottom, plough discharge batch type centrifugal machine with duplex S.S (AVESTA 2205) basket, backing, sandwich and working screen, carbon steel monitor casing, top cover, molasses separator, massecuite feeding arrangement with butterfly valves, discharge chute, AC motor with VFD with control panel, push button station and cable between control panel to motor and push button station. The machine will supply with following accessories- 1. Suitable pugmill. 2. Hopper of 2.0 mtr width & 8.0 mtr to suite site and synchronization with existing hopper. 3. Suitable structure. 4. Suitable air compressor with drier.
3.8	Suitable capacity vibro screen for melt and filtrate juice.
3.9	Pneumatic type discharge valve on 2 nos 80 ton and 1 no 60 ton pans.
3.10	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5°C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
4	Plant Automation
4.1	1) Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
5	Piping & Structure
5.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.

6. Name of the mill: NANPARA

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	Cane preparation improvement - (a) Fibrizer to be converted into swing hammer type with 76 hammers by utilizing its existing shaft/bearings/drives by removing the old hubs and fitting of new hubs suitable for swing hameers of 2000 mm swing dia with suitable Anvil Plate (Pocket Type) 160° Angle to suit at existing location with proper matching of drives without ant major changes.. (b) One number hydraulic grab 5 ton capacity per tip for cane unloading. (c) Increase no. of knives from 40 to 42 at Leveler
1.2	Mill House automation - (a) Chest pressure/motor RPM control on first and fourth mills. (b) Chute level sensors on first and fourth mills. (c) centralized lubrication (dual line) system to be installed for all the four mills with greese lubrication
2.	Steam Generation
2.1	To provide AC VFD at existing motors for ID and FD fans for two nos. 20 TPH and one no. 30 TPH boilers. Pressure of all boilers is 21 kg/sq cm pressure. All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control..
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3.	Process section
3.1	Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.
3.2	Suitable size non-lube, screw type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement complete with motor cable, starter etc.
3.3	Automatic controlled De super heating system for exhaust steam.
3.4	Addition of two nos 2000 sq meter vapor cell Robert bodies and one no 650sq meter Robert body to achieve the desired steam consumption. Installation of two nos Direct Contact Type Heaters for achieving desired juice temperature The new evaporator bodies and juice heaters to be equipped in all

	<p>respect. . Head of juice pump should be in accordance with DCH or new juice pump with motor to be added.</p> <p>The scope of work will include all structure, civil work, pipeline, interconnections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pipeline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run</p>
3.5	<p>Modification of existing Cooling and condensing system</p> <ol style="list-style-type: none"> 1. Modification of all existing condensers to reduce water consumption. 2. Operation of condenser water inlet valves through automation. 3. Installation of VFD on one injection pump with motor.
3.6	Mechanical Circulator on 1nos. 40ton pan. Variable frequency drive and Mechanical seal on each circulator.
3.7	Flow meters for water line at pan flow and integrator of suitable capacity.
3.8	Pneumatic control discharge valve on two nos. 60 tonne and 01 no. 40 tonne capacity pan.
3.9	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5 ⁰ C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
3.10	New planetary gear boxes on 4 crstallizers
4	Plant Automation
4.1	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
5	Piping & Structure
5.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.

7.Name of the mill: POWAYAN

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	<p>Cane preparation improvement -</p> <p>(a) Two number hydraulic grab 5 ton capacity per tip for cane unloading.</p> <p>(b) Fibrizer to be converted into swing hammer type with 76 hammers by utilizing its existing shaft/bearings/drives by removing the old hubs and fitting of new hubs suitable for swing hameers of 2000 mm swing dia with suitable Anvil Plate (Pocket Type) 160⁰ Angle to suit at existing location without any major changes.</p>
1.2	<p>Mill House -</p> <p>A. Provision of modified design for portable short rake elevators in all the mills IRC by removing apron type slat conveyors with suitable donolley chutes,level sensors, with necessary modifications in existing mills,</p> <p>B. VFD on cane carriers (primary &, secondary)</p> <p>C. Chest pressure/motor RPM control on first and fourth mills.</p> <p>D. Auto imbibitions and temp water control.</p> <p>E. Automation at mills with PLC (with modification in existing PLC as required).</p> <p>F. All the mills grooved under feed rollers are to be converted into toothed underfeed rollers(TUFR) with juice drainage arrangement by using old shafts,bearings,housings etc. only CI shell to be replaced with fabricated TUFR.</p>
2.	Steam Generation
2.1	<p>(a) Provision of Economizer in Lipi make 20 TPH boiler – 01 number of 220 M² H.S. coil type as per IBR norm with by pass ducting and by pass piping mandatory Economizer to be complete with all shoot blowers, casing structure, ducting by pass, by pass ducting and feed water line modification.</p> <p>(c) To provide AC VFD at existing motors on boilers (20 TPH 2 numbers, 30 TPH 01 number) as follows: - ID fans (one number 250 HP and two numbers 150 HP)</p>

	<p>- FD fans (one number 100 HP and two numbers 75 HP).</p> <p>All boilers having 21 kg/sq cm pressure.</p> <p>All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control.</p>
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3.	Process house
3.1	<p>(a) Juice Flow stabilization system with mass flow on raw juice with VFD on sul juice pumps along with other accessories and centralized controlled PLC system.</p> <p>(c) One number Satwik type sulphur furnace of 100 kg/charge capacity.</p> <p>(d) 01 number Vibro screen of 5' Dia one for filtrate Juice.</p>
3.2	Suitable size non lube, screw type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement.
3.3	Automatic De super heating system for exhaust steam.
3.4	<p>Addition of one no 1500 sq meter vapor cell Robert bodies and two nos 440sq meter v Robert body ,two numbers 170 sq meter juice heater to achieve the desired steam consumption. The new evaporator bodies and juice heaters to be equipped in all respect.</p> <p>The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run .</p>
3.5	<p>Modification of existing Cooling and condensing system</p> <ol style="list-style-type: none"> 1. Replacement of three numbers double entry condensers with single entry condensers. 2. Operation of condenser water inlet valves through automation. 3. addition of Vertical pump for injection water 3000 cum/hr, 22m head with VFD system with motor.
3.6	Mechanical Circulator 01 no. 60 ton pan with mechanical seals and variable drive motors.
3.7	1500/30 ⁰ one numbers continuous Centrifugal machines complete with SS Basket, suitable HP A.C. motor, control panel, local push button station, discharge chute, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging.
3.8	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5 ⁰ C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
3.9	Sugar bins suitable for 08 hours holding capacity along with auto weighment and stitching system.
4	Plant Automation
4.1	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
5	Piping & Structure
5.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.
6	Installation of auto power factor control system 800 kvar two numbers.

8. Name of the mill: SAMPOORNANAGAR

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	Cane preparation improvement : 1) Three numbers hydraulic grabs for cane unloading. 2) Fibrizer Anvil Plate (Pocket Type) 160° Angle.
1.2	Mill House automation - (a) VFD on cane carriers (primary &, secondary). (b) Chest pressure/motor RPM control on first and fourth mills. (c) Chute level sensors on first and fourth mills. (d) Auto imbibition water control (e) centralized lubrication (dual line) system to be installed for all the four mills with greese lubrication
1.3	Rotary Screen for juice screening at mill along with drive and staging.
1.4	Automatic cane feeding system to suit all mill automation PLC based.
2.	Steam Generation
2.1	To provide AC VFD at existing motors for ID and FD fans. (30 TPHx01, 40 TPHx02). All 30 TPH boilers having pressure of 21 kg/sqcm and 40 TPH boilers having 45 kg/sqcm g pressure. All boiler automation to be integrated through PLC by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control will be through VFD on feed water pumps.
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3	Power House
3.1	Automatic power factor controller at kirloskar make alternator 1.5MW.
4.	Process house
4.1	Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.
4.2	Suitable size non lube screw type air compressor for all instrumentation and control requirements including refrigeration type air drier, vertical air receiver and standby arrangement.
4.3	Automation of De super heating and PRDS system.
4.4	Addition of one no 2000 sq mtr semi kestner,two nos2200 sq meter Robert body vapour cell,one no 1500 sq meter robert body and two nos 800 sq meter Robert bodies along with 2 no direct contact heaters on designed crush rate to achieve the desired steam consumption.Vapour line juice heater of 500 sq meter with complete condender and two nos 300 sq meter tubular heater will be in the scope of work. The new evaporator bodies and juice heaters to be equipped in all respect. Head of juice pump should be in accordance with DCH or new juice pump with motor to be added. The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run.
4.5	Modification of existing and condensing system 1.Modification of spray pump – MF 50/50 with cluster. 2.Modification of all existing condensers to reduce water consumption. 3.operation of water inlet valves through automation.
4.6	Mechanical Circulator on 01 no. 80 ton pan. Circulators to be provided with mechanical seal and variable drive motors.
4.7	Sugar melter 30 ton capacity with pumps and piping
4.8	1750 Kg/Charge fully automatic, flat bottom, plough discharge batch type one number centrifugal machine with duplex S.S (AVESTA 2205) basket, backing, sandwich and working screen, carbon steel monitor casing, top cover, molasses separator, massecuite feeding arrangement with butterfly valves, discharge chute, AC motor with VFD with control panel, push button station and cable between control panel to motor and push button station. The machine will supply with following accessories- 1. Suitable pugmill. 2. Hopper of 2.0 mtr width & 8.0 mtr to suite site with synchronization with existing system. 3. Suitable structure.
4.9	Pneumatic type discharge valve on 2 no 80 ton,4 nos 60 ton pans.
4.10	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115

	±5 ⁰ C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
5	Plant Automation
5.1	Centralized PLC system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
6.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strengthening of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party. All required piping, valves & structure for interconnecting with existing system.

9.Name of the mill: SARSAWA

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	<p>Cane preparation improvement -</p> <p>(a)- one numbers hydraulic grab 5 ton capacity per tip for cane unloading.</p> <p>(c) Mill no. 1 AC motor 450 KW, 1000 RPM VFD panel and planetary gear box with cable upto power turbine and other accessories will be provided.</p> <p>(d) Ropeless type coupling for mill no 1.</p>
2	Steam Generation
2.1	<p>ACVFD at existing motors on ID and FD fans for two numbers 25 TPH and one no 20 TPH boilers of 21 kg/sq cm pressure</p> <p>All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control.</p> <p>Fin type economizers of two boilers having 25 TPH capacity, 21 Kg/sq cm should be replaced with suitable heating coil type economizers.</p>
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3	Power Generation
	N.A.
4	Process House
4.1	Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system. pumps along with other accessories along with centralized controlled PLC system.
4.2	Automatic controlled De super heating system for exhaust steam.
4.3	<p>Addition of one no 1200 sq meter semi kestner, 1200 sq meter robert body vapour cell along with two nos 300 sq meter vapour line juce heater , 3 no direct contact heaters on designed crush rate to achieve the desired steam consumption. . The new evaporator bodies and juice heaters to be equipped in all respect. Head of juice pump should be in accordance with DCH or new juice pump with motor to be added.</p> <p>The scope of work will include all structure, civil work, pipeline, interconnections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pipeline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run.</p>
4.5	<p>Modification of existing Cooling and condensing system</p> <ol style="list-style-type: none"> 1. Automization of 3 numbers existing condensers in addition to replacement of two nos condensers to reduce water consumption. 2. Operation of condenser water inlet valves through automization of newly installed condensers. 3. Replace spray pond clusters to reduce water consumption. 4. New 10 mm thick MS header and PVC branch pipes of spray ponds.
4.6	One number mechanical Circulator on 50 ton pan. Variable frequency drive and Mechanical seal on each circulator.
4.7	Flow meters for water line at pan flow and integrator of suitable capacity.
4.8	1500/30 ⁰ one no. continuous Centrifugal Machine complete with SS Basket, 150 HP A.C. motor, control panel with push button station, discharge suite, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging.

4.9	Temperature and Brix Control on new Sugar Melter of 15 tonne per hour capacity.
4.10	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5°C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
4.11	12 point dust collector at drier house
4.12	Pneumatic type discharge valves 03 numbers pans (02 numbers 60 tonne pan and one no. 40 tonne pan).
5	Plant Automation
5.1	Centralized automation system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
6.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strengthening of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party. All required piping, valves & structure for interconnecting with existing system.

10.Name of the mill: SEMIKHERA

S.NO.	Name of the Equipment/System
1.	Milling section
1.1	NA
1.2	Mill House automation - (a) Chest pressure/motor RPM control on first and fourth mills. (b) Chute level sensors on first and fourth mills. (c) Auto imbibitions and temp water control. (d) Centralized lubrication (dual line) system to be installed for all the four mills with greese lubrication
2.	Steam Generation
2.1	To provide AC VFD at existing motors for ID and FD fans for two nos. 20 TPH and one no. 30 TPH boilers. Pressure of all boilers is 21 kg/sq cm pressure. All boiler automation to be integrated through automation by sensing and controlling furnace draft and auto drum water level control. Boiler drum water level control.
2.2	Steam flow meter of suitable capacity for live steam line from boiler to mill and power turbines and for condensate flow from boiling house to boiler. Flow meters for water line at pan flow and integrator of suitable capacity.
3.	Power Generation
3.1	Automated Power factor control system 800 kvar.
4.	Process house
4.1	Juice Flow stabilization system with mass flow on raw juice with VFD on raw juice ,sul juice pumps along with other accessories and centralized controlled PLC system.
4.2	Automatic controlled De super heating system for exhaust steam.
4.3	Addition of one nos 1200 sq meter semi kestner and one no 1200 sq meter Robert body, one no 2000 sq meter radial flow Robert body and one no 560 sq meter and one no 500 sq meter robert bodies along with one no 200 sq meter vapour line juce heaters with condenser ,if required., two nos 200 sq meter dynamic heter , 2 no direct contact heaters on designed crush rate to achieve the desired steam consumption. . The new evaporator bodies and juice heaters to be equipped in all respect. Head of juice pump should be in accordance with DCH or new juice pump with motor to be added. The scope of work will include all structure, civil work, pipeline, interconections with existing system and adjoining system, all types of pumps and motors, starters, cables etc, s.s tubes,, all types of valves, vapour bleeding connections, condensate withdrawl system including pieline and pumps, aluminum cladding, platforms, ladders, condenser if required etc.Requirement for adequate cleaning arrangement to be fulfilled to improve overall evaporator run.
4.4	Modification of existing Cooling and condensing system 1. Modification of all existing condensers to reduce water consumption. 2. Operation of condenser water inlet valves through PLC. 3. Installation of one VMF injection pump of capacity 2500 m ³ /hr with ACVFD with motors.
4.5	Mechanical Circulator on 1 number 60 ton pan. Circulators to be provided with mechanical seal and variable drive motors.
4.6	1500/30 ⁰ one number continuous Centrifugal machine complete with SS Basket, suitable HP A.C. motor, control panel, local push button station, discharge chute, pulp valve, feed unit with acceleration cup, cable between control panel to motor, with suitable magma mixer pug mill and staging.

4.7	Pneumatic type discharge valve on 3 no 60 ton,4 nos 40 ton pans.
4.8	Super heated wash water system for A centrifugal machines to maintain wash water temperature at 115 ±5°C. Heating media should be either low pressure (less than 1.5 kg) vapours or condensate.
4.9	Sugar bins suitable for 12 hours holding capacity along with auto weighment and stitching system.
5	Plant Automation
5.1	Centralized automation system for all temperatures of juices, steam, exhaust, vapour, live steam, condenser inlet/outlet water temperature, feed water.
6	Piping & Structure
7.1	All required piping, platforms, ladders, valves & structure for interconnecting with existing system. Adequate strenthning of adjoining structural system/operating platforms specially in case of evaporator bodies will be in the scope of party.All required piping, valves & structure for interconnecting with existing system.

- A. **Note:** Above details regarding equipment/system of each mill is the indicative basic feedback of the work to achieve the desired results as per performance parameters given in next Annexure III A. Bidders may do minor changes regarding selection of equipments/systems for proper balancing of the sugar mill in order to achieve steam consumption %cane @45% and other desired parameters. The bidder will give the evaporator bodies configuration and concern details as per the Scope of Work. The bidder responsibility will be to achieve the desired steam consumption %cane maintaining the rate of crush as per capacity of the sugar mill(TCD) and other parameters during crushing season and to operate the equipments and the systems durinf seaason 2019-20. The warranty of equipments/systems will be for 24 months as supplied new from date of commissioning.Non performing parts/equipments will be rectified/replaced during this period.
- B. All bidders are advised to visit concerned sugar mills for actual assessment of work before quoting the price.**Bidders are also advised to cosult and validate evaporator configuration with technical team of concerned mill.**

GENERAL CONDITIONS FOR BIDDER'S SCOPE OF WORK:

1. All civil work for erection of different equipments, machinery, evaporator bodies,juice heaters, including foundation work,staging,column etc.
2. To connect the various equipments/systems and evaporator bodies with the existing system, end-points with valves, pipelines etc., will be provided to make trouble free connection during the shut down period of the mill.Aluminium cladding insulation of newly supplied tubular vessles, all pipe lines, desuperheater will be in the scope of bidder.**All supplied equipments will be well equipped in all respect as per site conditions to run during crushing season and to get the desired results.**
3. All the machinery and equipments supplied should be brand new of latest design, fabricated as per ISI or equivalent Standard and tested for construction of first class material and workmanship along with material test certificates including bought out items according to technical specifications and as per given Engineering standards (of tender document) for construction material and latest design model. Provision of Platforms,ladders etc will be in the scope of party for ease of operation.
4. The work is to be executed as per the terms & conditions stipulated in the tender document and this Agreement.
5. Scope of Supply includes all the necessary equipments/systems with structural staging, platforms, approach ladders, walkways, sheds, supports, electrical, s.s tubes, instrumentation etc. of each section/equipment, duly coated with protective paints both internally and externally and insulation as applicable and all civil works. This also includes other tools & tackles required for the fabrication, erection at site and adequate manpower quite conversant with the fabrication & erection work of such plant and machinery.

6. All foundation bolts, foundation wedges, alignment packings, liners etc. are also included in the scope of supply.
7. After the finalization of the order, the Seller will prepare all civil foundations if any, structural and the detailed fabrication drawings and loading data of each and every plant & machinery, piping, electrical cabling, instrumentation, circuit drawing, layout drawing, isometric drawings, equipment layout drawings, elevation drawings for approval from Purchaser as well as by concerned Govt. Authority and shall be submitted well in advance to Purchaser for prior examination and approval thereof.
8. All the consumables required for erection & commissioning like gas, all types of welding/ brazing or soldering rods, emery papers, grinding paste, hold lights, graphite, Kerosene Oil, Rustburg, back joints, steam packings etc. are also included in the scope of supply.
9. All types of tools & tackles like hoisting tools, chain blocks, pulleys, wire rope hooks, tube expanders, hydraulic pumps and all special tools etc. shall be arranged by Seller. All staff including engineers, technicians, skilled, unskilled workers, Khalasi required for loading/unloading, fabrication, erection, testing and trials etc. shall be arranged by Seller. The machinery & other equipments delivered at site should be properly stored at site. The transportation of machinery and equipments from the stored place to their respective position shall also be in the scope of Seller.
10. Technical services included in the scope of supply:
 - a. Project In charge: Seller will retain a qualified, experienced and responsible project engineer/manager to supervise the installation and erection/ commissioning of the plant at site.
 - b. Training of the Purchaser's personnel: Seller shall arrange to train the Purchaser's personnel to operate the equipments/systems after two year warranty period.
11. All equipments including bought out items shall be offered for inspection to the authorized representative of Purchaser before dispatch.
12. The Seller shall prepare and submit to Purchaser the time schedule as per PERT/CPM chart. Seller should ensure that it will maintain the time schedule as per the chart. The equipment delivery shall strictly be in as per schedule given in the scope of work.
13. All materials of construction and fabrication shall be as per relevant ASME/ASA/AISI/ ASTM /ANSI /BS /IS/Standards and acceptable equivalent standards referred to in the Technical Specifications herein and in the tender document. They should also comply with standard and good engineering practices acceptable to the Purchaser and its expert consultant.
14. The Seller shall be fully responsible for any mishaps/casualty/fatal accidents of their employees during the contract period of project. Sugar mill shall not be responsible at all for such mishaps whatsoever. The Seller shall also be fully responsible for any mishaps/casualty/fatal accidents of Purchaser employees/machinery during erection and commissioning.
15. The layout for Installation of the equipments/system will be prepared by the Seller in consultation of Purchaser and will conform to various statutory requirements and guidelines of various Act/Statute/Rules and in order to provide working facility.

Following shall also be in the scope of supply:-

16. Painting – General
 - a. All steel structures shall be given red oxide primer coating followed by appropriate final coating
 - b. Railings and staircases, wherever required as per the factory act., duly coated.

17. All designs with respect to civil, structures, tank foundations etc. should follow the standard code practice for earth quake resistant designs viz. as per IS 1893.
18. Insulation, lagging with aluminum cladding, earthing, lightening arrestor, flame etc.
19. All dismantling, levelling/filling and shifting of waste to a designated place if required shall be in scope of Seller. All required structural works etc. shall also be in the scope of seller.
20. The capacity, efficiency and performance of the said plant & individual units should be guaranteed as per performance parameters for individual items, steam consumption and other parameters.
21. Any other items or activities not specifically mentioned in the scope of work and equipment list and required for completion of project are deemed to be included in the scope of work.
22. Mill/power turbine modification/upgradation including erection, if required then that work will be done by the Original Equipment Manufacturer (O.E.M).
23. The delivery period of all the equipments/system will be eight months from the date of agreement..

Annexure-II

TECHNICAL SPECIFICATION OF EQUIPMENTS/SYSTEM AND MACHINERY TO BE SUPPLIED

The specifications of the various equipments are outlined below. All specifications should be as per best standard practices of industry and national federation specifications. In case of any dispute/differences, the National Federation, New Delhi decision will be final.

1. Specification of Vapour Line Juice Heater

Partition plate and header: 12 mm

Body shell thickness: 12 mm

Tube plate thickness: 32 mm

Cover plate thickness: 40 mm with stiffeners

Double beet valves of SS 409 construction: As per requirement with SS-304 internals.

Safety valve of suitable specifications shall be provided in juice heaters.

Top & bottom venting control shall be by separate valves to atmosphere and vacuum arrangement. Butterfly valves shall be used in the venting, condensate and juice lines.

The partition plate and header shall be not less than 12 mm thick M.S. plate and flexible cord fixing arrangement be made of 30 mm sq. with dove tail grooves.

Valves and vapour piping: Rubber seated RA Valves with necessary piping with alternative arrangement of juice heating with exhaust steam for initial start up/ as per requirement.

Arrangements shall be provided to drain juice heaters, drained juice to go to collection tank along with suitable pump to deliver the drained material to juice sulphitor/ screened juice tank in mill house. The platform shall be provided below the juice heaters for opening the covers, draining and repairs etc. Each juice heater shall have mercury filled 150 mm dial type thermometer in inlet and outlet branch of juice and for the steam chest. One compound gauge shall also be provided in the steam chest.

Annealed stainless steel tubes as per AISI-304 L of 45 mm outside dia. And 1.2 mm thick shall be used. In Vapour line juice heaters, SS tube thickness shall be 1.6 mm. Ligament of the tubes shall be minimum 12 mm but 15mm for vapour line juice heater. The length of tubes shall be 5000 mm.

Condensate outlet pipe / siphon from various units shall have sight glasses at eye level in addition to sight glasses in extraction columns. Test cocks shall be provided at all units individually for testing condensate for sugar traces and suitable drainage connection with valves.

Vertical tubular juice heaters condensate shall be sent to cigar by gravity as per the ab. Pressures in the system. Proper sealing / siphon shall be provided for individual juice heater condensate. Condensate receivers and pumps with standby arrangement where ever required shall be provided.

Multiple passes vertical tubular juice heaters with easy opening device for cover plates shall have 2 condensate outlets. And the tightening bolt shall be 'T' head construction or of eye bolt type with individual fixing pins having circular pitch not more than 120 mm.

Vertical tubular juice heaters

The partition plate and header shall be not less than 12 mm thick M.S. plate and flexible cord fixing arrangement be made of 30 mm sq. with dove tail grooves.

Valves and vapour piping : Rubber seated RA Valves with necessary piping with alternative arrangement of juice heating with exhaust steam for initial start up/ as per requirement.

Multiple passes vertical tubular juice heaters with easy opening device for cover plates, shall have 2 condensate outlets and the tightening bolt shall be "T" head construction or of eye bolt type with individual fixing pins having circular pitch not more than 120 mm.

Arrangements shall be provided to drain all juice heaters, drained juice to go to collection tank along with suitable pump to deliver the drained material to juice sulphitor/ screened juice tank in mill house.

The platform shall be provided below the juice heaters for opening the covers, draining and repairs etc. Each juice heater shall have mercury filled 150 mm dial type thermometer in inlet and outlet branch of juice and for the steam chest. One compound gauge shall also be provided in the steam chest. The tighttening arrangement for cover should have T type constructions or eye bolts with individual fixing pins having circular pitch not more than 120m.

Annealed stainless steel tubes as per AISI-304 L of 45 mm outside dia. and 1.2 mm thick shall be used. In Vapour line juice heaters, SS tube thickness shall be 1.6 mm. Ligament of the tubes shall be minimum 12 mm and min 15mm for vapour line juice heaters. The length of tubes shall be 5000 mm.

Condensate outlet pipe from various units shall have sight glasses at eye level in addition to sight glasses in extraction columns. Test cocks shall be provided at all units individually

for testing condensate for sugar traces. All the condensate pumps delivery lines shall have suitable connections with valve for draining as and when sugar traces are found in the condensate.

Juice heater shall be provided with individual condensate receiver for exhaust and vapour condensates as per the ab. pressures in the system along with pump of suitable capacity and head with stand by arrangement.

Direct contact juice heaters

The direct contact juice heaters (DCH) shall be of all SS-304 construction designed at designated rate of sulphited juice and clear juice for ultimate capacity), complete in in-built entrainment separators, NRV in vapour line, control valves, auto control of temperature with all accessories. Thickness of DCH shell & internals shall be as per design but shall not be less than 6 mm

2. Specification for Automatic lime dosing and pH control system for juice sulphitation

Lime dosing into Juice Sulphiter shall be automatically controlled based on pre-set ratio to juice flow. Lime flow will be measured to give feedback signal to the lime dosing control loop.

The juice outlet pH control shall be achieved by regulating application of SO₂ gas to reaction vessel, by regulating molten sulphur and air feed control to sulphur burners.

The volumetric flow of mixed juice from mass flow meter shall control lime dosing to pre-set ratio.

The control system shall be compatible for centralized control DCS system. The control shall be made available with a remote / local selection switch.

3. Specification of juice sulphitor

It shall consist of a reaction vessel, stack gas recovery tower and milk of lime proportioning unit complete with inter connecting piping.

It shall be installed indoor.

The sulphitor shall have provisions for

- Pre liming
- Shock liming and
- Simultaneous liming and sulphitation
- Sulphited juice outlet shall be by overflow at a fixed height through peripheral gutter.

The reaction vessels will be provided with a stirrer. The stirrers shall be driven by a suitable HP, TEFC squirrel cage electric motor drive through a planetary gear box. The stirrer speed shall be around 16 rpm.

The vessel shall be complete with 200 dia sight & light glasses, continuous juice sampling device and other fittings and mountings. The continuous juice sulphitation unit shall be made from 12 mm thick mild steel plate and be complete with milk of lime proportioning arrangement, SO₂ gas pipe line shall be FRP piping and sparger shall be of SS 304 grade of schedule 40/FRP. Pipe line for juice from mill house upto evaporator 1st body inlet shall be of SS-304 grade of schedule 20.

Quick opening hinged manholes of 550 mm dia should be provided in the bottom cone, top cover and vessels for easy and quick cleaning of reaction vessel. Suitable number of hand-holes shall be provided in the recovery tower for cleaning of trays etc.

pH. Automation for juice sulphiter shall be provided.

4. Specification For Rotary Cane Mud Vacuum Filter

DRUM SHELL

Material - S.S. AISI 304 grade
Thickness - 6 mm with 12 mm shell rim of S.S. AISI 304 grade

HEAD

Material - S.S. AISI 304 grade
Thickness - 8mm (reinforcement with M.S. structural)

TRUNNION - M.S. with G.M. liners & force feed lubricator system.

INTERNAL PIPING - S.S. 304 grade

DECKING - Poly Propylene Grids

SCREENS - S.S. AISI-304 grade perforated screens having 30 SWG & hole size 0.5mm dia. 625 holes / sq. inch

MUD TROUGH - 8mm thick S.S. 409. Mud Trough with M.S. agitator and constant speed drive of 2.2 KW TEFC motor

HIGH FLOW VALVE- 2 Nos. One on each side per vacuum filter.

Body - SS AISI-304 (casing)

Wear Plate - G.M.

Tube / Pipe Plate	-	Drum internal piping and pipe plate in SS-304 divided into two specs.
Cake wash assembly	-	SS-304 pipes with brass /SS nozzles and G.I. splash panels on M.S. tubular structure and adjustable scrapper divided in two specs.
DRUM DRIVE	-	With VFD
KW	-	3.7
Type	-	TEFC
Drum Speed	-	Variable from 30 RPH to 10 RPH.
M.S. MUD OVERFLOW TANK	-	1 No.
Capacity	-	60 HL
Thickness	-	6mm
S.S. FILTRATES SEALING TANK	-	1 No.
Capacity	-	60 HL
MOC	-	SS AISI 304
Thickness	-	5mm
FILTRATE PUMPS	-	2 Sets (1 working & 1 standby)
Capacity	-	Of suitable capacity not less than 80 Cub. M/hr.
Head	-	30 meter
RPM	-	1440 RPM
MOC	-	C.I. body with SS impeller With suitable AC VFD drive
MUD CIRCULATION PUMP	-	2 Sets (1 working & 1 standby)
Type	-	Centrifugal
Capacity	-	Of suitable capacity not less than 80 Cub. M/hr.
Head	-	30 meter
RPM	-	1440 RPM
MOC	-	C.I. body with SS impeller With suitable electric motor drive
FILTRATE RECEIVERS	-	1 Set (Heavy & light) per vacuum filter
MOC	-	SS AISI 304
Thickness	-	Suitable thickness not less than 5mm
Vacuum Regulating Valve	-	1 Set C.I. body and G.M. working parts

CONDENSER - 1 No. per vacuum filter (with injection pumps and drive of suitable capacity , 1 working & 1 standby) . Pumps shall be separate for individual condensers. Total pumps 04 nos.

M.S. Condenser of cascade type of suitable size not less than 750mm x 2740mm long x 6 mm thick.

ENTRAINMENT SEPARATOR : 1 No. per vacuum filter.

M.S. construction of suitable size not less than 750 mm x 1520 mm long x 6 mm thick.

MUD MIXER : 2 Sets of suitable for ultimate capacity of 7500 TCD (one each for for individual vacuum filter).

MOC : M.S. construction – body 10 mm with stiffeners thick & side cover 10mm thick of MS

IS:2062 grade with scroll SS-304 grade

• mm thick

Construction : M.S. fabricated

Drive : Complete with suitable electric motor and reduction gear box etc

BAGACILLO PIPELINE : 2 Set for individual vacuum filter

MOC : G.I.

SWG (Thickness) : 1.8mm – 2.00 mm as per dia/ requirement

Size : suitable dia for ultimate capacity

Length : As per site condition

BAGACILLO CYCLONE : 2 Set for individual vacuum filter

MOC : G.I.

Thickness : 2.00 mm

Size : 2000 mm dia suitable for ultimate capacity

VACUUM PUMP : 3 Nos. (2 working & 1 standby)

Capacity : 3000 Cub. M/hr., against 500 mm Hg

Motor : 125 HP x 1440 RPM

Vacuum : 20" (500mm) Hg

MOC : C.I. body & SG iron impeller

BAGACILLO BLOWER : 3 Set (2 working & 1 standby)

M.S. construction complete with electric

motor suitable for Vacuum Filter of size 14'x28'

Capacity	:	7300 Cub. M / hr. at 200mm WG Pressure/ suitable capacity as per site condition
CAKE WASH PUMP	:	2 Nos. (1 working & 1 standby) for each set
Type	:	Centrifugal
Capacity	:	30 Cub. M/hr.
Head	:	50 meter
RPM	:	2900
MOC	:	C.I. body with SS impeller With suitable electric motor
RUBBER BELT CONVEYOR	:	1 set/2 sets as per layout
Width	:	600 mm, suitable for this duty
Length	:	Length as per site condition
Drive	:	Complete with suitable motor, idler, roller etc
Interconnecting	:	1 Set as per layout.
Pipeline & fittings		

The feed mixer, Air blower and cyclone separator shall be suitable for ultimate capacity.

All pipe lines which comes in contact with light and heavy filtrate shall be of SS AISI 304 grade

Pump details of suitable capacity for above vacuum filters.

Vacuum pump with drive	:	3 nos. (One standby)
Filtrate pump with AC VFD drive	:	2 nos. (One standby)
to vibro screens with filtrate receiving tank of Capacity-		60 HL
MOC	-	SS AISI 304
Thickness	-	5mm
Cake wash pump with drive	:	2 nos. (One standby) for each set
Injection pump with drive	:	2 nos. (One standby) for each set
Mud re-circulating pump with drive:		2 nos. (One standby)
Filtrate pump for screened filtrate juice to Juice sulphitor	:	2 nos.(one standby)

The vacuum filter shall be complete with all accessories, auxiliaries, piping valves and fittings etc. so as to make the system complete for proper and satisfactory operation for vacuum filter under reference.

The filtrate shall be delivered to the 3 nos. vibro screens – make SS-304 and size 60” (1524 mm).

The screened filtrate shall be pumped to juice sulphitor by providing suitable capacity receivers and pumps with standby arrangement. The screened bagacillo will be returned to the mud mixer by gravity.

The feed mixer, air blower and cyclone shall be suitable for 7500 TCD.

Mud belt conveyor – 2 nos.

The mud receiving belt conveyor shall preferably be placed below the operating floor. The mud scrapped from the filter shall be delivered to the belt conveyor through a closed 5 mm thick MS fabricated chute.

The mud receiving belt conveyor shall transfer the mud to another inclined mud belt conveyor, which will discharge the mud in a mud bin.

Mud bins

The mud bin shall have a capacity to store 4 hours of mud at 5000 TCD. The mud bin shall have a power operated sealed door at the bottom. The bottom most level of the bin discharge door shall be minimum 2500 mm above FFL to accommodate tractor trolley with tractor

5. General specification common to all conventional (Robert type) evaporator

Efficient design with peripheral juice, condensate and noxious gas outlets. The tubes shall be SS-304, 1.2 mm thick, fully annealed after final drawing. The pitch of the tubes shall be such that ligament is not less than 12 mm in any case.

Minimum thickness of mild steel plate of calandria, body and save all shall be of 16 mm, bottom saucer 22 mm and tube plate 32 mm.

The bottom saucer shall be welded to the calandria. The design must ensure that the expansion of tubes in the bottom tube plate is carried out without any difficulty.

An efficient juice distribution system should be provided to ensure uniform distribution of juice under the bottom tube plate.

The Robert bodies shall have a vapour space height between the top tube plate and bottom of the umbrella (cylindrical portion of the vapour space) not be less than 2.5 times the calandria height.

All MS fabricated pipes for vapour shall be of 8 mm thickness upto 800mm dia size and of 10mm over 800mm size.

The internal save all must be of efficient design and must not impart drop in vapour pressure.

The evaporator vessel shall have sight and light glasses. Location of light glasses should be such that it illuminates the whole tube plate.

Pressure / Compound / vacuum gauges, temperature gauge and thermo-well for Thermometer / RTDs in calandria steam / vapour inlet and vapour space of the vessels shall be provided.

All gauges shall be mounted on an esthetically looking gauge board only,

All manholes shall be quick opening & closing type.

All the sight and light glasses shall be of minimum 200 mm dia. The 1st sight glass shall not be higher than 1.5 m from the working platform and 100-150 mm above top tube plate.

The light & heavy box. Outlets shall be arranged and connected in separate headers with separate valves. Continuous juice / syrup sampler shall be provided.

There shall be only one vapour outlet from the top dome / catchall.

Suitable sturdy stools shall be provided.

The evaporator vessel shall be complete in every respect with necessary fittings for satisfactory operation.

Condensate outlet from the vessels shall have sight glasses at eye level in addition to sight glasses on the condensate outlet box of calandria. Sampling cocks shall be provided at all units individually for testing condensate for sugar traces of the condensate pumps delivery lines shall have suitable connection with valve for draining as and when sugar traces are found in the condensate.

Online check and auto draining of polluted exhaust condensate with alarm and DCS compatibility shall be supplied to save boiler water contamination.

External save-all – 2 sets (one for each evaporator set)

A generously sized, efficient External Entrainment Separator shall be provided for each evaporator set. It shall be mounted on the out-going vapour pipelines from quintuple – 5 to VLJH and condenser.

Syrup Receiver – 2 sets (one for each evaporator set)

Vertical cylindrical vessels, each of 1200 mm dia, 2000 mm height in mild steel construction complete with sight and light glasses, temp. & Pressure indicators, inlet outlet & equalising connections with valves etc. shall be provided.

6. General specifications of semi-kestner

The semi-kestner vessel shall be of efficient design must be provide with twin vessel construction i.e. with separate heat exchanger and entrainment vessels connected with an amply sized vapour duct & peripheral juice outlets.

The tubes shall be SS-304, 1.6 mm thick, fully annealed after final drawing.

The pitch of the tubes shall be such that ligament is not less than 14 mm in any case.

Minimum thickness of mild steel plate of calandria and body shall be of 16 mm, bottom saucer 22 mm and tube plate 32 mm.

The bottom saucer shall be welded to the calandria. The design must ensure that the expansion of tubes in the bottom tube plate is called out without any difficulty.

An efficient juice distribution system should be provided to ensure uniform distribution of juice under the bottom tube plate.

The internal save-all must be of efficient design and must not impart drop in vapour pressure.

The evaporator vessel shall have sight and light glasses. Location of light glasses should be such that it illuminates the whole tube plate.

Pressure gauges, temperature gauges and thermo well for thermometer/

RTDs in calandria steam inlet and vapour space of heat exchanger vessels shall be provided.

All gauges shall be mounted on an esthetically looking gauge board only.

All manholes shall be hinged and quick opening / closing type.

The steam safety valve shall be of butterfly auto controlled type compatible to DCS.

All the sight & light glasses shall be of minimum 200 mm dia. The 1st sight glass shall be 250 mm above top tube plate.

The light and heavy nox. Outlets shall be arranged and connected in separate headers with separate valves.

Continuous juice / syrup sampler shall be provided.

There shall be only one vapour outlet from the catchall of entrainment separator vessel.

Suitably sturdy stools shall be provided.

The equipment must be designed in such a manner that the outlet juice is taken out from the heat exchanger vessel only. There should not be any chance of outlet juice entering the entrainment vessel.

The semi-kestner vessel shall be complete in every respect with necessary fittings for satisfactory operation.

Minimum 1750 mm space between tube plate & juice deflector.

Suitable condensate extraction pump with receiver bottle, pump capacity not less than 80 cu.m. / hr. , with AC VFD drive RPM not exceeding 1500 and shall be compatible to centralized control DCS system. On line conductivity measurement of condensate water shall be provided so that any sugar trace detected in exhaust condensate for boiler shall be drained with alarm in control room.

The tubes shall be of stainless steel conforming to grade AISI 304 L, I.S. 13316, fully annealed after final drawing. The evaporator sets shall be complete in every respect with fittings for satisfactory operation, 8 mm thick mild steel interconnecting vapour pipes and vapour valves etc. where ever required as per site operative conditions.

A working platform with stair case from ground level and from operative platform to the level under and above the bodies for cleaning, operation, repairs and maintenance shall be provided. Platform with stair case shall be provided on the top of quintuple sets and for other safe operations where ever required.

Suitable relief valve shall be provided to ensure that pressure in the vapour space of quintuple's 1st and 2nd effect does not exceed the permissible limit. The Robert bodies shall have a vapour space height (between the top tube plate and the bottom of the umbrella or cylindrical portion of the vapour space) not be less than 2.5 times the calandria height, and 3.0 times in case of last body (All Robert type only) Suitable arrangement for light and heavy noxious gas removal shall be provided. Boxes shall be provided for easy removal of condensate from calandria. Manhole shall be provided in bottom saucer and vapour space . Suitable connection for soda washing and draining for juice shall be provided. Safety valves shall be provided on calandria of first body of quintuple. For open soda boiling, exhaust connections with rubber seated right angle valves of suitable sizes and vapour outlet with suitable size valves to atmosphere at top of quintuple body shall be provided. Pipe shall be extended out side the building.

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The semi- kestner vessel shall be of efficient design must be provide with twin vessel construction i.e. with separate heat exchanger and entrainment vessels connected with an amply sized vapour duct & peripheral juice outlets.

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The bottom saucer shall be welded to the calandria. The design must ensure that the expansion of tubes in the bottom tube plate is called out without any difficulty.

An efficient juice distribution system should be provided to ensure uniform distribution of juice under the bottom tube plate.

The internal save-all must be of efficient design and must not impart drop in vapour pressure.

The evaporator vessel shall have sight and light glasses. Location of light glasses should be such that it illuminates the whole tube plate.

Pressure gauges, temperature gauges and thermo well for thermometer/

RTDs in calandria steam inlet and vapour space of heat exchanger vessels shall be provided.

All gauges shall be mounted on an esthetically looking gauge board only.

All manholes shall be hinged and quick opening / closing type.

The steam safety valve shall be of butterfly auto controlled type compatible to DCS.

All the sight & light glasses shall be of minimum 200 mm dia. The 1st sight glass shall be 250 mm above top tube plate.

The light and heavy nox. Outlets shall be arranged and connected in separate headers with separate valves.

Continuous juice / syrup sampler shall be provided.

There shall be only one vapour outlet from the catchall of entrainment separator vessel.

Suitably sturdy stools shall be provided.

The equipment must be designed in such a manner that the outlet juice is taken out from the heat exchanger vessel only. There should not be any chance of outlet juice entering the entrainment vessel.

The semi-kestner vessel shall be complete in every respect with necessary fittings for satisfactory operation.

Minimum 1750 mm space between tube plate & juice deflector.

Suitable condensate extraction pump with receiver bottle, pump capacity not less than 80 cu.m. / hr. , with AC VFD drive RPM not exceeding 1500 and shall be compatible to centralized control DCS system. On line conductivity measurement of condensate water shall be provided so that any sugar trace detected in exhaust condensate for boiler shall be drained with alarm in control room.

General specification common to all conventional (Robert type) evaporator

Efficient design with peripheral juice, condensate and noxious gas outlets. The tubes shall be SS-304, 1.2 mm thick, fully annealed after final drawing. The pitch of the tubes shall be such that ligament is not less than 12 mm in any case.

Minimum thickness of mild steel plate of calandria and body shall be of 16 mm, bottom saucer 22 mm and tube plate 32 mm.

The bottom saucer shall be welded to the calandria. The design must ensure that the expansion of tubes in the bottom tube plate is carried out without any difficulty.

7. Specification Condensate Flash Heat Recovery System

Flash vapours of all condensates except for condensate of last vessel of quintuple set is utilized.

Efficient condensate Flash Vessel of SS 304 Construction of suitable /standard thickness shall be provided all interconnecting pipes shall be SS-304 schedule 20 (Min).

Heat recovery from exhaust steam condensate through free flow plate type heat exchange shall be done by pass arrangement shall also be provided.

All condensate from different vessels and pans shall be collected in Condensate Flash Vessels.

02 Nos of plate type heat exchanger shall be provided (One working and one standby) to heat suitable condensate for super heated wash water operating on exhaust steam to maintain the final desired temperature of 120 deg. C of condensate for A centrifugals with suitable capacity pumps (1W+1S).

Arrangement shall be provided for heat exchange unit for hot air blower for sugar hopper using condensate of suitable temperature.

Suitable capacity inlet condensate receiving bottles, pumps (one operating and one standby), where required, for above operations with AC-VFD drive compatible for centralized control DCS system shall be provided.

Suitable arrangement of tank and pump shall be made for back wash of plate heat exchangers.

Condensate Flash Heat Recovery System

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Suitable capacity inlet condensate receiving bottles, pumps (one operating and one standby), where required, for above operations with AC-VFD drive compatible for centralized control DCS system shall be provided.

Suitable arrangement of tank and pump shall be made for back wash of plate heat exchangers.

8. Specification of batch type pan

Batch pan shall have mechanical circulators along with VFD and VFD panel. These pan and mechanical circulator shall be designed to ensure efficient working of pans at low temperature vapour.

Magnetic flow meter with indicating, integrating and recording facility for hot water use in pan shall be provided.

Material of construction:

Blades: Stainless steel 304 grade

Hub: Cast Steel

Shaft: EN-8

Sealing arrangement: Gland packing

Mechanical circulators shall be supplied with the followings:

- Blades, Hub, Central shaft, Central shaft top, Bottom & Middle guiding housing with GM liners, Thrust bearing and pin bush coupling.
- Planetary GEAR Box, AC VFD motor and VFD panel.
- Mounting structure & supports.

Provision shall be made in lay out for ultimate capacity

The A massequite shall flow by gravity to receiving crystallizers. It shall flow to pug mill of high grade centrifugal machines by gravity.

The A1& C1 massequite shall flow by gravity to receiving crystallizers. It shall flow to pug mill of continuous centrifugal machine by gravity.

The layout and levels of vacuum pans and receiving crystallizers shall ensure quick and easy movement of massequite through gutters without deposits etc.

The 'B' & 'C' massecuite from pans shall be received in receiving crystallizer by gravity and then shall be pumped to respective vertical crystallizers.

S/V ratio shall be 7.00 for batch type pans

The vacuum pans shall be low head rapid boiling calandria type. Graining volume in pan shall preferably not exceed 45% strike capacity. Down take dia. Shall be 45 % of the calandria dia. The length of the tube shall not exceed 800 mm. in batch pans. The tubes shall be of Stainless steel fully annealed after final drawing confirming to I.S. 13316-92 having 102 mm outside dia, x 1.6 mm thickness. The pitch of the tubes shall be such that ligament is not less than 16 mm.

Mild steel tube plates shall be 32 mm thick, calandria, body and save- all 16 mm, bottom saucer 22 mm.

Vapour pipe plate shall be 10 mm thick. W shape bottom saucer shall be welded to the calandria in which case suitable arrangement for expansion of tubes in the bottom tube plate shall be provided. Bottom saucer shall be of ring supported design of minimum 750 mm height.

A cylindrical vapour space of 2.5 m shall be provided in the cylindrical portion above the strike level having centrifugal type catchall of efficient design. The vanes of entrainment separators shall be of minimum 5 mm thick AISI-304.

Each pan shall have feed-check valve after the feed manifold. Pans shall have sight and light lasses, light and reflection to illuminate the whole tube plate and to have calibration scale, vacuum gauge and thermometer in vapour space and a compound gauge and thermometer in the calandria.

Magnetic flow meter with indicating, integrating and recording facility for hot water use in pan shall be provided.

- **Technical specification for Condensers.**

Condensers shall be designed after complete analysis of operating conditions to optimum safety margins and minimum energy losses.

Each Condenser shall operate with close condensing approach and generate initial vacuum rapidly.

It shall maintain good condensing efficiency and non-condensable gas evacuation rate to keep vacuum and pan temperature at desirable level.

The Condensers shall be designed for easy and quick maintenance.

The Strainer, Spray & Jet Nozzles shall be opened for inspection & cleaning very quickly. Stiffing ring without welding shall be provided to give extra strength to the Condenser Hinge type Manhole.

Strainer Dummy further eases the upkeep of the Condensers.

The construction of condensers shall be Stainless steel. Use of corrosion resistant material ensures that Condenser remains unaffected by all kinds of acidic or basic environment.

The water consumption of condensers shall be minimum.

TECHNICAL SPECIFICATION

Designed Water Inlet Pressure at Condenser level	1.2 – 1.3 kgf/cm ² Absolute 0.2 – 0.3 kgf/cm ² Gauge
Designed Water Inlet Temperature	35°C
Vapour Pressure	0.1467 bar (a)
Vacuum Generation Time	When body is heated to 90°C – 2 Min. When body is not heated – 30 min
Vacuum	660 of Hg
Approach of condenser	5 deg C

MATERIAL SPECIFICATION

Shell & Cone	S.S. A.I.S.I 304
Jet & Spray Box	S.S. A.I.S.I 304
Man Hole Cover	Hand Operated Hinge type MS Plate lined with Stainless Steel on water exposed section.
Flanges (Outside)	MS. All flanges shall be drilled as per Table 17(sizes up to 150NB) IS6392. Table 11 (for sizes 200NB and above)
Flange (Inside)	Stainless Steel. All flanges shall be drilled as per Table 17(sizes up to 150NB) IS6392. Table 11 (for sizes 200NB and above)
Spray & Jet Nozzles	Engineering Thermoplastics
Tail Pipes	S.S. A.I.S.I 304
Strainer	Stainless Steel 304
Nuts-Bolts (Inside)	Stainless Steel 304
Nut-Bolts (Outside)	MS

AUTOMATION OF CONDENSER (CONTROL VALVE BASED)

Water flow to Condenser shall be controlled by using single control valve for Jet & Spray Nozzles.

The Condenser Automation shall have single control valve at water inlet for Spray and Jet Nozzles. The parameters such as vacuum, tail pipe temperature, Masecuite Temperature & Spray Box Pressure shall be the analog inputs for the Condenser.

The Logic shall be defined and PC shall control the control output of the Valves.

The Valves shall be positioned accordingly as per the requirement of the water in the Condenser to maintain the desired vacuum.

The junction box near the Condenser shall terminate all the Ais and AOs. The junction box will also have the termination of the Temperature and Pressure transmitter. The signals will flow from the junction box through 12-pair cable to Control room.

SPECIFICATIONS

CONTROL VALVES:

Butterfly Valve with double acting pneumatic Actuator and Electro-Pneumatic non smart Positioner and AFR shall be provided.

a. INSTRUMENTATION

S. No.	Item	Make	Power	Type
1	Pressure Sensor	Honeywell/Bar ksdale	24 vdc	Diaphragm
2	Temp. Sensor	Radix	24 vdc	RTD (Head Mounted)
3	Solenoid Coil	Rotex	24 vdc	3/2 way & 2/2 way
4	Pneumatic Actuator	Rotex	--	--
5	Electro Pneumatic (Non-Smart Positioner)	Rotex	24 vdc	Rotary Type
6	Butterfly Valve, MOR and hand wheel	Crane process	--	--
7	Cable	-	-	Flexible

11. Specification of High grade fully automatic plough discharge centrifugal machines with AC VFD drive

Four (4) nos. Batch type, high grade centrifugal machines, each of 1750 kg / charge, minimum 20 cycles / hr, fully automatic recycling type centrifugal machines shall be supplied for single curing of 'A' massecuite with 94.95 deg. Brix. Massecuite to pugmill shall flow by gravity. Magnetic flow meter with indicating, integrating and recording facility for hot water (SHWW) use in A- Centrifugal machines shall be provided.

Basket shall be SS DIN Standard 1.4462 / SS Standard metallurgy.

Working screen – Brass, Backing screen – S.S. Backing screen, 4 mesh DOVEX R Type

Spindle- material specification – Forged steel as per IS 2004 CLASS IV

The machines will be driven by suitable power AC VFD.

All operations of the automatic recycling type machines including charging and discharging, changing the speed, application of superheated wash water, molasses separation, operation, bottom valve closing etc. Shall be automatic. Manually operated brakes shall also be provided with process logical control programme such that the plough should not be operated at higher basket speed than ploughing speed of 60 RPM. Manually controlled steaming arrangement of monitor casing shall be provided.

Each machine shall have individual switch fuse isolator of suitable rating, an ammeter, and thyristorised/ air break-contactors for operating the machine in manual and fully automatic recycling with a separate selector switch. All operations such as charging, bringing the machine at different speeds, retardation, water wash, pugmill gate opening and closing, syrup separation, cycle over etc. Shall be given on control box and indicated by different lamps. All these applications shall also be possible to be applied by push button/rotary switch in manual or automatic position of the selector switch from the control box except bringing the machines at different speeds, retardation and cycle over. Control box shall have speed indicator etc. Necessary arrangement in the panel shall be provided for tripping of the machine in case of high temperature on sensing through ETDs of the motors. AC VFD motor panel board & drive shall be equipped with AC's with standby arrangements.

The machines shall be complete with all accessories, auxiliaries, including support, structure, platform pug mill with drive, super – heated wash water system (PHE) with stand-by arrangement, air compressors with standby (1+1), run-off tanks, run-off pumps (1+1) with drive, incoming and control panels etc. Air compressor for A – centrifugal machines shall be independent of Air compressor for instrumentations of boiling house. The centrifugal station shall be complete in all respects and shall have necessary accessories namely Air compressor 7 kg/cm² (g) with standby arrangement with receiver and refrigeration dryer system to supply moisture free air for pneumatic control of centrifugal machines.

All pumps shall have standby arrangements. Mono rail with suitable capacity for hoisting shall be provided

Structure, pug-mill, molasses gutters and all other accessories suitable for installation of one no. Similar machines shall be provided for ultimate capacity.

'Auto - manual' switch shall be provided for manual operation in case of failure of control system. Necessary manual controls shall be provided.

Manually operated power actuated brakes shall also be provided for emergency.

Necessary arrangement in the panel shall be provided for tripping of the machine in case of high temperature on sensing through ETD, of the motors and excessive vibrations / wobbling.

Suitable interlocking arrangement shall be provided in panels so that not more than one machine start at a time.

Provision shall be made in lay out suitable for ultimate capacity of 7500 TCD

Molasses Run-off Tanks

Two (2) sets of vertical cylindrical, 8mm thick of Mild Steel IS 2062 construction molasses run-off tanks each of 3 m³ capacity, one for AH molasses and one for AL molasses shall be supplied.

Molasses Pumps

Two (2) sets of molasses run-off pumps of suitable capacity and head for each duty, one operating and one standby, complete in all respect with AC motor shall be provided.

Pug Mill

The pug-mill shall be made out of 8 mm thick mild steel plate and provided having paddle type stirring arrangement, driven by Ac electric motors through shaft mounted planetary gearbox.

12. Specification of Continuous Centrifugal Machines

Magnetic flow meter with indicating, integrating and recording facility for hot water use in continuous centrifugal machines shall be provided.

Continuous Centrifugal Machines for 'C' fore worker shall be capable to cure 'C' massecuite of minimum 101 brix and 48 purity at a rate of 8-10 tonnes per hour and shall be having a minimum gravity factor of 2400.

Continuous Centrifugal Machines for B single curing shall be capable to cure B massecuite of minimum 96 Brix and purity not exceeding 65.00 at the rate of 16-18 Tons per hour.

Continuous Centrifugal Machines for C1 and A1 shall be capable to cure C1 and A1 massecuite of minimum 94-96 Brix at the rate of 12- 15 Tons per hour.

Continuous Centrifugal Machines for 'CAW' magna curing shall be capable to cure 'CAW' magna at a rate of 16-18 Tons per hour.

A1, B and CA magma and its liquidation shall flow to horizontal magma melter by gravity. **The staging level / operating platform level of all the machines shall be suitable for this purpose.**

Massecuite feeding device shall be provided with manual as well as pneumatic control valves it shall operate automatically with load end shall stop in case power failure.

Each continuous centrifugal machine shall be complete with following:

- a) Mild steel monitor casing designed to provide a sturdy support for all machine elements,
- b) Basket of SS 304 make
- c) Separate compartments for sugar and molasses,
- d) Sight and light glasses for inspection,
- e) Hinged doors for access to the sugar chamber,
- f) Sugar sampler and
- g) Water/steam washing arrangement,
- h) Stainless steel accelerating cone, receiving cup etc.
- i) Hot water, exhaust steam & Q1 vapour for washing arrangement with metering device to measure the wash water,

Massecuite feeding device shall be **provided with manual as well as pneumatic control valves**. It shall operate automatically with load and shall stop in case power failure.

Drive arrangement having motor pulley, V belts and bearings, Massecuite feeding devices etc.

The angle of basket shall be 30° for all low grade of massecuite / magma.

Large enclosed distribution header of suitable size, with water jacket, shall be provided for C & C1 massecuite. Pug-mills for A1- massecuite, B – massecuite & CFW shall be provided and shall be mounted over the machines, suitable transient heaters, with automatic temp control shall be provided for C & C 1 massecuite. Arrangement between B – massecuite and CFW magma pugmill shall be provided to use common centrifugal machine for B- massecuite and CFW magma curing.

The machines shall be complete with all accessories, auxiliaries, including support, structure, and platform pug mill with drive.

Auto controlled temperature of wash water system for massecuite curing in continuous centrifugal machines shall be provided. Run-off tanks, run-off pumps (1+1) with drive, incoming and control panels etc shall be as per requirement.

The pug-mills for A1, B massecuite, C1 & CAW magma shall be made out of 8 mm thick mild steel plate and provided having paddle type stirring arrangement, driven by AC electric motors through shaft mounted planetary gearbox.

The complete centrifugal station shall be complete in all respects and shall have necessary accessories namely Air compressor 7 kg/cm² (g) with receiver and refrigeration dryer system to supply moisture free air for pneumatic control, Air compressor under reference shall have standby arrangement and shall have no connection with any other air compressor proposed in boiling house.

Approach ladder and platform to top feed headers and pugmill shall be provided.

Vapour from 1st vessel of quintuple shall be used in continuous centrifugal machines & transient heaters, where ever required. Live steam shall not be used. In fact Live steam connection shall not be provided in boiling house.

Monorail with 5 tonnes capacity, with chain pulley block over the centrifugal machines / motorised- remote control system shall be provided.

Provision shall be made in lay out suitable for ultimate capacity of 7500 TCD.

Molasses Run-off tanks

Independent molasses run off tanks with independent pumps (one working one standby) shall be provided.

Five (05) Nos. Of vertical cylindrical, 8mm thick of Mild Steel IS 2062 construction molasses run-off tanks each of 3 m³ capacity, one each for BH, A1, C1 Heavy, CL, and Final molasses shall be supplied.

Molasses Pumps

Two (2) sets of molasses run-off pumps of suitable capacity and head for each duty, one operating and one standby, complete in all respect shall be provided.

Magma Mixers

The machines shall discharge sugar directly into the corresponding magma mixers of suitable width & capacity and design. The shell of the magma mixers shall be not less than 6 mm thick mild steel plates having double beater paddles shall be driven by AC electric motors through shaft mounted planetary gearbox.

Independent . magma mixers for CFW sugar (2 nos.), CAW sugar & B single cured sugar (2 nos.) & 1 no. For A1/C1 single cured sugar shall be provided.

Two nos magma mixer shall be provided for B single cure sugar to avoid longer side magma.

Magma Pumps

Four (04) nos. Magma pumps for CFW magma (one operating and one standby) & A1/C1FW magma, (one operating and one standby), each of 25 T/hr. Capacity, 15 m massecuite head with replaceable tips and driven by AC motor through a planetary / helical gearbox shall be supplied for CFW magma.

A1, B and CA magma and its liquidation shall flow to horizontal magma melter by gravity.

The staging level / operating platform level of all the machines shall be suitable for this purpose.

Independent pugmill/ system shall be provided for each duty.

Independent pipeline from each pump shall deliver the magma to its destination.

All massecuite, magma, molasses pumps and cut over lines etc. Shall be provided with suitable steam duty pipe line, NRV and valves for heating using vapour from quintuple 1st body with suitable condensed water drain arrangement.

Structure, pug-mill, molasses gutter and all other accessories suitable for installation of one no. Continuous centrifugal machines for C - massecuite shall be provided for ultimate capacity.

13. Specification for Electric motors

All the electric motors up to 100 HP except ID Fan motors shall be squirrel cage TEFC enclosure induction motors. All motors above 100 HP shall be slip ring SPDP enclosure induction motors. All the electric motors (except fibrizer and mill drive motors) shall be suitable for operation at 3 phase, 50 Hz, 415 volts, AC supply and shall conform to IS-325-1978 and IS-4722 specifications.

Motors for batch type centrifugal machines shall be suitable for S1 duty as per IS-4722 specifications and shall be designed for an ambient temperature of 50 deg.C and shall be fitted with ETDs in each phase for thermo-protection of motor windings.

Electric motors for cross travel and long travel of cane unloader and mill house cranes shall be slipring TEFC enclosure suitable for S5 duty as per IS-4722 specifications. The electric motors for hoisting/de-hoisting of cane unloader and mill house crane shall be squirrel cage TEFC enclosure suitable for S5 duty as per IS-4722 specifications.

Electric cables (11 KV, 1.1 KV grade)

All power, control and lighting electric cables for the entire electrical distribution system shall be supplied.

The power electric cables from the main distribution panel to each MCC and to auxiliary panel shall be suitable for the connected load at unity load factor excluding standby equipments. Suitable derating factor for the cables shall be considered as per the recommendations of cable manufacturers. All power and lighting cables shall be PVC insulated, entigra, suitable for use at 1100 V and shall conform to IS-1554(part I) specifications. All the control cables shall be of copper conductor. The minimum cross sectional area per core shall be 4 mm² for entigrad conductor and 2.5 mm² for copper conductor for power cables and 1.5sq.mm. copper conductors for control cables. All the power & lighting cables shall be 3. ½ core. All other cables from MCC to motors shall be 3 core.

All cable terminations shall be through crimping type cable lugs. Cable glands shall be provided at panels.

Power factor correcting capacitors

Suitable number and rating low loss power capacitors APP double layer type shall be supplied to improve the plant power factor to 0.90, at 5000 TCD (22 Hrs. Basis) crushing capacity. The power capacitors shall conform to IS-2834 specifications. Suitable capacity capacitors shall be connected to main distribution panel through APFC panel. Capacitors shall also be connected to the motor control centers and across motors of rating 125 KW and above with SF unit, contactor and 'ON' indication.

Capacitors shall be connected to main distribution panel through auto power factor correction relay and capacitor switching shall be by contactors / thyristered switching. If thyristered switching is used capacitors shall be MPP type.

14. Specification for De-superheating Station

Pressure Reducing & De-superheating control valves shall be provided for controlling the temperature and pressure of the steam for Boiling House and to gain the additional steam for process. The quantity of live steam to the PRDS should be monitored with flow meter and totalizer.

Juice Flow Stabilisation Control

Raw Juice from mill house shall be entgrade to for consistent flow of juice to process section. The total juice flow to boiling house will be controlled as per a set point based on the raw juice tank level and control with a magnetic mass flow meter and VFD driven pump. This set point will be automatically corrected according to the level in the raw juice tank, to take care of small changes in cane feeding rate. The control logic will be such as to ensure both high level and low level of juice in the tanks and actual set point will operate to maintain the tank level between 30% to 70% flow with flow variation of +/- 1.0%. In case of high or low level in juice tank, alarms will be generated to draw the attention of operator. If level of the tank is above the set point (upper limit), then carrier speed should be reduced and is over rider to all parameters to prevent overflow from the raw juice tank.

Lime Control

Lime dosing to juice sulphiter shall be automatically controlled based on pre set ratio to juice flow. The total lime slurry will be pumped to an overhead tank and overflow from this will be fed to a lime-proportioning unit. The required amount of lime will be diverted to the process and rest will be sent back to the lime storage tanks. Lime flow will be measured to give feed back signal to the lime dosing control loop to ensure correct amount of lime is added to juice. In case juice flow reduced below 5% of crushing rate, the lime dosing unit will close 90% to 100% depending on operator set value.

PH Control

PH of treated juice will be measured and signal given to control speed of sulphur dosing pump of film type sulphur furnace. Combustion temperature of film type burner will be measured and air vent valve will be adjusted to control temp. Of sulphur burner.

15. Specification for Pipelines and Fittings

All hot and cold water,, juice, syrup, magma, molasses, massecuite and bled vapours, live steam, reduced pressure and exhaust steam pipe lines shall be suitable for 5000 TCD and all headers shall be designed for ultimate capacity. Various pipelines shall be designed so that velocities given below are not exceeded at 5000 TCD.

- (i) Water and juice : Suction 1.0 m/second
Delivery 1.2 m/second.
- (ii) Condensate : Suction 1.0 m/second
Delivery 1.20 m/second
- (iii) Syrup : Suction 0.5 m/second
Delivery 1.0 m/second.
- (iv) Molasses : Suction 0.3 m/second
Delivery 0.5 m/second.
- (v) Massecuite/
Magma : Suction 0.1 m/second
Delivery 0.15 m/second
- (vi) Superheated/ Saturated steam : 30 m/second
Exhaust steam : 30 m/second
Bled vapours : 30 m/second
- (vii) Compressed air/
SO2 : 20 m/second
- (viii) A maximum pressure drop of 2.0 kg/cm² g. Shall be allowed from boiler outlet to the inlet of power turbine and maximum pressure drop of 0.10 kg/cm² g shall be allowed from power turbine to the inlet of evaporator.
- (ix) All pipelines, valves etc. Shall be designed for 5000 TCD and not for ultimate capacity, but main exhaust header, inter connecting piping at evaporator and vapour piping to pans shall be designed for capacity of 5000 TCD for 22 hrs. Basis.

Safety valves to be provided in the steam pipe lines wherever necessary. Blow off pipes shall extend beyond the roof/factory buildings safety valves in the exhaust and reduced pressure lines shall be butterfly type auto operated compatible to DCS. Suitable drains, valves, steam traps etc. Shall be provided in all steam lines, where necessary. High pressure steam manifold of 500 mm shall be provided for ultimate capacity. It shall have additional provision of blind nipple for one additional boiler on incoming side one additional inputs for turbo alternator on outgoing side. It shall have flanged ends.

The pipes shall conform to specifications given below :

- **Cast Iron Pipes and Fittings :**

The pipes shall be class 'B' and shall conform to IS:1537-1976 specifications and integrally cast flanged joints or spun pipes with screwed ends on flanges as per IS:1536-1976 shall be used.

The pipe fittings shall be class 'B' and shall conform to IS:1538 (part I to XXIII) – 1976 specifications. Only flanged joints shall be used. One side of the flanges shall be machined in case all pipe fittings.

(ii) Mild Steel Pipes

All mild steel pipes and pipe fittings used for conveying of air, cold water, to water (except boiler feed water) oil (except oil for hydraulic accumulators), molasses, massecuite, juice, lime, syrup, noxious gases etc. Shall conform to IS:1239(part I)-1976 and IS:1239 (part II)-1982 specifications. All juice from mills to inlet to evaporater shall be of SS grade 304 schedule 20 and syrup piping including entigrade juice piping shall be class 'C' (heavy) and rest of the piping shall also be of class 'C' class (heavy). The thickness of mild steel pipes having diameter more than 200 mm shall be 8 mm.

In case of all piping above 25 mm NB only flanged joints shall be used. All flanges to be as per IS:6392-1971 or to suit connecting prescribed valves.

- ***Live steam, exhaust steam and boiler feed water piping:***

These shall conform to I.B.R. wherever applicable. The thickness of exhaust and vapour steam piping shall be minimum 8 mm in case of 300 mm dia. And above.

The distance between two flanges in straight portion of pipes shall not exceed 6 metres except steam, vapour feed water pipe. In case of bends, flanges shall be provided atleast at one end. All steam expansion bellows shall be of stainless steel tested at 1.5 times the exhaust steam pressure.

Valves shall be provided in each branch line of juice heater,, reduced pressure steam lines, water separator, drain, steam trap etc.

All delivery lines of juice, water and syrup of centrifugal pumps shall have non-return valves except in case of unstrained imbibitions juice pump, lime and Mud pumps, Water connections to be provided at each station for cleaning.

All exhaust steam valves for evaporator and pans shall be right angle valves.

All bearing and oil cooling water to be collected in a masonry tank which shall not be more than 10 metres away from the factory building.

16. Specification of Supporting steel structure

Necessary staging for all the machinery including supporting columns, integral floor structure, staircases, railings etc. Shall be provided. Mills, mill drive, turbo generator, clarifier and lime slaker shall be on R.C.C. staging. Sulphur furnaces shall be on steel staging with R.C.C. flooring. Other machinery except those on floor level shall have its own supporting steel staging.

Pipelines, mill and power house cranes, condensers, flash tanks, cyclone separators can be supported on building columns. No weight of other machinery or platform shall be transmitted to building columns. Mills to have mild steel chequered or perforated or grating flooring. Centrifugals to have chequered plate floor. In the boiling house chequered plate flooring shall be provided. All gangways, passages, staircases, working platform and railings shall be convenient. Chequered plate thickness shall be minimum 6 mm.

End columns of pan staging to be similar to intermediate columns to take load of pans to be added.

A clear working platform of atleast 2.0 m. Width shall be provided in working front of pans and evaporator bodies. Moving space between pans shall be 1000 mm and in evaporator bodies a distance of 750 mm shall be provided. In case of other units a clear working platform of atleast 1.2 m. Width to be provided.

All statutory requirement regarding staging platform staircases, safety devices etc. Shall be observed at the design stage.

17. Specifications for Insulation

For lagging the equipments, pipes and fittings etc. Of the sugar plant as per specifications the Sellers scope of supply should be as follows:

All the equipments and pipelines (including fittings as defined under Clause 6 of IS:7413 specifications), surfaces in the sugar plant above 55 deg. C. Temperature should be effectively lagged (except where heat dissipation is desirable and the surfaces which become hot intermittently such as steam traps and relief valve outlet pipes, vents, blow-down pipes etc.)

Material to be used:

For lagging: Factory made mattresses of Mineral wool (LRB mattresses) as per IS:8183 – (latest issue) specifications. The bulk density of the material should be:

100 kg/m³ for hot surface temperatures upto 250 deg. C.

120 kg/m³ for hot surface temperatures above 250 deg. C. But upto 550 deg. C.

(as per clause 3.2 of IS:8183 – (latest issue) specifications)

The thickness of the lagging should be such that the difference between temperature measured (at any time during the maintenance warranty period as per clause 22 of the draft agreement) at any point on the outer surface of the lagging cladding (i.e. protective finish) and the ambient temperature at that time should not exceed 10 deg. C.

For protective finish:

Material for cladding of all lagging in the sugar plant should be 22 gauge aluminium sheet cladding (as per IS:7413 standard specifications) (except as follows). It includes fixing of 'L' lugs, M.S. flat rings, wire netting stitched with lacing wire and fixing of aluminium sheet with the help of self taping screws and grooving all joints with necessary overlap to make it completely water proof.

The valves and flanges (including the flanges of the equipment) to be lagged shall be provided with openable lagging boxes for valves and fittings of the HP steam lines (including boiler plant) openable boxes shall be out of 18 SWG thick aluminium sheets as per IS:737 designation 31000 condition H3.

All the turbines lagging should be provided with boxes of 3 mm thick Aluminium sheets. Lifting block should be provided for these boxes.

Balance materials (not specified above) should be as per IS:7413 specifications.

Application and finishing of the lagging materials, protective coverings etc. Should be carried out by the Seller as per IS:7413 (latest issue) specifications.

18. All specifications of the equipments/machinery/system, which comes under scope of supply, erection and commissioning of the bidder, will be as per general standard norms of the industry. In case of any deviation, the concerned sugar mill decision will be final.

19. SPECIFICATION FOR 170 Sq. Mtr. H.S. JUICE HEATER

1. Shell thickness	12 mm
Top and bottom tube plate thickness	32 mm
Top and bottom cover thickness(with opening and Closing arrangement)	32 mm
Stiffening of covers with 1"x 4" size plate along with out ring	
1 Bolts for covers 1" x 6" size	
No. of tubes per pass	13 nos
No. of Passes	24 nos
Total no. of tubes	312 nos
2. Size of tubes	42 mm(ID) x 45 mm(OD)x 4060mm (length)
Ligament	13 mm (Minimum)
Pitch	59 mm(Minimum)
Condensate connection	4"Size
Ammonia(NOX) gasses connection	Lower & upper side of 2" dia
14.Header partition plate thickness	12mm

19. Technical specification & scope of supply for sugar elevator for sugar grader to sugar bin

S.No.	PARTICULARS	SUGAR ELEVATOR
1	Capacity	20T/HR
2	Quantity	1 no.
3	Metal to handle	Sugar
4	Center to center distance	14 Meter/ as per site location to suit sugar bin system
5	Casing thickness	5 mm thick plate top and bottom & 4 mm thickness in middle with stiffeners iS 2062
6	Casing size	1100 mmX 550 mm
7	Belt & bucket	
	Belt	12 mm thick 5 ply nylon impregnated 5 mm top, 2mm bottom 450 m width, m-24 grade, Food grade, make Hindustan, Indus
	Bucket	350x200x125 mm in P.V.0

	Spacing	400 mm or as per design
8	Drive	
	Motor power	7.5 H.P., 1440 RPM make-Crompton/ABB/Siemens
	Gear box	Suitable ratio make kavastu/ top gear transmission
9	Shaft & pulley	EN-8 shaft with integral, MS drum machine with rubber coated for drive and non-drive pulley complete with dust prove plow bearing for end & non drive shaft assembly with arrangement for tightening of belt.
10	Speed	60 mintinute
11	Working platform	3 side to elevator with hand railing

SUGAR BIN

- a) Capacity 40tons-2no.ForMgradesugar&30tons-1 no. for S grade sugar
- b) Material used for storage Granular white sugar
- c) Bulk density of sugar 900 Kg/CUM
- d) Thickness of plate-shell plate 10 mm M.S. plate
Slopping bottom cone with stiffener 10 nim MS plate
Top cover with supporting structure 8 min, M.S plate with Channel
- e) The slopping bottom ensure there(Mass Flow)

- One set supporting structure of adequate capacity will be provided for supported storage Bin. For 40 tons 2 nos & 30 tons- 1 no. Capacity & will be provided approach ladder & platform. The structure will be adequately braced to avoid any vibration ,bursting or buckling due to thrust of the stored material.

AUTOMATIC WEIGHING & BAGGING MACHINE- The weighing & bagging machine will be gravity feeding type or net payment of Sugar with 3 load cell with surge hopper and distance piece will be provided for 100 Kg bag and 50 Kg bag. The machine will be electromechanically type weighing machine. Will all the gates controlled by pneumatic operation.

Other detail

1.Type of Feed	Gravity
2.Weighing range	50 Kg to 100 Kg
3.Output per hour	300-350 bags for 100 Kg
4.Accuracy	+/- 20 grams
5.Material of construction	M.S

6.Make	Power build LTD/High tech
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SUGAR BIN STITCHING MACHINE

Make	Stitch Expert
Model	SS-1000
Head Style	80000 S for 50/100 Kg bags
Slate conveyor	4 meter long and 300 mm wide with geared motor For driving the conveyor.
Speed o conveyor	6 to 8 meter/ minute
Stitch type	Double thread inter lock chain-Stitch
Thread cutter	Mechanical thread cutter in built
Feeding direction	From right to left
Lubrication	Manual through sight fed oiler
Height adjustment of sewing head	150-950 mm form ground level.
Thread type	both nylon and cotton thread
Tubular telescope type pipe column along 0.5 H.1' motor and side wheel for height. Adjustment for different size of bag .Machine is operated by double action foot switch and have reverse drive mechanism also.	

The specifications of the VFD shall be as follows –

VFD shall be of 12 pulse, Suitable KW or its equivalent for mill for incoming supply of 690 V, 50 HZ, AC. Each inverter cubicle shall be fabricated for 14/16 SWG. CRCS sheets, free standing, aestivated & painted with anticorrosive paints. Overload duty shall be of class V with a protection of IP – 41. Each drive shall be complete with all the salient features including protection for its drive.

The cubicle shall house all the switch gear & their protectors, controls, thyristor, regulating modules, interlocking relays & filters etc. All necessary meter indicators, enunciators, controls etc. shall be neatly arranged on cubicle front doors with neoprene gaskets on all edges of the panel. Ventilation openings shall be provided at the top of the panel & on side covers by louvers suitably covered by wire mesh.

Drive shall have provision for bi-direction speed regulation & will be +/- 1 % of the base speed by tacho-feed back . The panel will have the facility to accept 4 – 20 mA signal for speed setting in local auto mode & to have control from PLC/DCS.

Each of the drives shall be provided Ammeter, Voltmeter with selector switch, speed indicators, KWH meters etc.

The pressure ventilation system with electric motor drive blower with filter shall be provided for panels. One common control desk with all the controls shall be provided for each motor to be controlled common desk.

Specifications of Inverter Duty Transformers shall be –

- Quantity : 2 Nos.
- Rating : Continuous, 2.0 MVA each suitable for 12 pulse drive
- Primary Voltage : 11KV +/- 10 % (winding delta connected)
- Secondary Voltage : 690 V /690 V (winding delta / star)
- Impedance : 5.95 %.
- Vector : D Doy 11.

The transformer shall be complete with fittings & accessories like conservator, MOG, BREATHER, Bucholtz relay , with contacts etc for alarm & trips , pressure relief devices, thermometer packets , OTI & WTI , Valves , earthing terminals , cooling accessories , bi-directional flanged rollers with locking & bolting device for mounting on rails , air release devices , inspection box , marshal box etc .

Each transformer feeder shall have incoming supply 400 amp 11 kV VCB , kw meter, kw h meter an ammeter , instantaneous o/c relay , earth fault relays , ID MT over current relay.

The electrical installation for mill drive motor, inverter panel and transformer etc. shall be complete in all respect.

Centrally Air conditioning system and equipment of control room for mill drive inverter penal shall be supplied by the seller. The room (Air Conditioned) and civil work shall be provided.

CIVIL WORKS

DETAILS OF BUILDINGS AND FOUNDATIONS TO BE CONSTRUCTED

M/s UP Co-operative Sugar Factories Federation Ltd. Is proposing UPGRADATION WORK in ten sugar mills..

Design Philosophy

Civil Design Basis

Loads are applied on STAAD.PRO model design check is done by STAAD.Pro Software analysis as per IS456:2000.

For Steel buildings and structures RC Pedestals are to be provided to transfer the forces to Foundation.

The Water bearing structures such as spray pond etc. are to be designed as per IS 3370.

Architectural Design Basis

UP Sugar Factories Federation Ltd. And the UP State Government has very high aesthetical standards for this plant since it would like this plant to be a model sugar plant not for the state but also for the entire nation. The architectural philosophy should also follow this brief and the elevations should consist of at least three colours and should reflect a modern industrial plant. Adequate light and ventilation through polycarbonate sheeting and louvers, rigvent monitor is a must. A minimum of two different elevations with 3-d views of the sugar factory and power house should be presented to the management for approval. The power house lobby should be made of high quality finishes which will be used to host several state and national dignitaries.

Site Information

Site Location:

Site is located at ten sugar mills as per bid document

Units of Measurement

The International System of Units (SI) will be used.

Design Loads and Geotechnical data

Dead Loads

Dead loads will include the weight of all structural and architectural components and other permanently applied external loads. Self weight of materials may be calculated on the basis of unit weights given in IS: 875.

Live Loads

The loads listed hereunder are the minimum loads for the areas involved. Loading resulting from concentrations of facilities in specific areas will be substituted where listed base loading is exceeded.

The live loads on floor will be taken as per IS: 875 (part-2).

Control rooms	-	15 kN/m ²
Terrace area of any room	-	5kN/m ²
Slab adjacent to mill foundation and TG laydown area in power house	-	20 kN/m ²
Equipment Floor area	-	10 kN/m ²
Official and non industrial rooms	-	3.5kN/m ²
Roof Live load	-	0.75kN/m ² (Not accessible)
Roof Live load on corrugated sheets	-	0.4 kN/m ²
All stairs	-	5 kN/m ²

Wind Load

The Wind pressure shall be calculated based on the data furnished below and other provisions laid in IS: 875 (Part 3) – 1987.

Basic Wind speed	=	47 m/sec
Risk coefficient	=	1.07
Terrain category	=	1
Structure class	=	Class C for all houses
Topography factor	=	1.0

Earthquake Load

- i) The lateral forces will be established in accordance with the recommendations of IS: 1893.-2002
- ii) The importance factor for all power plant buildings and structures shall be taken as 1.5.
- iii) Seismic zone = Zone III
- iv) Damping: For all concrete structure damping shall be 5%. For all Steel structures damping shall be 2%
- v) Importance Factor I = 1.75 unless specified otherwise
- vi) Importance Factor I = 2.0 for Stack-Like structures in Category I (IS1893- Part 4): 2005
- vii) Response Spectra: For Type I soil as per IS1893-Part1.
- viii) For Response Reduction Factor 'R' refer table 7, IS1893 (Part 1) 2002.

Load Combinations

Generally combinations of the loads shall be as stated below:

- DL
 - ii) DL + LL
 - iii) DL + WL or SL
 - iv) DL + LL + WL or SL
- Where, DL is Dead loads
 LL is Live loads
 WL is Wind loads
 SL is Seismic loads

Partial Safety Factors for Loads – RC Structures Design using Limit State Method as per IS: 456

LOAD COMBINATIONS	LOAD Factors For Limit state of collapse			LOAD Factors for limit state of serviceability.		
	D.L.	L.L	W.L	D.L.	L.L.	W.L.
DL + LL	1.5	1.5		1.0	1.0	--
DL + WL/SL	1.5		1.5	1.0	--	1.0
DL + LL + WL/SL	1.2	1.2	1.2	1.0	0.8	0.8
DL + WL/ SL	0.9		1.5	--	--	--

Note: Wind and seismic loads shall be considered for both X & Y directions .

Permissible stress:

The permissible stress shall be as per relevant IS codes.

Foundations

Based on the geotechnical report the following conclusions can be drawn about the soil conditions at site
 Soil strata is comprises of Silty clay of medium plasticity (CI) silty clay of low plasticity compressibility (CL) and silty clayey silt of very low plasticity (CI/ML) and 'ML' sandy silt .

Observing bearing capacity from shear as well as from settlement criteria, it is revealed that shear failure consideration will govern the design of foundation rather than the settlement.

Water table was met up to 6.0m depth below ground level.

The values of allowable bearing capacity at 1.20m ,1.50m & 2.0m depth below existing ground level have been evaluated for Isolated footing of 1.20 m &1.50m widths and the results are tabulated below: -

Depth (m)	Width/ Size (m)	Type of footing	Allowable Bearing Capacity T/m²
1.20	1.20	Isolated Footing	8.80
1.50	1.20	Isolated Footing	10.20
2.0	1.50	Isolated Footing	11.05

Based on the above observations Isolated footing is recommended at 1.20m, 1.50m & 2.0m depth and bearing capacity values may be considered as per the above table If, any change is envisaged then the same may be referred to us for recalculation.

All foundations considered are open spread type.

Partial contact between the foundation and soil strata will be considered wherever applicable. The footing will be checked for minimum contact area, and maximum bearing pressure will be calculated for the actual contact area only.

For design of foundations the permissible increase of Allowable Bearing Pressure or Resistance of Soils shall be as follows:

- As per Table 1 of IS1893 (Part 1 -2002) with combinations including seismic loads
- 25% with combinations including wind load.

Foundation shall be designed to carry all the loads from equipment or super-structure which they support in accordance with the relevant codes.

FS against overturning as per IS 1904 clause 17.2 - 1.5 (with wind and seismic) and 2.0 (Normal operating condition). FS against sliding as per IS 1904 clause 17.1.1 - 1.5 (with wind and seismic) and 1.75 (Normal operating condition).

Foundation plinth for structural columns and equipment supports shall extend not less than 50 mm from the edge of base plate.

The clear distance between a standard mild steel anchor bolt or anchor sleeve/pocket and the face of the foundation shall be not less than 75 mm. All bolts conforming to IS 1367-8.8/8/CS

Minimum thickness of lean concrete layer shall be 100 mm and shall extend 100mm beyond the foundation edge.

Buried structures shall be checked for floatation with ground water at FGL. (i.e. at finished ground level). FOS against floatation shall be ≥ 1.2

Foundation for Vibratory Equipment

Design of foundations for vibratory equipment such as engine, pump, fans etc. will be done in accordance with IS:2974 and will be isolated for vibration control. To avoid resonance, natural frequency of the foundations will be kept 20% away from the operating frequency and amplitudes will be kept within the allowable limits specified by the manufacturer or in their absence as specified in the IS Codes. Other equipment foundations will be of block type. For minor foundations, dynamic analysis need not be carried out and the same will be sized as to have a mass 2 to 3 times the machine mass. Relevant IS codes will be referred for design of block foundation.

Mill foundation will be RCC block type foundations. Where free vibration and forced vibration cases will be checked against all necessary permissible limits. Mill foundation model will be analysed for :

- a) Self weight of foundation, static weight of machines, (DL)
- b) Normal torque load (TL)
- c) Dynamic Load (RD)

Concrete mix M25 will be used and all foundation hardware and metal inserts will be embedded in to the concrete. IS code 2974 will be taken as guidelines for design and construction of the foundation.

Analysis Methods

3D Analysis of the structures is carried out by using the software STAAD Pro 2008 Vi or higher. Appropriate load and its combinations, as per relevant clauses in IS codes, for most unfavourable effects are chosen for design.

Design Life

The design life of the structure is assumed as 75 years. This requirement is not applicable to replaceable materials.

Design Methodology

All R.C.C structures shall be designed according to the Limit State Method as specified in IS: 456 – 2000.

Materials

The self-weight of the various elements are computed based on the unit weight of materials as give below:-

Table 7-1:

Materials	Unit weight kN/m ³
Reinforced Cement Concrete	25.00
Steel	78.50

Concrete Grade

The following grades of concrete as per IS 456 will be adopted for the type of structure noted against each. Design mix shall be used for RCC work as per standards.

Type of structures		Grade of concrete
Lightly loaded structures, Grade slab, and paving etc.	:	M25
All RCC members in foundation & Substructure	:	M20
All RCC members in Superstructure	:	M30
All Water retaining structures and ACC	:	M30
TG Foundation, Superstructure & TG Deck	:	M30
Mill foundation	:	M25
Chimney Foundation	:	M30
Chimney Shell Wall (as per design)	:	M30
PCC for Water retaining structures	:	1:3:6
PCC for Remaining Foundations	:	1:4:8
Fill concrete	:	1:5:10

The groundwater & soil is assumed as non aggressive in nature & sulphate /chloride contents are assumed within permissible limits. Hence, no any special cement is considered as well as no any special treatment to reinforcement is considered.

Fire Resistance for Concrete shall be 1.5 hours

Reinforcement Grade

High yield strength deformed bars of various diameters grade Fe-500 conforming to IS: 1786 will be used as reinforcement for all reinforced concrete structures.

Bricks

Local bricks having the following average compressive strengths will be used for masonry
 Class A = 4.2 N/sq.mm.
 Class B = 3.5 N/sq.mm.

Nominal Cover to Reinforcement

Concrete Cover to Reinforcement is defined in terms of nominal cover. Nominal cover is the design depth of concrete cover to all steel reinforcement, including stirrups/links. It is the dimension used in design and indicated on the engineering drawings. The engineer shall use the following nominal cover requirements.

Description		Top (mm)	Bottom (mm)	Sides (mm)
Footings	:	50	75	50
Grade Beam	:	40	40	40
Grade Slab	:	25	25	25
Beams above EL +0.00M	:	35	35	35
Column & Pedestals	:	50	--	50
Lintel Beam(less than 300 x 300)	:	25	25	25
Slab & Stair cases	:	25	25	25
Block Foundation including STG Foundation	:	50	75	50
Water Retaining Structures				
Base Soft and Walls (Water face)	:	50	50	50

Description		Top (mm)	Bottom (mm)	Sides (mm)
Base Soft and Walls (Soil face)	:	40	40	25
Pre-cast Units	:	15	25	20
Walls	:	25	25	35

For any other elements not specified above, clear cover shall be as per the clause 26.4 of IS: 456 – 2000.

Codes & Standards

The relevant Indian Standard codes, as given below, shall be followed for structural design:

Table 9-1:

Sl.No.	Code	Description
1.	IS: 875 (Part 1) – 1987	Code of Practice for Design Loads (other than earthquake) for Buildings and structures – Unit weights of buildings materials and stored material.
2.	IS: 875 (Part 2) – 1987	Code of Practice for Design Loads (other than earthquake) for Buildings and structures – Imposed Loads.
3.	IS: 875 (Part 3) – 1987	Code of Practice for Design Loads (other than earthquake) for Buildings and structures – Wind loads.
4.	IS: 875 (Part 4) – 1987	Code of Practice for Design Loads (other than earthquake) for Buildings and structures – Snow loads.
5.	IS: 875 (Part 5) – 1987	Code of Practice for Design Loads (other than earthquake) for Buildings and structures – Special loads and load combinations.
6.	IS: 456 – 2000	Code of Practice for Plain and Reinforced Concrete.
7.	IS: 1786 – 1985	Specification for High Strength Deformed Steel Bars and Wires for Concrete Reinforcement.
8.	IS: 432 (Part 2) – 1982	Specification for Mild Steel and Medium Tensile Steel Bars and Hard Drawn Steel Wire for Concrete Reinforcement – Hard Drawn Steel Wire.
9.	IS: 1343 – 1980	Code of Practice for Prestressed Concrete.
10.	IS: 13920 – 1993	Ductile detailing for reinforced concrete structures subjected to seismic forces – Code of practice.
11.	IS: 14268 – 1995	Uncoated Stress Relieved low relaxation seven-ply stand for Prestressed Concrete -
13	IS: 2974-Part 1-1982	Code of practice for Design and Construction for Machine Foundations: Foundation for Reciprocating Type Machines
14	IS:1893-(Part 1)-2002	Criteria for Earthquake Resistant Design of Structures: Part 1 General Provision and Buildings.
15	IS:1893-Part 4-2005	Criteria for Earthquake Resistant Design of Structures: Part 4 Industrial Structures including Stack-Like structures
16	IS:1904-1986	Code of Practice for design and construction of foundation in soils – General Requirements
17	IS: 2974-Part 2-198	Code of practice for Design and Construction for Machine Foundations: Foundation for Impact type machines (Hammer foundations)
18	IS: 2974-Part 3-1992	Code of practice for Design and Construction for Machine Foundations: For rotary type machines (medium and high frequency)
19	IS: 2974-Part 4-1979	Code of practice for Design and Construction for Machine Foundations: Foundation for rotary type machines of low frequency.
20	IS: 3370-Part 1-1965	Code of Practice for Concrete Structures for Storage of Liquids – General Requirements.
21	IS: 3370-Part 2-1965	Code of Practice for Concrete Structures for Storage of Liquids – Reinforced Concrete Structure
22	IS: 3370-Part 4-1967	Code of Practice for Concrete Structures for Storage of Liquids – Design Tables.

23	IS:13920-1993	Ductile Detailing of Reinforced Concrete Structures subjected to Seismic Forces
24	IS:2502-1963	Code of Practice for Bending and Fixing of Bars for Concrete Reinforcement
25	IS: 2950-Part 1-1981	Code of Practice for Design and Construction of Raft Foundation- Part-1 Design.
26	IS:1905-1987	Code of Practice for Structural Use of Un reinforced Masonry.

PERFORMANCE PARAMETERS

Following Performance parameters are to be achieved in each factory as per following norms -

All performance parameters will be achieved while maintaining the present rated crushing capacity (T.C.D.) of each factory.

1. Cane preparation and Milling:

S.No.	Factory Name	Bagasse moisture % (Max)	Preparatory Index (PI) (±1)	Primary Extraction (PE)
1	ANOOPSHAHR	49%	85	71 to 72
2	BAGHPAT	49%	88	71 to 72
3	BELRAYAN	49%	88	71 to 72
4	BISALPUR	49%	86	71 to 72
5	NANAUTA	49%	90	71 to 72
6	NANPARA	49%	85	71 to 72
7	POWAYAN	49%	86	71 to 72
8	SAMPOORNANAGAR	49%	90	71 to 72
9	SARSAWA	49%	85	71 to 72
10	SEMIKHERA	49%	85	71 to 72

2. Process House Overall:

S.No.	Factory name	Steam Consumption% Cane (Maximum)	Losses % Cane (Maximum)	M-30 Sugar ICUMSA value (Maximum)
1	ANOOPSHAHR	45%	1.90%	110
2	BAGHPAT	45%	1.90%	110
3	BELRAYAN	45%	1.90%	110
4	BISALPUR	45%	1.90%	110
5	NANAUTA	45%	1.80%	110
6	NANPARA	45%	1.90%	110
7	POWAYAN	45%	1.90%	110
8	SAMPOORNANAGAR	45%	1.90%	110
9	SARSAWA	45%	1.80%	110
10	SEMIKHERA	45%	1.90%	110

Note:

- I. The steam consumption of the whole plant will be measured by flow meter.
- II. Bidder is to mention gross power consumption (kw/TCH) as a result of modernization and upgradation work in the technical bid document.
- III. Water balance is to be carried out by the bidder so as to limit the quantity of effluent generation from factory. Overall water balance (in present scenario and after modernization) and water conservation is to be considered as to limit the gross effluent generation from factory as per CPCB norms.
- IV. Steam consumption% cane, losses% cane and other parameters will be analysed daily and as an average figure for the season to get the desired performance.

3. Mill Imbibition water control:

Accuracy in water flow rate : +/- 0.1 %

4. Juice flow stabilization system:

Accuracy in juice flow rate : +/- 0.1 %

5. Measurement of Steam flow from boilers:

Correct Measurement of flow rate indicating in tons per hour for every hour, previous hour and twenty four hours.

6. Air compressor:

Suitable to supply, desired quantity and quality of compressed air to meet requirement of existing and proposed instrumentation on 24 hours basis.

7. Cooling and condensing system

- Minimum vacuum at condenser body shall not be less than 635mm at mean sea level.
- The difference of temperature between vapours to be condensed and tail pipe water temperature shall be less than 10 deg. C.
- Power consumption in cooling and condensing system shall be less than 2kw/ton on cane wherever complete system is provided

8. Centrifugal Machines:

The guaranteed capacity of continuous centrifugal machines shall be as per parameters mentioned in technical specifications Annexure II.

9. Sugar Melter:

Brix of the melt at outlet of melter shall be 65 +/- 5 degree.

Temperature of Melt at outlet of melter shall be 75 +/- 5 degree Centigrade.

Melt shall be free from sugar crystals.

10. Automatic desuperheating system:

Maximum variation in exhaust steam temperature: +/- 5 degree centigrade.

11. Super heated Wash water system:

System will be designed to maintain continuous supply of 115 +/- 5 deg C water at A centrifugal machines.

ANNEXURE-III B

WORKING PARAMETERS FOR HMBD AND STEAM CONSUMPTION CALCULATION OF 10 MILLS											
S No	PARTICULARS	NANAUTA		BELRAYAN		SAMP. NAGAR		BAGPAT		SARSAWA	
A	ABSOLUTE VAPOUR PRESSURE	Pressure	Temp	Pressure	Temp	Pressure	Temp	Pressure	Temp	Pressure	Temp
	AND TEMPERATURES	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C
1	EXHAUST	1.83	125	1.93	120	1.93	120	1.75	115	1.83	125
2	QUNTIPLE 1	1.47	106	1.54	120	1.54	112	1.48	108	1.47	106
3	QUNTIPLE 2	1.12	100	1.17	104	1.17	104	1.02	102	1.21	100
4	QUNTIPLE 3	0.79	93	0.82	90	0.82	94	0.68	95	0.79	93
5	QUNTIPLE 4	0.47	80	0.49	76	0.49	80	0.52	81	0.47	80
6	QUNTIPLE 5	0.18	56	0.17	60	0.17	57	0.18	58	0.18	56
B	BASIC PARAMETERS FOR STEAM										
	BALANCE CALCULATION										
1	CRUSH RATE(TCD)	5000		5000		5000		2500		2750	
2	IMBIBITION%CANES	42		42		42		42		42	
3	IMBIBITION%FIBRE	300		280		280		280		300	
4	BAGASSE%CANES	30		33		32		32		30	
5	RAW JUICE%CANES	115		110		110		115		110	
6	FIBRE%CANES	14		16		14.8		15		14.5	
7	MUDDY JUICE%CANES	15		13		13		14		17.5	
8	FILTER CAKE%CANES	4		3.25		2.5		3.5		4.5	
9	FILTER CAKE WASH WATER%CANES	5		3		3		2		4	
10	FILTRATE%CANES	14		14		14.67		10.5		13	
11	SULPHITED JUICE%CANES	122		115		120		115		123	
12	CLEAR JUICE%CANES	108		95		109		105		105	
13	POL%BAGASSE	1.8		2.02		1.92		1.78		1.9	
14	MOISTURE%BAGASSE	49		49		49		49		49	
15	PURITY LAST MILL JUICE	72		70		69		71		73	
16	BRIX%BAGASSE	2.5		2.93		2.78		2.5		2.64	
17	FIBRE%BAGASSE	47		47.25		47.22		48.5		47.5	
18	CLEAR JUICE BRIX	13		13		13		13		13	
19	SYRUP BRIX	62		60		60		63		62	
20	TOTAL EVAPORATION(MT/Hr)	180		177		189		114		100	
21	A MASSECUITE%CANES	30		25		26		30		29	
22	B MASSECUITE%CANES	11		12		12		12		12	
23	C MASSECUITE%CANES	9		8		10		8		8	

WORKING PARAMETERS FOR HMBD AND STEAM CONSUMPTION CALCULATION OF 10 MILLS											
S No	PARTICULARS	SEMI KHERA		BISALPUR		POWAYAN		ANOOP SAHAR		NANPARA	
		Pressure	Temp	Pressure	Temp	Pressure	Temp	Pressure	Temp	Pressure	Temp
A	ABSOLUTE VAPOUR PRESSURE AND TEMPERATURES	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C	Kg/Cm ²	°C
1	EXHAUST	1.85	118	1.83	1125	1.65	125	1.80	125	1.64	125
2	QUNTIPLE 1	1.50	111	1.83	125	1.35	107	1.45	104	1.32	105
3	QUNTIPLE 2	1.26	105	1.43	110	1.05	105	1.10	98	1.00	100
4	QUNTIPLE 3	0.96	98	1.12	80	0.72	90	0.78	92	0.70	90
5	QUNTIPLE 4	0.56	84	0.89	70	0.42	80	0.47	80	0.41	77
6	QUNTIPLE 5	0.26	65	0.18	60	0.18	65	0.17	58	0.14	54
B	BASIC PARAMETERS FOR STEAM BALANCE CALCULATION										
1	CRUSH RATE(TCD)	2750		2750		2125		2500		2500	
2	IMBIBITION%CANES	42		42		45		42		42	
3	IMBIBITION%FIBRE	295		280		290		280		300	
4	BAGASSE%CANES	32		32		32		31		30	
5	RAW JUICE%CANES	110		110		115		110		110	
6	FIBRE%CANES	14.75		15		14.75		14.74		14	
7	MUDDY JUICE%CANES	17.5		17		20		12		15	
8	FILTER CAKE%CANES	4		3.5		3		3.1		4.5	
9	FILTER CAKE WASH WATER%CANES	3.5		5		8		3		4	
10	FILTRATE%CANES	15		15		15		14.5		15	
11	SULPHITED JUICE%CANES	125		112		125		117		120	
12	CLEAR JUICE%CANES	105		105		110		105		105	
13	POL%BAGASSE	1.9		1.9		1.8		1.9		1.5	
14	MOISTURE%BAGASSE	49		49		49		49		49	
15	PURITY LAST MILL JUICE	71		70		71		72		72	
16	BRIX%BAGASSE	2.8		3.0		2.9		2.7		3.0	
17	FIBRE%BAGASSE	47.5		48		47		47.5		47.5	
18	CLEAR JUICE BRIX	13		13		13		13		13	
19	SYRUP BRIX	60		60		62		60		60	
20	TOTAL EVAPORATION(MT/Hr)	102		98		98		90		98	
21	A MASSECUITE%CANES	26		28		28		29		28	
22	B MASSECUITE%CANES	11		12		18		11.94		12	
23	C MASSECUITE%CANES	9		9		8		8		8	

ANNEXURE-III C

DETAIL OF EXISTING BOILER, TURBINE AND EVAPORATOR BODIES IN 10 SUGAR MILLS													
S. No.	NAME OF MILL	BOILERS			TURBO ALTERNATOR				EVAPORATOR BODIES				
		NOS.	CAPACITY	WORKING Pr.	POWER TURBINE		MILL TURBINE		NOS.	NAME	H.S.		
					NOS.	CAPACITY	NOS.	CAPACITY					
1	Anoopshahar 2500TCD	4	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	4	1-400BHP	1	S.K.	1100 M ²		
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2- 400BHP	2	V.Cell(Old)	700M ²		
			3- 20T/hr	21Kg/cm ²				3- 400BHP		V.Cell(New)	700M ²		
			4- 30T/hr	21Kg/cm ²				4- 400BHP	2	Quad Sets:	1	2	
											1- 560M ²	1- 560M ²	
											2- 440M ²	2- 440M ²	
											3- 440M ²	3- 440M ²	
											4- 440M ²	4- 440M ²	
2	Baghpat 2500 TCD	3	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	4	1-500/600BHP	2	S.K.	900 & 820 M ²		
			2- 30T/hr	21Kg/cm ²		2- 1.5MW		2- 500/600BHP	1	V.Cell	837 M ²		
			3- 30T/hr	21Kg/cm ²				3- 500/600BHP	2	Quad Sets:	Old	New	
								4- 500/600BHP			1- 560M ²	1- 630M ²	
											2- 440M ²	2- 500M ²	
											3- 440M ²	3- 500M ²	
3	Nanauta 5000 TCD	5	1- 20T/hr	21Kg/cm ²	3	1- 1.5MW	4	1-750BHP	2	S.K.	800 & 2300 M ²		
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2- 750BHP	1	V.Cell	950 M ²		
			3- 30T/hr	21Kg/cm ²		3- 3.0MW		3- 750BHP	2	Quad Sets:	1	2	
			4- 40T/hr	45Kg/cm ²				4- 750BHP			1- 560M ²	1- 560M ²	
			5- 40T/hr	45Kg/cm ²							2- 440M ²	2- 440M ²	
											3- 440M ²	3- 440M ²	
											4- 440M ²	4- 440M ²	
										1	Quintuple Set:	1- 1750M ²	
											2- 1750M ²		
											3- 1500M ²		
4	Sarsawa 2750 TCD	3	1- 25T/hr	21Kg/cm ²	2	1- 2.0MW	4	1-400BHP	1	S.K.	800 M ²		
			2- 25T/hr	21Kg/cm ²		2- 1.5MW		2- 600BHP	1	V.Cell	950 M ²		
			3- 20T/hr	21Kg/cm ²				3- 600BHP	2	Quad Sets	1	2	
								4- 300BHP			1- 650M ²	1- 650M ²	
											2- 540M ²	2- 540M ²	
											3- 540M ²	3- 540M ²	
5	Belrayan 5000 TCD	5	1- 20T/hr	21Kg/cm ²	3	1- 1.5MW	4	1-750BHP	2	S.K.	800 & 2300 M ²		
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2- 750BHP	1	V.Cell	950 M ²		
			3- 30T/hr	21Kg/cm ²		3- 3.0MW		3- 750BHP	2	Quad Sets	1	2	
			4- 40T/hr	45Kg/cm ²				4- 750BHP			1- 560M ²	1- 560M ²	
			5- 40T/hr	45Kg/cm ²							2- 440M ²	2- 440M ²	
											3- 440M ²	3- 440M ²	
											4- 440M ²	4- 440M ²	
										1	Quintuple Set:	1- 1750M ²	
											2- 1750M ²		
											3- 1500M ²		

DETAIL OF EXISTING BOILER, TURBINE AND EVAPORATOR BODIES IN 10 SUGAR MILLS												
S. No.	NAME OF MILL	BOILERS			TURBO ALTERNATOR				EVAPORATOR BODIES			
		NOS.	CAPACITY	WORKING Pr.	POWER TURBINE		MILL TURBINE		NOS.	NAME	H.S.	
					NOS.	CAPACITY	NOS.	CAPACITY				
6	Bisalpur 2750 TCD	3	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	4	1-400BHP	2	S.K.	800 & 900 M ²	
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2- 600BHP	1	V.Cell	950 M ²	
			3- 30T/hr	21Kg/cm ²				3- 600BHP	1	Quad Sets	1- 560M ²	
								4- 400BHP			2- 440M ²	
											3- 440M ²	
											4- 440M ²	
7	Powayan 2125 TCD	3	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	2	1-600BHP	1	S.K.	800 M ²	
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2- 600BHP	1	V.Cell	950 M ²	
			3- 30T/hr	21Kg/cm ²					1	Quad Sets	1- 560M ²	
											2- 440M ²	
											3- 440M ²	
											4- 440M ²	
8	Sampurnanagar 5000TCD	5	1- 20T/hr	21Kg/cm ²	3	1- 1.5MW	4	1-750BHP	2	Quintuple Set:	1	2
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2-750BHP			S.K.- 2600M ²	S.K.- 860M ²
			3- 30T/hr	21Kg/cm ²		3- 3.0MW		3-750BHP			1- 1100M ²	1- 950M ²
			4- 40T/hr	45Kg/cm ²				4-750BHP			2- 1100M ²	2- 560M ²
			5- 40T/hr	45Kg/cm ²							3- 440M ²	3- 440M ²
											4- 440M ²	4- 440M ²
9	Semikhera 2750TCD	3	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	4	1-700BHP	1	S.K.	800 M ²	
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2-600BHP	1	V.Cell	950 M ²	
			3- 30T/hr	21Kg/cm ²				3-600BHP	1	Quad Sets	1- 560M ²	
								4-700BHP			2- 440M ²	
											3- 440M ²	
											4- 440M ²	
10	Nanpara 2500TCD	3	1- 20T/hr	21Kg/cm ²	2	1- 1.5MW	4	1-400BHP	1	S.K.	800 M ²	
			2- 20T/hr	21Kg/cm ²		2- 1.5MW		2-600BHP	1	V.Cell	950 M ²	
			3- 30T/hr	21Kg/cm ²				3-600BHP	1	Quad Sets	1- 560M ²	
								4-600BHP			2- 440M ²	
											3- 440M ²	
											4- 440M ²	

ANNEXURE IV**LIST OF APPROVED SUPPLIERS FOR CRITICAL EQUIPMENTS**

SL. NO.	NAME OF EQUIPMENT	NAME OF SUPPLIERS
1	VACUUM PUMP	KAKATI/KIRLOSKAR/PPI
2	BOILER FEED WATER PUMP	KSB/SULZER
3	CENTRIFUGAL PUMPS	KIRLOSKAR/SINTECH GHAZIABAD
4	MILL DRIVE	KIRLOSKAR/CROMPTON/SIEMENS/ABB
5	COMPRESSOR	KIRLOSKAR/INGERSOL RAND/Atlas Capco
6	(a) ELECTRIC MOTORS (b) CRANE DUTY ELECTRIC MOTOR	KIRLOSKAR/ CROMPTON/ SIEMENS/ BHARAT BIJLEE
7	VVV FD MOTORS FOR MILL DRIVE and OTHER DRIVE	KIRLOSKAR/ CROMPTON/ ABB/ SIEMENS/ DANFOSS & their system houses
8	OTHER PUMPS	KIRLOSKAR/ SINTECH GHAZIABAD / GITA/ RISANSI/ PSP
9	MILL GEAR BOX	ELECON/ PREMIUM/ WIL
10	ROPE COUPLING	JPMA
11	DCS-MICROPROCESSOR SYSTEM	ABB/ SIEMENS/ YOKOGAVA/ HONEYWELL/ ROCKWELL
12	VF DRYER	VS Project/
13	All types of Valves	Puri Industries/Leader/Kirloskar
14	Centrifugal machines	WIL/KRUPP(TKIL)

INSPECTION PROCEDURE

GENERAL

9.1 Whenever there is no particular reference in the Agreement about IS/ISO Standards, the equipments/units should be manufactured/fabricated strictly in accordance with Latest IS/ISO Standards.

9.2 Inspection at Manufacturer's workshop prior to dispatch (to be read only those applicable to Sugar Mill equipments / machinery and captive power plant in Sugar Mill).

The list of machinery and equipment to be inspected by authorized agency at manufacturer's works prior to dispatch is furnished in enclosed Annexure-X.

9.3 The inspection call from OEM/Sub-Vendor should be enclosed with Internal Inspection Report duly signed by Sub-Vendors authorized person and OEM's representative.

9.4 During the course of inspection at manufacturer's workshop, the manufacturer will make available the following test certificates in respect of raw material for verification.

Material Test Certificate giving chemical composition, physical properties such as ultimate tensile strength, Elongation %, yield strength, hardness of finished product etc. in respect of steel forgings, steel castings, boiler drums and tubes, brass tubes, stainless steel tubes steam piping and valves, components of conveyor chains, enclosed gear boxes and alternator etc.

9.5 At the time of inspection, the manufacturer will provide, free of cost, instruments, measuring devices such as straight edge, micrometers, DP test chemicals, line dori, verniers, calipers, 'GO' and 'NO GO' gauges, hardness tester, ultrasonic testing instrument, stroboscope, vibration meter, noise level measuring instrument, dial gauge, feeler gauge, drift expansion/flattening test facility for various tubes, breaking load test and hydraulic test facility or any other instrument or test facility as may be required.

9.6 For Electrical Items, the manufacturer will provide, free of cost, the instruments such as Secondary Injection Kit, High Voltage Testing Instrument, Megger, Kelvin bridge, Vibration meter, Stroboscope, Phase sequence tester, Voltmeter, Ammeter, or any other instrument or test facility as may be required.

Witnessing ultrasonic testing of drive and driven shafts.

9.7 For Stainless Steel Tubes, Brass tubes and boiler tubes, following inspection shall be carried out by MILL.

- (i) Dimensional checking of random samples.
- (ii) Witnessing Destructive Testing of sample tubes drawn at random, for tensile strength, flattening test, flaring test, reverse bend test, elongation test, acid test as per procedure of IS:13316-1992 for SS tubes, and relevant IS/BS code for boiler tubes.
- (iii) Verification of material test certificates furnished by manufacturer.
- (iv) Witnessing hydraulic testing of random samples of SS/brass/boiler economizer & super heater tubes.
- (v) For Boiler Tubes Verification of IBR test certificates, IBR stamping and heat numbers marked on the tubes, hydraulic test certificate.

- 9.8 Manufacturers shall also provide dynamic balancing test certificate for high speed rotating parts, wherever required.
- 9.9 The Inspecting Officer of authorized agency shall be within his rights to bring to the notice of the manufacturer/Sellers, any defects and deviations observed from the approved drawings / Agreement specifications / standard engineering practices / relevant Indian / British / DIN / API codes etc. and the manufacturer / Seller shall be required to rectify such defects and deviations at their own cost. Such inspection by authorized agency or its nominees shall not absolve the manufacturer / Sellers from their responsibility of supplying the machinery and equipment in accordance with the terms and conditions of the Agreement.
- 9.10 The OEM/Sub-Vendor shall arrange test motors, gear boxes for witnessing, no load running trial of their equipment.

PARAMETER FOR INSPECTION AT MANUFACTURER'S WORKS

- a) Heat Exchangers, Condensers, reboiler etc. : Dimensional check up, hydraulic test, welding quality and material specifications.
- b) Distillation Columns, Plates & Caps and : - do
other internals.
- c) D.C. MOTOR DRIVES
- (i) For D.C. Motors.
- Witnessing measurement of resistances and insulation values for main and field windings: Witnessing H.V. test.
 - Witnessing no load trial and full load trial for relevant standards as described in IS 4722 and BS:5000 for temperature rise of windings.
 - Witnessing measurement of vibrations as per IS 12075 during running trial.
 - Scrutiny of test certificate for dynamic balancing and ultrasonic testing of rotor shaft.

NOTE : Type test shall also be witnessed in respect of any new size or design of manufacture of DC motor.

(ii) For Thyristor and Control Panels:

- Testing of thyristor Panel for temperature rise as per relevant class of duty.
- Checking of functioning of various protection devices and relays.

(a) AC Motor

Testing procedure with control panel as prescribed in the latest IS code.

(b) Hydraulic drives for Mills

Procedure to be finalized in consultation with manufacturers.

10.2 Enclosed Transmission Gear Boxes

- Checking up of dimensions, handing and reduction ratio,
- Witnessing the no load running trial at full input speed of each gear box fitted with forced lubrication system at partial loading by damping.
- Open Inspection:
- Checking up of tooth contact and blue impressions.
- Measurement of back lash, tooth contact area, hardness of shaft and gear wheel and pinion, oil circulation system and nozzle location etc.
- Teeth surface finish checking – visually.

- Verification of material composition certificate, ultrasonic test and dynamic balancing certificate stress relieving & physical test report, for gears/pinions/shafts.
- Verification of Service Factor, H.P. rating calculations ,and Pressure Lubrication System having 2 pumps, 2 motors,
 - a) coolers, 2 micro filters etc.
- Routine test certificate of gearboxes.

10.3 BOILER

10.3.1 Pressure Parts :

- Dimensional checking of drum, wall thickness, tube hole sizes (with go-no-go gauge), drum internals.
- Verification of material composition certificate for drum, tubes, super heater and economiser elements and tube holes size in drum, stress relieving certificate for drum, header, etc.
- Hydraulic test of headers and economiser coil and super heater coil etc.
- Witnessing destructive testing of random selected sample of boiler tubes as per para 1.9, and checking of tube thickness, o.d., and IBR stamping verification.

10.3.2 D.C. / A.C. variable frequency Motor Drives for ID/FD fans

Inspection and testing as per procedure described in para 2.1.7 (b) in case D.C. motors and as per relevant IS code in case of A.C. motors.

10.3.3 ID/FD/SA Fans:

- Verification of impeller curvature, wearpad for ID, test certificates for dynamic balancing of impeller of ID, FD, SA fan etc. and sizes of plate s thickness etc.
- Verification of calculations for capacity and head of fans.
- Dimensional verification as per approved drawing.
- Witnessing measurement of free air delivery/capacity.
- Witnessing ultrasonic testing of shafts of fans.
- MTC for shaft, characteristic curves for fan performance etc.

10.3.4 Furnace Grate Assembly

- Dimensions of assembled frame sizes. etc.
- Operation of grate bar movement & traveling grate movement by fitting of auxiliary drive.
- Checking of grate bar hole details and hardness and MTC

10.3.5 Oil firing equipment assembly

- Running trial of the system.
- MTC, RTC and hydraulic testing certificate for individual equipment.

10.4 HEAT EXCHANGES

- Verification of tube plate thickness, door thickness and door straightness etc. Measurement of tube plate holes size checking by go and no-go gauge, no. of holes per pass, no. of passes, lay out of passes on top and bottom covers, condensate outlet connection, noxious gas connection, drains, airvent connection, checking of door-tightening arrangement with T-bolt/I bolt with individual pin arrangement, Steam/Vapour entry connections, ligament, welding quality, distance between tube plates and alignment, variation pitch of holes, witnessing hydraulic testing of steam, vapour and double beat valve etc.
- Condensate outlet connection, noxious gases connection, drains/air vent connections, checking of steam/vapour connections.
- For plate type heaters, measurement of thickness of plates, size, gasket and hydraulic testing, scrutiny of material test certificate for S.S.
- Tube plate holes to be finished by reaming.
- Inspection and testing of S.S./Brass tubes shall be as per para 1.9.

10.5 Air Compressors and Vacuum Pumps

- Dimensional checking
- Witnessing measurement of free air delivery with nozzle test, measurement of power consumption as described in BS: 1571 part II.
- Checking pressure setting for valves, auto cut-off, bearing temps, cooling system checking.
- Verification of hydraulic test certificate and material test certificate.

10.6 Evaporators

- Verification of dimensions of calandria, body, catchall, tube plate thickness, holes etc., measurement of tube holes with go and no go gauge, alignment and distance between tube plates, ligament and pitch for tube holes, welding quality, witnessing hydraulic testing of steam and vapour valves etc.
- Checking the Layout of holes in the tube plate and its finish by Reaming, condensate outlet connections, noxious gases outlet connection, vapour inlet sizes, ovality of calandria, if any, tube plate straightness and tie rod fixing.
- Checking of saveall construction & plate thickness & curvature of vanes etc.
- Inspection and testing of S.S./Brass tubes shall be as per para 1.9

10.7 CONDENSING AND COOLING SYSTEM

10.8 Dimensional checking for condenser and ejector and material of construction with MTC.

10.9 Witnessing of hydraulic testing of condenser, ejector and tail pipe at 2 kg/cm² g, nozzle plate details, nozzle convergent angle and distance.

10.9 Nozzle details of condenser/ejector.

10.10 Cooling Tower

- Verification of service factor for gear boxes.
- Verification of capacity of fans
- Dimensional checking of fans
- Witnessing of no load running trial of fans
- Measurement of vibration noise level capacity of fans.
- Scrutiny of material test certificate for gear box & blades.

10.11 PRESSURE REDUCING VALVES, EXHAUST AND VAPOUR PIPING
(i) PRDS Station

- Checking up of pressure reducing valves, bypass valves,
- Pneumatic control checking
- Desuper heater checking and water spray trial
- Hydraulic testing of valves and vessels.

10.12 Exhaust piping and vapour piping and valves more than 400 MM, NB size.

- Verification of dimensions, thickness, welding quality.
- Checking of valves for its components and witnessing hydraulic testing at 6 kg/cm².
- Verification of general arrangement drawing of exhaust/vapour piping.

10.13 POWER TURBINES AND ELECTRICALS

10.13.1 Turbogear Unit with its Base frame

10.13.2 Witnessing the no load running trial for each power turbine fitted with its gear box, governor and forced lubrication system and checking up of functioning of protective devices.

10.13.3 Measurement of vibrations – Amplitude, Velocity, Frequency, Acceleration, Noise Level as per latest standards.

10.13.4 Checking oil cooler for its material and witnessing of hydraulic testing.

10.13.5 Verification of residual imbalance as per latest standards.

10.13.6 Verification of test certificates for hydraulic testing of casings, rotor material test certificates, balancing certificate of rotor, blade surface crack and verification of Heat nos., Sl. No. of rotor, casing and turbine/test etc.

10.13.7 Checking up of protective devices functioning while running at no load, rated speed such as Over Speed Trip, Low Lub-Oil Pressure, High Exhaust Pressure, Aux. Pump Cut Off/On etc.

10.13.8 Checking blade construction and sizes as per data sheet.

10.13.9 Open inspection of turbine and gear box – to examine condition of rotor, bearings, tooth contact of gears, back lash, hardness of gear, verification of service factor from catalogue and calculation with relevant standards, thrust clearance, clearance between moving and stationery blades, bearing clearance, trueness of rotor disc face.

10.13.10 verification of Characteristic Curve for Steam Consumption versus Load.

10.13.11 Verification of Turbine Correction Factor Chart for variation of pressure, temperature for inlet steam and exhaust steam in relation to the Design Parameters.

10.13.12 Open inspection of power turbine, rotor, gear box, bearings, checking up of tooth contact, back lash, bearings, etc.

10.13.13 Verification of HP rating calculations for gear box.

10.14 Alternator for T.G. set

10.14.1 Witnessing tests as described in latest IS 4722 such as insulation test and measurement of resistances of main field, main windings, exciter armature, and exciter field.

10.14.2 Witnessing of open circuit test, short circuit test, overload test and H.V. test as per IS-4722.

10.14.3 Verification of test certificates for ultrasonic testing and dynamic balancing of rotor.

10.14.4 Phase sequence checking and verification of direction of rotation.

10.14.5 Functional testing of AVR with alternator and regulation test, over voltage relay functional testing, on both AVR which are independent.

10.14.6 Vibration measurement as per IS 12075 and sound level measurement during no load running trial of the alternator.

10.14.7 Shaft current measurement.

10.15 ELECRICALS

10.15.1 Alternator Control & Excitation Panels for TG sets, MCC, Main distribution panel, Bus bar trunking, Bus coupler panel, APFC Panel, Control panel for DG set, Control panels for centrifugal machines.

10.15.2 Verification of dimensions and makes of different components.

10.15.3 Testing of simulation of various protective devices in each panel.

10.15.4 H.V. and insulation test of each panel assembly, each MCC assembly and bus bar trunking assembly.

10.15.5 No load sequence operation test of each panel assembly.

10.15.6 Verification of single line diagram of electrical distribution system as well as size of bus bars and cables and quantity of power factor improving capacitors.

NOTE :Type test as per IS 4722 shall also be witnessed in respect of any new size or sign or manufacturer of alternator.

10.16 POWER HOUSE CRANE.

- As per standard practice and factory act of testing for manually operated cranes.

10.17 H.P. STEAM PIPING

10.17.1 Distribution Header

10.17.2 Witnessing of the Hydraulic Testing of Header.

10.17.3 Dimensional checking

10.17.4 Verification or material test certificate, IBR approval.

10.18 H.P. Piping

10.18.1 Checking up Pressure Drop Calculations, Pipe Sizes with reference to Flow and Velocity and general arrangement drawing.

10.18.2 Checking flexibility analysis, Scrutiny of material Test Certificate for the H.P. Piping.

10.18.3 Checking and hydraulic testing of pipes and manipulation as per approved drawing.

10.18.4 Checking of IBR stamping of pipings and flanges.

10.19 Steam Separators

10.19.1 Material test certificate verification

10.19.2 Dimension at check

10.19.3 Witnessing of hydraulic testing

10.20 Valves covered by IBR (covering over and above 100 mm size, 20 kg/cm² pressure)

10.20.1 Dimensional checking

10.20.2 Witnessing hydraulic testing of sample drawn at random in each size.

10.20.3 Scrutiny of test certificate given by manufacturer and C.I.B.

10.20.4 IBR – stamping etc.

10.21 **MISCELLANEOUS**

10.21.1 All C.I. Valves above 150 mm NB, all C.I. Pipes, Tees, Bend etc.

10.21.2 Checking up of dimensions, internals and scrutiny of test certificate for S.S. components.

10.21.3 Witnessing hydraulic testing of valves and pipes selected at random.

PERFORMANCE CERTIFICATE

This is to certify that M/s _____ have supplied, erected and commissioned following equipments/systems in accordance to the performance parameters defined in the bid document.

12.7 All other parameters given in the technical specifications/scope ofwork of the equipments.

DRAFT OF BANK GUARANTEE AGAINST FIRST & SECOND ADVANCE PAYMENTS

Bank Guarantee No. _____

THIS GUARANTEE MADE THIS _____ day of Two thousand & Eighteen, by the _____ Bank, having its branch office at _____ (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of The Uttar Pradesh Coop. Sugar Factories Federation Ltd., Lucknow on behalf of The Kisan Sahakari Chini Mills Ltd., -----, Uttar Pradesh – hereinafter called 'The Purchaser' which expression shall, unless repugnant to the context or contrary to the meaning thereof include its successors and assignees) of the other part.

WHEREAS M/s, a company registered under the Indian Companies Act,1956 having its registered office at and chief place of business at (hereinafter called 'The Seller' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____ (hereinafter called the said Agreement) to Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document as per specifications and scope of work given in the bid document The Seller will also operate the equipments/system DURING SEASON 2019-20 and the warranty will be for 24 months from the date of agreement to achieve norms as prescdibed in bid document.

(hereinafter referred to as "the said Machinery and Equipment") for the Purchaser's new system to be set up at -----, Distt. -----, Uttar Pradesh in accordance with the terms and conditions therein contained.

AND WHEREAS under clause 16.1(i)/16.1(ii) of the said Agreement, the Purchaser is required to pay to the Seller against the security of a Bank Guarantee an advance payment of Rs..... lakhs (Rupeesonly) representing 10% (Ten per cent) of portion of Ex-Works Price mentioned at clause no. 3.1.1 (a) as first/second advance payment for the purpose of procurement of materials/equipment for the said Machinery and Equipment and such guarantee to be valid till the full advance amount is adjusted against the Ex-Works price of the actual deliveries as provided in price break-up (Annexure-VI of the Agreement) of Machinery and Equipment supplied to site.

AND WHEREAS before advance payment as aforesaid is made the Guarantor has at the request of the Seller agreed to give a guarantee as hereinafter contained.

NOW THIS DEED WITNESSES AS FOLLOWS:

- (a) In consideration of the premises the Guarantor hereby undertakes to pay the Purchaser within thirty days of demand and without demur such a sum not exceeding Rs..... lakhs (Rupeesonly) as the Purchaser may demand representing 10% (Ten per cent) of the Ex-works Price and cost of foundations and buildings and if the Guarantor fails to pay the sum within the said period, the Guarantor will also pay, on the sum demanded, interest @ 12 % (Twelve percent) p.a. from the date of demand till the date of payment. Provided that the liability of the Guarantor hereunder shall be adjusted and reduced with the progress of delivery of Plant Machinery and Equipment supplied by the Seller and to the extent adjustment shown in Seller's invoices upto that time as per clause 16.0 and its sub-clauses of the said Agreement.
- (b) The Guarantor shall pay to the Purchaser on demand the sum under Clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, it being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the Purchaser shall be the sole judge of and as to whether the Seller have committed breach of any of the terms and conditions of the said Agreement and SECONDLY that the right of the Purchaser to recover from the Guarantor any amount due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Seller with regard to their liability or that proceedings are pending before any Tribunal, Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the Guarantor shall immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the Seller to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.
- (c) This Guarantee shall come into force from the date hereof and shall remain valid till 30 days after the full advance amount is adjusted under clause 16.0 & its sub-clauses of the said Agreement, which according to the terms and conditions of the said Agreement is stipulated to be adjusted by proportionate 10% (ten per cent) of the Ex-works Price mentioned at clause 3.1.1 (a) of the said Agreement of the Sellers for effected actual deliveries of the Machinery and Equipment at site, but if the actual deliveries as aforesaid have not been completed by the Seller within the said period for any reason whatsoever, the Guarantor hereby undertakes that the Seller shall furnish a fresh or renewed guarantee on the same proforma for such further period as the Purchaser may intimate failing which the Guarantor shall pay to the Purchaser a sum or sums not exceeding Rs.....lakhs (Rupeesonly) or the residual amount of balance advance left after proportionate adjustment in accordance with clause 1 above, as the Purchaser may demand alongwith the interest @ 12 % (Twelve percent) p.a. on unadjusted amount of advance.
- (d) This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of the Purchaser on behalf of the Seller.
- (e) The Seller and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the assent of the Guarantor.

- (f) This Guarantee shall not be affected by any change in the constitution of the Guarantor or of the Seller nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.
- (g) This guarantee is irrevocable except with the written consent of the Purchaser.
- (h) The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this guarantee.
- (i) The invocation of this guarantee shall be by a letter signed by the Purchaser and countersigned by the Managing Director, Uttar Pradesh Coop. Sugar Factories Federation Ltd., Lucknow and notifying/declaring the amount of advance remaining unadjusted and payable to the Purchaser.
- (j) Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs..... lakhs (Rupeesonly) alongwith the interest @ 12 % (Twelve percent) p.a. on unadjusted amount of advance . This guarantee shall remain in force upto Unless a demand or action under this guarantee is filed against the Guarantor in writing within three months from the date of expiry i.e. on or before all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

(k)

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor

**DRAFT OF BANK GUARANTEE FOR TIMELY DELIVERY
(TO BE SUBMITTED BEFORE SIGNING OF THE AGREEMENT)**

Bank Guarantee No. _____

THIS GUARANTEE MADE THIS _____ day of _____, Two thousand Eighteen, by the _____ Bank, having its branch office at _____ (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of The Kisan Sahakari Chini Mills Ltd., -----, Distt. ----- having its registered office at Lucknow, in Uttar Pradesh State, hereinafter called 'The Purchaser' which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assignees)of the other part.

WHEREAS M/s.....a company registered under the Indian Companies Act, having its registered office at and chief place of business at (hereinafter called 'The Seller' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____ (hereinafter called the said Agreement) to Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:- as per specifications and scope of work given in the bid document The Seller will also operate the equipments/system DURING SEASON 2019-20 and the warranty will be for 24 months from the date of agreement to achieve norms as prescdibed in bid document hereinafter referred to as "the said Machinery and Equipment") for the Purchaser's proposed sugar plant at -----, Distt. -----, Uttar Pradesh in accordance with the terms and conditions therein contained.

AND WHEREAS under clause 16.1(iii) of the said Agreement, the Seller are required to furnish to the Purchaser a Bank Guarantee in respect of timely delivery of the said Machinery and Equipment as provided in clause 16.1(iii) of the said Agreement for the sum of Rs..... lakhs (Rupees only) being 10% (ten per cent) of the total Contract Price mentioned at section 3.1.2 such guarantee to **be valid till 6 months** after the scheduled date of Performance Trial of the Machinery and Equipment.

AND WHEREAS at the request of the Seller, the Purchaser has agreed to accept a Guarantee from the Guarantor being these presents to secure such obligations on conditions expressly that the Guarantor shall on demand and without demur pay the aforesaid guaranteed amount to the Purchaser.

AND WHEREAS the Guarantor has at the request of the Seller agreed to give the guarantee as hereinafter appearing.

NOW THIS DEED WITNESSES AS FOLLOWS:

- A) In consideration of the premises the Guarantor hereby undertakes to pay the Purchaser within thirty days of demand and without demur such a sum not exceeding Rs. _____/- (Rupees _____ only) representing 10% (ten per cent) of the Total Contract Price (as given at clause 3.1.2) as the Purchaser may demand, and if the Guarantor fails to pay the sum within the said period the Guarantor will also pay, on the sum demanded, interest at the bank lending rate then prevailing reckoned from the date of demand.
- B) The Guarantor shall pay to the Purchaser on demand the sum under clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, if being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the Seller have committed breach/or breaches, of any of the terms and conditions of the said Agreement and SECONDLY that the right of the Purchaser to recover from the Guarantor any amount due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Seller with regard to their liability or that proceedings are pending before any Tribunal/Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the Guarantor shall immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the Seller to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.
- C) This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of this Purchaser on behalf of the Seller.
- D) The Seller and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the accent of the Guarantor.
- E) This guarantee shall not be affected by any change in the constitution of the Guarantor or of the Seller nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.
- F) This guarantee is irrevocable except with the written consent of the Purchaser.
- G) The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this deed.
- H) This guarantee shall come into force from the date hereof and shall remain valid till the supply and erection of the Plant and Machinery for the said plant is completed in all respects and to the satisfaction of the Purchaser and the said plant is commissioned in accordance with the stipulation in the said Agreement for which the stipulated date according to terms and conditions of the said Agreement is, but if the date is for any reason whatsoever and upon such extension the Seller fails to furnish or renew Guarantee for the extended period, the Guarantor shall pay to the Purchaser the said sum of Rs...../- or such lesser sum as the Purchaser may demand.
- I) The invocation of this guarantee should be accompanied by a claim signed by the Purchaser only.
- J) Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs...../- (Rupees _____ only). This guarantee shall remain in force upto, unless a demand or action under this guarantee is filed against

the Guarantor in writing within three months from the date of expiry i.e....., all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor

**DRAFT OF BANK GUARANTEE FOR PERFORMANCE
(TO BE SUBMITTED BEFORE SIGNING OF THE AGREEMENT)**

THIS GUARANTEE MADE THIS _____ day of _____, Two thousand Eighteen, by the _____ Bank, having its branch office at _____, (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of The Kisan Sahakari Chini Mills Ltd., -----, Distt. -----, Uttar Pradesh having its registered office at Lucknow, in Uttar Pradesh State, hereinafter called 'The Purchaser' which expression shall, unless repugnant to the context or contrary to the meaning thereof include its successors and assignees) of the other part.

WHEREAS, M/s _____, a company registered under the Indian Companies Act, 1956 having its registered office at _____ and chief place of business at _____, (hereinafter called 'The Seller' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____, (hereinafter called the said Agreement) to Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:- as per specifications and scope of work given in the bid as per specifications and scope of work given in the bid document IN accordance with the terms and conditions therein contained (hereinafter referred to as 'the said Machinery and Equipment') The Seller will also operate the equipments/system DURING SEASON 2019-20 and the warranty will be for 24 months from the date of agreement to achieve norms as prescdibed in bid document AND WHEREAS under clause 16.1(IV) of the said Contract, the Seller are required to furnish to the Purchaser a Bank Guarantee in respect of guaranteed performance of the Machinery and Equipment supplied by the Seller as referred to in clause 16.1(III) of the said Total Contract for Rs. _____ (Rupees _____ only) representing 10% (ten percent) of the total Contract Price mentioned in the Contract at section 3.0.

AND WHEREAS the Guarantor has at the request of the Seller agreed to give the guarantee as hereinafter appearing.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. In consideration of the premises the Guarantor hereby undertakes to pay to the Purchaser within 30 (thirty) days of demand and without demur such a sum not exceeding Rs. _____/- (Rupees _____ only) representing 10% (ten per cent) of the Total Contract Price (mentioned at section 3.0) as the Purchaser may demand, and if the Guarantor fails to pay the same within the said period, the Guarantor shall also pay, on the sum demanded, interest at the bank lending rate then prevailing reckoned from the said thirty days till the date of payment.
2. The Guarantor shall pay to the Purchaser on demand the sum under Clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, it being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the Seller have committed breach/ or breaches, of any of the terms and conditions of the Agreement and to the extent of loss, damage, costs, charges and expenses caused to or suffered by the Purchaser from time to time shall be final and binding on the Guarantor and SECONDLY that the

right of the Purchaser to recover from the Guarantor any amount due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the Seller with regard to their liability or that proceedings are pending before any Tribunal, Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the Guarantor shall immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the Seller to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.

3. This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of the Purchaser on behalf of the Seller.
4. The Seller and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the accent of the Guarantor.
5. This guarantee shall not be affected by any change in the constitution of the Guarantor or of the Seller nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.
6. The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this deed.
7. The guarantee is irrevocable except with the written consent of the Purchaser.
8. This guarantee shall come into force from the date hereof and shall remain valid till 60 days after the end of warranty period if the period of the contract is for any reason extended and upon such extension if the Seller fail to furnish a fresh or renewed guarantee for the said extended period, the Guarantor shall pay to the Purchaser the sum of Rs. _____/- (Rupees _____ only) or such lesser sum as the Purchaser may demand.
9. The invocation of this guarantee shall be by a letter signed by the Purchaser and need to be countersigned by Managing Director, UP Coop. Sugar Factories Federation Ltd., Lucknow.
10. Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs. _____/- (Rupees _____ only). This guarantee shall remain in force upto the end of three months after completion and certification of successful establishment of performance of plant and machinery unless a demand or action under this guarantee is presented to the Guarantor in writing within three month from the date of expiry all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor

SECTION III(D) - DRAFT AGREEMENT FOR ERECTION AND COMMISSIONING

This Agreement is made on the day of.....2018(.....two thousand Eighteen) at _____ between the Kisan Sahakari Chini Mills Ltd., Name of Sugar Mill _____ –Uttar Pradesh – , a cooperative society registered under the U. P. Cooperative Societies Act , having its registered office at **Name of Sugar Mill** through Sri..... General Manager, hereinafter referred to as the "The PURCHASER", which expression shall, unless repugnant to the subject or context, include their successors and assignees of the ONE PART, and the M/s. a company within the meaning of companies act, 1956, having its registered office atthrough Sri.....hereinafter referred to as the Erection Contractor or "E.C." which expression shall, unless repugnant to the subject or context, include their legal representatives, administrators, successors of the OTHER PART.

WHEREAS the offer of Erection Contractor vide tender dated _____ to erect and commission the plant erection and commissioning of Purchaser's proposed plant and machinery for process of upgradation, with all accessories at ----- Name of Sugar Mill _____ Uttar Pradesh (hereinafter referred to as the "site") as specified in schedule-'A' annexed hereto and forming part of this Agreement (hereinafter referred to as 'the said machinery and equipment') has been accepted by the Purchaser on the terms & conditions hereinafter appearing .

ANDWHEREAS the Contract Price hereinafter mentioned is based on the E.C.'s undertaking to erect, commission and make ready for commercial use the said equipment by _____ which respect the time is essence of the contract and if the E.C. fails to do so, the Contract Price shall stand reduced as hereinafter provided.

NOW THEREFORE, the parties hereto have agreed on the following terms and condition for erecting and commissioning the said machinery and equipment and their matters connected therewith referred to herein along with the dismantling, shifting & land development of old machineries and plant building if required.

1.0 CONTRACT PRICE

1.1 The E.C. agreed to erect and commission the said machinery and equipments to be purchased by the Purchaser under the supply contract and dismantling, shifting and leveling of old plant building and machineries (if required), as specified in schedule -A' annexed to and forming part of the Agreement with the purpose to successfully design supply machinery and equipment of the required system for the Sugar Mill plant and satisfy other relevant technical parameters related to plant and to do other works hereinafter mentioned, at a total price of Rs. _____ lakhs (Rupees _____) hereinafter referred to as the ' Contract Price' subject to the terms and conditions hereinafter provided as per break-up given below:-

Sl.No.	Particulars	Amount (in lakhs)
a)	Fabrication, erection (with consumables including those mentioned below) supervision of erection and commissioning and of EQUIPMENTS/machinery as per desired results and successful operation during season 2019-20 and warranty for 24 months	
b)	Lagging, cladding, insulation, Primer and anti-corrosive coate wherever required final including painiting inside and outside as per colour scheme of the Purchaser.	

c)	Insurance	
d)	Taxes and duties as applicable	
	Total Contract Price	

Total Contract Price for Erection and Commissioning (with all consumables, salaries & wages of workers, Taxes and duties), supervision of erection and commissioning and of trial run of the equipment purchased under the supply contract along with dismantling (if required) including successful performance is Rs. _____

The security deposit will be 5% of the Contract Price.

1.2 The price referred in clause 1.1 is firm in all respect till commission of the said equipment and completion of ----- months of successful operation from the date of commercial use.

1.3 INSURANCE

The Contract Price mentioned in clause 1.1 above include the charges of storage cum erection insurance policy including fire, theft, storage erection, commissioning and other insurance policies in respect hereof shall be arranged by the erection contractor and full force and effect. The E.C. contractor shall also have the interest of the Purchasers and their financiers noted upon such policies of insurance. The insurance policy shall be taken by the E.C. under agreed bank clause in the joint names of the Erection Contractor as contractor, the Purchaser as Purchaser. It shall be the responsibility of the E.C. to lodge the claim, if any, with the insurance company and to replace the items of equipment and machinery lost or damaged during erecting, such replacement to be done by the E.C. free of cost delivery at site, within such reasonable time as may be decided by the Purchaser. All money received against claims shall be to the account of E.C.

2.0 SCOPE OF WORK

The E.C. shall erect and commission the said plant as detailed in Schedule A, annexed to forming part of this Agreement, in conformity with the specifications laid and according to progressive erection schedule matching the supply and delivery schedule and to the satisfaction and approval of the Purchaser so that the said plant shall be ready for commissioning and commercial use within the time provided in clause 4.1 .

The dismantling, shifting and levelling land, if required shall be included in the scope of E.C. under this Agreement. EC has to shift safely the dismantled material to the specified area allotted by the Purchaser.

3.0 ERECTION AND COMMISSIONING

3.1 The E.C. agree to erect and commission the equipment and machinery by --/--/2019 to be supplied under the supply contract, as specified in schedule -'A' annexed to and forming part of this Agreement to the satisfaction of the Purchaser.

3.2 The E.C. shall, at their own cost, provide at the site adequate tools, tackles and other erection equipment and also employ adequate number of labor and suitable skilled workmen for safe custody, erection and the commissioning of the machinery equipment and shall have the entire work supervised by qualified and experienced personnel to the satisfaction of the Purchaser. Any defect in the said erection or damage or loss to the equipment till commissioning and during operation period of 24 months from date of commissioning shall be rectified /replace and made good forthwith by the E.C. at their own cost and expense.

3.3 EXCESS MATERIALS

Any materials including tools and tackles etc. brought by the E.C. at the Purchaser site and not paid for by the Purchaser can be taken out by the E.C. after the Purchaser's approval.

4.0 SCHEDULE OF ERECTION AND COMMISSIONING :

- 4.1 The E.C. agree to erect and to give successful performance of the equipment, detailed in Schedule A annexed to and forming part of this Agreement, so that the erection of the equipment is completed in all respect to the satisfaction of the Purchaser and the said equipment commissioned and made ready for commercial use by _____ in which respect time is the essence of the contract.
- 4.2 The E.C. shall be bound and hereby agree to erect and commission the said equipment by _____ in conformity with the drawings, diagram, design and layout as approved by the Purchaser and in accordance with the other terms and conditions of this Agreement.
- 4.3 The checking of the machinery foundation during different stages of construction shall be done jointly by the Purchaser or by their authorized representative and E.C. at factory site.
- 4.4 The E.C. shall in the erection work seek instruction from the Sellers of the said equipment under the supply contract and shall comply with all instructions that the Sellers of the said equipment may give to E.C. from time to time.
- 4.5 The E.C. shall receive the equipment to be supplied under the supply contract as agent of the Purchaser and shall keep the same in its custody for the purpose of erection. The E.C. shall indemnify the Purchaser against any loss or damage to the said equipments whilst in its custody and in the event of loss or damage thereto, the E.C. shall replace the same at its own cost within time so as to adhere to the date of commissioning.

5.0 TRIALS AND TAKEOVER:

- 5.1 As soon as the equipment is erected and ready for commissioning, the E.C. shall notify in writing to the Purchaser specifying a date and time not less than 10 days later than the date of the notice when the E.C. intend to carry out the steam, water and load trials as per schedule decided by the Purchaser

If the Purchaser fail to attend on the agreed date and time to the said trials as required by this clause or if it is agreed between the Purchaser and the E.C. that the Purchaser shall not do so, then the E.C. shall carry out such trials in the absence of the Purchaser and shall forthwith notify the Purchaser of the results thereof and the results so notified shall not be questioned by the Purchaser.

- 5.2 After the said trials have been completed to the satisfaction of the Purchaser and / of their furnishing a certificate to the effect that all the equipment and machinery mentioned in schedule -'A' has been erected and commissioned and the equipment has been completed according to the terms and conditions of this Agreement, the E.C. 's obligations under this Agreements shall be deemed to have been fulfilled.
- 5.3 The Purchaser will give 10 days clear notice to the E.C. for conducting the performance trials.

The performance trial will be conducted in the presence of the performance trial committee which shall comprise the authorized representatives of the following :-

- (a) U.P. Cooperative Sugar Factories Federation., Lucknow.
- (b) Purchaser
- (c) Selle
- (d) National Federation of co-operative sugar factories fed ltd

Out of the said four authorized representatives, three of them shall be necessary to form quorum for the said committee to function. The performance trial committee would tabulate the results, achieved during the trial period of three consecutive days and also indicate clearly whether performance of technical e-bid document has been achieved or not. In case of non achievement of performance, the extent of failure or default of clause-9 of the supply contract shall also be indicated by the said committee.

- 5.3.1 If the trials pursuant to clause 5.3 are completed to the satisfaction of the performance trial committee mentioned above, or in their absence to the satisfaction of committee constituted of persons mutually agreed upon by the Purchaser and the E.C., A certificate to the effect shall be issued by the Purchaser to E.C.
- 5.3.2 On furnishing of the certificate mentioned in clause 5.3.1 above, the said equipment shall be deemed to have been taken over by the Purchaser and the performance guarantee provided in the Erection contract shall stand discharged.

6.0 DAMAGE TO PERSONS AND PROPERTY:

During and until the Performance Trial of the said machinery and equipment the E.C. shall be fully responsible for any loss or damage to persons engaged or deputed at site by the E.C. resulting from any cause whatsoever connected with erection or operation of the works, The E.C. shall provide, at their own cost, for the chief erector and their assistants and erection workmen deputed by them for the erection, an insurance for death or bodily injury suffered by them.

In every case in which by virtue of the provisions of the workmen's compensation Act, the Purchaser are obliged to pay compensation to a workman employed by the E.C. or by any of their sub-contractors in the execution of the work, the Purchaser will recover from the E.C. the amount of compensation so paid, and with out prejudice to the rights of the Purchaser under section 12(2) of the said Act, the Purchaser shall be at liberty to recover such amount or any part thereof by deducting it from sums due by Purchaser to the E.C. whether under this contract or otherwise, or realize the same from the E.C.

The Purchaser shall not be bound to contest any claim made under section 12(1) of the said Act, except of the written request of the E.C. and upon their giving to the Purchaser, full security for all cost for which Purchaser might become liable in consequence of contesting the claim.

7.0 PURCHASER'S RESPONSIBILITY :

7.1 WORKSHOP AND ERECTION FACILITIES :

- 7.1.1 The Purchaser, if available, shall provide free of cost suitable accommodation, / space for storage of the purchase equipment and machinery and E.C.'s tools and tackles etc.
 - 7.1.2 Workshop machinery facility as available at site shall be provided by the Purchaser to the E.C.
 - 7.1.3 The Purchaser shall provide free of cost to the E.C. adequate water supply at factory site. However electricity shall be provided by the Purchaser on actual cost basis .
- 7.2 The Purchaser shall provide at their cost technical staff and labour, including skilled and unskilled for steam and water trial and commissioning and operating the equipment.

- 7.3 The Purchaser shall pay the required statutory inspection and other fees and charges payable under the provision of any Act in respect of installation, operation, or use of machinery and equipment,

but the follow-up work for getting the approval thereof shall be done by the E.C. for which they would be solely responsible. It is clarified that E.C. shall also be responsible to submit the desired applications timely to the concerned authorities and to obtain the desired certificates/clearances in time.

7.4 ACCOMMODATION :

Accommodation as available at site shall be provided by the Purchaser to E.C.. In case of insufficient residential accommodation with Purchaser, EC has to arrange of his own for which no compensation will be given by the Purchaser. E.C. has to arrange for medical facility for his staff at site, for which no compensation will be given by the Purchaser.

8.0 GROUNDS ENTITLING THE E.C. TO AN EXTENSION OF TIME:

The E.C. shall not be entitled to any extension of time mentioned in clause 4.1 for any reason, whatsoever except for the following reasons. Any extension of the commissioning date will be granted by the Purchaser only after obtaining approval of the Managing Director, U.P. cooperative sugar factories federation Ltd., Lucknow.

8.1 If the Purchaser order expressly in writing for execution of work by the E.C. to be suspended for no fault of the E.C. the E.C. shall be entitled to reasonable extension of time, as may be decided by the Managing Director, U.P. Cooperative Sugar Factories Federation, Lucknow.

8.2 The E.C. shall be entitled to corresponding extension of time due to force majeure as per clause of this Agreement.

9.0 FORCE MAJEURE:

The right of the E.C. to proceed with the work shall not be terminated as provided in clause 16 nor will the Contract Price be reduced or damages be payable as provided herein because of any delay in the completion of the work, due of unforeseen causes beyond the control and without the fault and negligence of the E.C. including (but not restricted to) act of God or public enemy, action of Government in its sovereign capacity, floods, epidemics, quarantine, strikes, riots, lockouts, fires, explosion, and accident. In the event of any of the aforesaid contingencies, the Purchaser will be promptly kept informed by the E.C. by telephone, fax, email, telegrams, followed by confirmation in writing with documentary proof within 10 days of commencement and cessation of force majeure circumstances.

a) Force majeure clause shall be applied only to the Erection & Commissioning work that fall in the period as per delivery schedule.

b) Extension of Time – Any period within which the Erection Contractor shall, pursuant to this Agreement, complete any action or task, shall be extended by the Purchaser if satisfied, for a period equal to the time during which the Erection Contractor was unable to perform such action as a result of Force Majeure.

c) Measures to be taken – Erection Contractor affected by an event of Force Majeure shall take all reasonable measures to remove such Erection Contractor inability to fulfil its obligation hereunder with a minimum of delay. The parties shall take all reasonable measures to minimize the consequences of any event of Force Majeure.

d) If the Erection Contractor even after extension of time by the purchaser as per provision of clause 13 (c) of this Agreement did not fulfill the contract even during such extended time ,then the purchaser may,if deem fit, rescind this contract and take such penal action as provided in this Agreement.

10.0 TERMS OF PAYMENT

A total advance of 20% comprising First Advance of 10% of Contract Price (as per clause 1.1.a) and Second Advance of 10% of Contract Price (as per clause 1.1.a) against Bank Guarantees on any Nationalised Bank will be paid to the Erection Contractor from the actual date of start of the erection work at site on receipt of respective Bank Guarantees on the Purchaser's proforma. The advance given shall carry a interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills. The date of adjustment of bills means the date on which the amount is paid by cheque /draft.

- 10.1 1st advance Bank Guarantee equivalent to 10% of the Contract Price (as per clause 1.1.a) on any Nationalised Bank 10% of the Contract Price shall be paid by way and in the nature of first instalment of advance from the actual date of start of the erection work at site by crossed demand draft/RTGS in favor of E.C. The advance given shall carry a interest @ 12% per annum on reducing balance.
- 10.2 2nd advance Bank Guarantee equivalent to 10% (as per clause 1.1(a to d) of the Contract Price on any Nationalised Bank towards satisfactory performance of the machinery and equipment, 10% of the Contract Price shall be paid subject to furnishing and compliance of the following:
- I. Utilisation certificate signed by the chief executive of the E.C. on the proforma annexed here to for advance paid as per clause 10.1.
 - II. Statement showing the detailed price breakup of the Contract Price as per clause 1.1
 - III. Detailed schedule containing monthwise erection prepared in consultation with and to the satisfaction and approval of the Purchaser.
 - IV. Proof of fulfillment of all contractual obligations in terms of this Agreement including those given in Schedule 'A', 'B' due upto that date.

The advance given shall carry a interest @ 12% per annum on reducing balance.

Provided that if the E.C. fails to comply with any of the contractual obligations due up to that date , the second instalment of advance will not be released to the E.C.'s and all delay will be on E.C's account and no extension in date of commissioning shall be granted by the Purchaser.

The advance payment made by the Purchaser shall be utilised by the E.C. for arranging and making payment to manpower, tools and tackles for erection and commissioning of the said plant and machinery and for no other purpose whatsoever .

Provided that all the aforesaid advance payment shall be made by the Purchaser on receipt of bank guarantee of equivalent amount on the Purchaser proforma from Nationalised bank as per clause 12.4(a).

If the E.C. fail to get any instalment of advance for non-compliance of the above obligations on their part, the payment of advance shall be delayed and such delay shall not in any way entitle the E.C. for grant of extension in the stipulated date of erection and commissioning under this Agreement.

- 10.3 60% of the amount of Contract Price (as provided in clause 1.1) after adjustment of mobilization advance, interest on mobilization advance shall be paid against actual completion of the proportionate work and also when the E.C. have complied with all obligations including furnishing of various guarantees and other obligations due up to the date of the said payment. The payment shall be made by the Purchaser only after the progress of the work has been certified by an authorized representatives duly authorized by UP Cooperative Sugar Factories Federation Ltd. Lucknow.

- 10.4 The payment of balance amount being 20% of the Contract Price shall be made after commissioning of the various machineries & equipments of the system.
- 10.5 The payment of the Contract Price under this Agreement shall be made to E.C. as stated in this clause 10.0.
- 10.6 The earnest money deposited with bid shall be converted into security deposit and refundable after 6 months of successful performance of System. No interest is payable on security deposit.
- 10.7 In case the E.C. fail to commission the said plant within the time specified in clause 4.1, the E.C. shall be liable to pay Purchaser interest at the State Bank lending rate prevalent at that time compounded half yearly on the amount of advance paid to the E.C. reckoned from the stipulated date of commissioning of the plant as specified in clause 4.1 to actual date of commissioning.
- (a) In making payment against the proportionate work done, the Purchaser shall always deduct there from proportionate advance given by that time.
- (b) The Purchaser shall deduct the income tax as per provision of Income Tax Act 1961 amended up to date and also other taxes at sources, if deductible to comply with the statutory requirements.
- 10.8 The advance given under clause under 10.1 & 10.2 shall carry a interest @ 12% per annum on reducing balance from the date of issue of cheque/bank draft till the progressive adjustment in the bills under clause 10.4. The date of adjustment of bills means the date on which the amount is paid by cheque /draft.

11.0 Liquidated Damages

- 11.1 In case of late commissioning of plant & machinery a penalty of 0.5 per week of Contract Price and maximum upto 10% of Contract Price.
- 11.1.1 Apart from above it is also hereby agreed that if the erection contractor fail to erect and commission all the said equipment within the time fixed by clause 4.1 or extension, if any, thereof allowed by the Purchasers as per terms of this Agreements, the Contract Price herein agreed in clause 1.1 shall stand reduced by an amount equal to one percent of Contract Price, per completed week or part thereof delay after the appointed or extended date, as the case may be, and the E.C. shall within 30 days of demand repay the same to the Purchasers such price reduction to be in full satifaction of the E.C.'s liability for delay but shall not exceed five percent of the Contract Price.
- 11.1.2 To secure obligation under clause 11.1.1 the E.C. shall furnish to the Purchaser a Bank Guarantee as provided in clause 12.2 herein after .

12.0 GUARANTEES:

- 12.1 The E.C. shall furnish to the Purchaser at their own cost on the Purchaser proforma (enclosed) four bank guarantees from the Nationalised Bank as specified bellow:
- 12.2 A bank guarantee on or before signing of the Agreement in respect of timely erection and commissioning of equipment and machinery for Rs.-----equivalent to five percent of the Contract Price as provided in clause 1.1 shall be furnished. This guarantee shall be valid till 6 months of the said equipment is commissioned .
- 12.3 A bank guarantee on or before signing of the Agreement in respect of guaranteed performance of the equipment and machinery erected by the E.C. for Rs.-----equivalent to five percent of the

Contract Price 5% of the basic price as referred to in clause 1.1 of this Agreement shall be furnished . This guarantee will be valid upto 60 days after the end of 24 months from the date of Performance Trial.

- 12.4(a) Two Bank Guarantees in respect of advance payment as provided in clause 10.1 & 10.2 of this Agreement to be given before drawing the respective advance payment from the Purchaser.

Provided that the liability of the guarantor herein shall stand reduced by deductions pro-rata against the value of the work certified and passed for payment under clause 10.5.

- 12.4(b) The recovery of the advance paid under clause 10.1 10.2 and 10.3 shall be made prorata (that is to say in the same proportion that the amount of the guarantee bears to the amount as mentioned under clause 10.5)

- 12.5 If the E.C. abandon this contract or fail to perform their part of this contract within the period, herein agreed or any extension thereof granted by the Purchaser as per terms of this Agreements or if the work or any part thereof could not performed due to Force Majeure mentioned in clause 9 then and in any such case the E.C. shall refund to the Purchaser within 30 days of demand such part of the advance payment hereunder made as the Purchaser may deem fit to protect their interest failing which the Purchaser may recover the same with the interest at the lending rate of State Bank then prevailing .

- 12.6 The Bank Guarantee required to be furnished by the E.C. under the provisions hereof to secure the advance payment , bank guarantee to secure the timely erection/ commissioning or performance of the plant and machinery or the Bank Guarantees for any other purpose under the provisions hereof shall be in the form(s) approved by the Purchaser which form(s) shall inter-alia invariably include the provisions that the decision of the Purchaser as to whether there has been any loss or damage or default and /or negligence on the part of the E.C. will be final and binding on the guarantor, that the right of the Purchaser to recover from the guarantor any amount due to the Purchaser shall not be effected or suspended by reasons of the fact that any dispute or disputes have been raised by the E.C. with regard to their liability or that proceedings are pending before any tribunal, Arbitrator(s) or Court with regard there to or in connection therewith, that the guarantor shall pay to the Purchaser the sum under the guarantee without demur on first demand requiring the Purchaser to invoke any legal remedy that may be available to them, that it shall not be to open to the guarantor to know the reason thereof or to investigate or to go into the merits of the demand or to question or to challenge , the demand or to know any facts effecting the demand or to require proof of the liability of the E.C. before paying the amount demanded by the Purchaser under the guarantee(s) and that the guarantee shall be invoked only when the invocation letter is signed by the Purchaser & counter signed by the Managing Director of U.P. Cooperative Sugar Factories Federation Ltd., Lucknow (U.P.). The guarantee required to be furnished by the E.C. under the provision here of to secure the advance payment , timely erection & commissioning & performance of the plant and machinery or for any other purpose under the provision hereof shall be for such period as may cover the period of erection/ commissioning or the Guaranteed Performance respectively as the case may be, as stipulated under this Agreement & shall also provide a minimum of 6 month invocation period - If however, , the period of this Agreements is extended under the provision hereof or due to E.C. not fulfilling their obligations under this Agreement, the E.C. shall have such guarantees extended up to the corresponding extended period at their cost and in no case extension of the period of the contract shall be construed as waiver of the right of the Purchaser to invoke the guarantees.

13.0 ARBITRATION:

If at any time there should be any question, dispute or difference between the parties in respect of any matter arising out of or in relation to this Agreement, either party may give to the other party notice in writing of the existence of such question, dispute or difference and the same shall be referred to arbitration of a single arbitrator, when the parties may agree upon, otherwise two arbitrators, one to be nominated by each party. The two arbitrators appointed by the parties shall before proceeding with the reference, appoint a third arbitrator with mutual consent, who will act as the presiding Arbitrator. The arbitrator should not be associated with either of the parties to the agreement in any of the capacities as mentioned in the 7th Schedule of the The Arbitration and Conciliation Act 1996. The award of the arbitrators shall be final and binding on the parties and be accepted by them.

This reference to the arbitrators shall be deemed to be a reference, under the provision of The Arbitration and Conciliation Act 1996 and the rules made there under and any statutory modifications or re-encashments thereof that may be made from time to time and actually in force at the time of reference.

The cost of arbitration shall be borne by the parties as may be decided upon by the arbitrators. Jurisdiction for arbitration will be Lucknow, Uttar Pradesh.
The place of arbitration shall be Lucknow.

14 JURISDICTION

The High Court of judicature at Lucknow and courts subordinates there to at..... (UP) shall alone have jurisdictions to exclusion of all other courts subject to the arbitration proceedings under clause 13 of this Agreement.

15.0 SUB - CONTRACTS :

The E.C. has right to sub-contract any part of the contract to sub-contractors.

Provided that nothing contained in this clause shall be deemed, however, to create any contractual relations between the sub contractors of the one part and the Purchaser of the other part and shall not absolve the E.C. from their ultimate responsibility for purpose of this Agreement .

16.0 TRANSFERABILITY OF THE CONTRACT:

The E.C. shall not transfer their rights and obligations arising out of or in relation to this Agreement except with the consent in writing of the Purchaser.

17.0 NON - COMPLIANCE:

If the E.C. shall neglect to erect and commission the equipment as per terms and conditions of this Agreement or to comply with any orders given to them in writing by the Purchaser in connection therewith , the Purchaser may give notice in writing to E.C. to make good, within a reasonable specified time, the failure neglect or contravention complained of , and if the E.C. still without reasonable cause fail to comply with the notice or fail to make good the matter to the satisfaction of the Purchaser within the time specified in the notice (to be reckoned from the date of receipt of notice by the E.C.) the Purchaser may take over the work of erection or commissioning of the

equipment as a whole or in part out of the E.C.'s hands and or may give it to another person on contract at a reasonable price under intimation to the E.C. and the Purchaser shall be entitled to recover any excess cost from E.C. or make it good from any bills or dues of the E.C. pertaining to this Agreement .

18.0 POWER TO CLOSE WORK:

- 18.1 If at any time after signing this Agreement, the supply contract is determined for any reason whatsoever or the Purchaser shall in order to comply with any directives of the Government of U.P. not require the whole or any part of the work relating to erection or commissioning of the purposed said equipment under the terms of this Agreement, to be carried out, the Purchaser shall give notice in writing of the fact to E.C. who shall have no claim to any payment by way of compensation or otherwise on account of any profit of advantage which they might have derived from the execution of the said work in full but which they could not derive in consequence of the giving up of the work before completion, the E.C. shall be paid at contract rates for the full amount of work executed and also actual expenses incurred by them on account of any labour and material collected at site or arrangement made for execution of the work which could not be utilised either fully or partially on the work on account of the giving up of work as aforesaid: provided that where partial utilisation of material and arrangement as aforesaid has been made, the payment will be made in proportion to the value of the work done to the value of the whole work covered by this Agreement .
- 18.2 In the event of the closing of the work as above, the E.C. undertake to refund all outstanding unutilised and unadjusted amount of the advance payment, if any, within 120 days, failing which the erector shall be liable to refund to the Purchaser the above amount along with interest for the period beyond 120 days at the lending rate of State Bank then prevailing.

19.0 Termination of Contract

The Purchaser reserves the right to terminate the whole or part of this Contract due to any or all the following conditions :

- 19.1 If the E.C. assigns the contract, or sub-let the whole of the Contract without the consent of the Purchaser and E.C. has failed or refused to take remedial steps, or the E.C. :
- a) Has abandoned the contract, or
 - b) has without reasonable excuse suspended performance of the contract for 30 days after receiving from the Purchaser written notice to proceed, or
 - c) Despite previous warnings in writing from the Purchaser is not manufacturing/ supplying/ erecting the Plant and equipment in accordance with the Contract, or is failing to proceed with due diligence or is neglecting to carry out his obligations so as to affect adversely the Performance of the Contract.
- 19.2 The Purchaser may give 21 days' notice to the E.C. of its intention to proceed in accordance with the provisions of this Clause. Upon the expiry of such notice the Purchaser may without prejudice to any other remedy under the contract and without affecting the rights and powers conferred by the contract on the Purchaser, terminate this Agreement Upon such termination the Purchaser shall be entitled to get the remaining ERECTION & COMMISSIONING Work completed by any other vendor or may itself complete the remaining work
- 19.3 As soon as practicable after the Purchaser has terminated the Agreement the Purchaser shall, by or after reference to the Parties and after making such enquiries as he thinks fit, determine the amount then due to the E.C. as at the date of termination and certify the amount thereof. The amount so certified is herein called 'Termination Value'.

- 19.4 **Payment and termination** - The Purchaser shall not be liable to make any further payments to the E.C. until the costs of completing the Plant and equipment or obtaining substitute Plant and equipment elsewhere and all other expenses incurred by the Purchaser have been ascertained and the amount payable certified by the Purchaser (herein called 'the Cost of Completion'). If the Cost of Completion when added to the total amounts already paid to the E.C. as at the date of termination exceeds the total amount which the Purchaser certifies would have been payable to the E.C. under the Contract on completion the Purchaser shall certify such excess and the E.C. shall upon demand pay to the Purchaser the amount of such excess. Any such excess shall be deemed a debt due by the E.C. to the Purchaser and shall be recoverable accordingly. If there is no such excess the E.C. shall be entitled to be paid the difference (if any) between the Termination Value and the total of all payments received by the E.C. as at the date of termination.
- 19.5 If the Purchaser have any information that the E.C. has become bankrupt or insolvent, or Receiver has been appointed, or compound with his creditors, or being a corporation commence to be wound up, not being a members' voluntary winding up for the purpose or amalgamation or reconstruction, or have an administration order made against him or carry on his business under an administrator or a receiver or manager for the benefit of his creditors or any of them, the Purchaser may be entitled to:
- a) To terminate the Agreement forthwith by 21 days' notice to the E.C. or to the receiver, manager, administrator or liquidator or to any person in whom the contract may become vested, or
 - b) To give such receiver, manager, administrator or liquidator or other person the option of carrying out the Contract subject to his providing a guarantee for the due and faithful performance of the Contract up to an amount to be agreed.

20.0 E. C. 'S LIABILITY FOR INTEREST:

In case the E.C. fail to commission the plant within the time agreed herein, the E.C. shall be liable to pay to the Purchaser interest @ 12 % per annum compounded half yearly on the amount of advance paid to the E.C. under clause 10 reckoned from the date of commissioning of the plant as specified in clause 4.1 till the date of actual commissioning .

21.0 MISCELLANEOUS:

- 21.1 Unless, otherwise especially agreed in writing any concession shown by the parties to this Agreement to each other shall not prejudice their individual rights under this Agreement .
- 21.2 The E.C. shall be deemed to have noted that time is the essence of this contract and have carefully examined and satisfied themselves as to the terms and condition, specifications etc, mentioned in this Agreement .
- 21.3 All money which the Purchaser may under the terms hereof be entitled to recover from the E.C. may be recovered by the Purchaser from any payment due or which may at time become due to the E.C. under this Agreement or any other contract.
- 21.4 The E.C. shall invariably depute their accderited representatives(s) to attend review meetings as may be fixed by the Purchaser to monitor the progress of the works and such representatives shall furnish such information and make such commitments on behalf of the E.C. 's as may be necessary in this behalf.
- 22.0 This Agreement including the schedule and annexures have been executed in two copies, the original will remain with the Purchaser, whereas the second copy will remain with the E.C. . By signing this Agreement , both i.e. the Purchaser and the E.C. agree to abide by its clauses .

This Agreement consists of following :-

- 1) Agreement
- 2) Schedule "A" (i) Part A - As in Annexure-I
 consists of Part A, Part B (ii) Part B - As in Annexure-II
 note: as per Annexure I to Annexure V of Section III (C)
- 3) Proforma "AA" Advance Guarantee
- 4) Proforma "BU" Timely Erection & commissioning Guarantee
- 5) Proforma "CP" Performance Guarantee
- 6) Proforma "d" Utilisation Certificate

23.0 The stamp duty shall be paid by E.C. True certificate copy of the extracts of the Minutes of the meeting of the Board vesting in its General Manger power of the Purchaser to sign this Agreement and the Power of Attorney executed by E.C. authorising the Attorney to sign the Agreement on behalf of the E.C. are enclosed herewith.

In witness whereof the parties hereto have herewith set their respective hands and put seal of the day and year first above written..

IN WITNESS HEREOF THE PARTIES HEREUNTO HAVE SET THEIR RESPECTIVE HANDS ON THE AFORESAID DATE.

FOR AND ON BEHALF OF
THE PURCHASER

FOR AND ON BEHALF OF
THE ERECTION CONTRACTOR

WITNESS:

- 1.
- 2.

WITNESS:

- 1.

Date:

Place:

DRAFT OF BANK GUARANTEE AGAINST FIRST &
SECOND ADVANCE PAYMENTS TO BE GIVEN BY E.C.

Bank Guarantee No. _____

THIS GUARANTEE MADE THIS _____ day of _____ Two thousand & Eighteen, by the _____ Bank, having its branch office at _____ (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of Name of Sugar Mill _____, (Uttar Pradesh) (hereinafter called 'The Purchaser' which expression shall, unless repugnant to the context or contrary to the meaning thereof include its successors and assignees) of the other part.

WHEREAS M/s _____, a company registered under the Indian Companies Act, _____ having its registered office at _____ and chief place of business at _____ (hereinafter called 'The E.C.' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____ (hereinafter called the said Agreement) to erect & commission the machinery & for the Purchaser's Sugar Mill at Name of Sugar Mill _____, in accordance with the terms and conditions therein contained. (hereinafter referred to as the said machinery & equipment)

AND WHEREAS under clause 12.4 of the said Agreement, the Purchaser is required to pay to the E.C. against the security of a Bank Guarantee an advance payment of Rs. _____ lakhs (Rupees _____ only) representing 10% (Ten per cent) of portion of Contract Price mentioned at clause no. 1.1 as first/second advance payment for the purpose for the said erection and commissioning and such guarantee to be valid till the full advance amount is adjusted against the payment to be made to E.C.

AND WHEREAS before advance payment as aforesaid is made the Guarantor has at the request of the E.C. agreed to give a guarantee as hereinafter contained.

NOW THIS DEED WITNESSES AS FOLLOWS:

- (l) In consideration of the promises the Guarantor hereby undertakes to pay the Purchaser within thirty days of demand and without demur such a sum not exceeding Rs. _____ lakhs (Rupees _____ only) as the Purchaser may demand representing 10% (Ten per cent) of the Contract Price, and if the Guarantor fails to pay the sum within the said period, the Guarantor will also pay, on the sum demanded, interest @ 12 % (Twelve percent) p.a. from the date of demand till the date of payment. Provided that the liability of the Guarantor hereunder shall be adjusted and reduced with the progress, erection and commissioning by the Seller and to the extent adjustment shown in E.C.'s invoices upto that time and reduced with the progress, erection and commissioning by E.C. and to the extent adjustment shown in E.C. Bills upto that time as per clause 10.0 and its sub-clauses of the said Agreement.
- (a) The Guarantor shall pay to the Purchaser on demand the sum under Clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, it being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the E.C. have committed breach of any of the terms and conditions of the said Agreement and SECONDLY that the right of the Purchaser to recover from the Guarantor any amount due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the E.C. with regard to their liability or that proceedings are pending before any Tribunal, Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the

Guarantor shall immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the E.C. to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.

- (b) This Guarantee shall come into force from the date hereof and shall remain valid till 90 days after the full advance amount is adjusted under clause 10.0 & its sub-clauses of the said Agreement, which according to the terms and conditions of the said Agreement is stipulated to be adjusted by proportionate 10% (ten per cent) of the Contract Price mentioned at clause 1.1 of the said Agreement of the E.C. for effected actual progress of the erection and commissioning at site, but if the actual progress as aforesaid have not been completed by the E.C. within the said period for any reason whatsoever, the Guarantor hereby undertakes that the E.C. shall furnish a fresh or renewed guarantee on the same proforma for such further period as the Purchaser may intimate failing which the Guarantor shall pay to the Purchaser a sum or sums not exceeding Rs.....lakhs (Rupeesonly) or the residual amount of balance advance left after proportionate adjustment in accordance with clause 1 above alongwith interest @ 12% per annum on unadjusted amount,, as the Purchaser may demand.
- (c) This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of the Purchaser on behalf of the E.C.
- (d) The E.C. and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the assent of the Guarantor.
- (e) This Guarantee shall not be affected by any change in the constitution of the Guarantor or of the E.C. nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.
- (f) This guarantee is irrevocable except with the written consent of the Purchaser.
- (g) The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this guarantee.
- (h) The invocation of this guarantee shall be by a letter signed by the Purchaser and countersigned by Managing Director, U. P. Copperative Sugar Factories federation Limited notifying/declaring the amount of advance remaining unadjusted and payable to the Purchaser.
- (i) Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs..... lakhs (Rupeesonly) alongwith interest @ 12% per annum on unadjusted amount of advance. This guarantee shall remain in force upto Unless a demand or action under this guarantee is filed against the Guarantor in writing within three months from the date of expiry i.e. on or before all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor

DRAFT OF BANK GUARANTEE FOR TIMELY ERECTION & COMMISSIONING
(TO BE SUBMITTED BEFORE SIGNING OF THE AGREEMENT)

THIS GUARANTEE MADE THIS _____ day of _____, Two thousand fifteen, by the _____ Bank, having its branch office at _____ (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of Name of Sugar Mill _____, U.P. (hereinafter called 'The Purchaser' which expression shall unless repugnant to the context or contrary to the meaning thereof include its successors and assignees) of the other part.

WHEREAS M/s _____, a company registered under the Indian Companies Act, 19__ having its registered office at _____ and chief place of business at _____ (hereinafter called 'The E.C.' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____ (hereinafter called the said Agreement) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically targetted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-)

AND WHEREAS under clause 12.2 of the said Agreement the Erection Contractor (E.C.) are required to furnish to the Purchaser a Bank Guarantee in respect of timely erection and commissioning of the said Machinery and Equipment as provided in Schedule 'A' of the said Agreement for the sum of Rs. _____/- (Rupees _____ only) being 10% (ten per cent) of the total Contract Price (given at section 1.1). Such guarantee to be valid till 30 days after the scheduled date of commissioning of the Machinery and Equipment.

AND WHEREAS at the request of the E.C., the Purchaser has agreed to accept a Guarantee from the Guarantor being these presents to secure such obligations on conditions expressly that the Guarantor shall on demand and without demur pay the aforesaid guaranteed amount to the Purchaser.

AND WHEREAS the Guarantor has at the request of the E.C. agreed to give the guarantee as hereinafter appearing.

NOW THIS DEED WITNESSES AS FOLLOWS:

- A) In consideration of the promises the Guarantor hereby undertakes to pay the Purchaser within three days of demand and without demur such a sum not exceeding Rs. _____ (Rupees _____ only) representing 10% (ten per cent) of the Contract Price (given at section 1.1) as the Purchaser may demand, and if the Guarantor fails to pay the sum within the said period the Guarantor will also pay, on the sum demanded, interest at the bank lending rate then prevailing reckoned from the date of demand.

The Guarantor shall pay to the Purchaser on demand the sum under clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, if being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the E.C. have committed breach/or breaches, of any of the terms and conditions of the said Agreement and SECONDLY that the right of the Purchaser to recover from the Guarantor any amount

due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the E.C. with regard to their liability or that proceedings are pending before any Tribunal/Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the Guarantor shall immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the E.C. to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.

This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of this Purchaser on behalf of the E.C.

The E.C. and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the accent of the Guarantor.

This guarantee shall not be affected by any change in the constitution of the Guarantor or of the E.C. nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.

This guarantee is irrevocable except with the written consent of the Purchaser.

The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this deed.

This guarantee shall come into force from the date hereof and shall remain valid till _____ i.e. one month after the commissioning of the Plant and Machinery for the said plant is completed in all respects and to the satisfaction of the Purchaser and the said plant is commissioned in accordance with the stipulation in the said Agreement for which the stipulated date according to terms and conditions of the said Agreement is, but if the date is for any reason whatsoever and upon such extension the E.C. fails to furnish or renew Guarantee for the extended period, the Guarantor shall pay to the Purchaser the said sum of Rs. _____/- or such lesser sum as the Purchaser may demand.

The invocation of this guarantee should be accompanied by a claim letter signed by the Purchaser and countersigned by Managing Director, U. P. Copperative Sugar Factories Federation Limited

Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs. _____/- (Rupees _____ only). This guarantee shall remain in force upto _____ unless a demand or action under this guarantee is filed against the Guarantor in writing within three month from the date of expiry all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor

**DRAFT OF BANK GUARANTEE FOR PERFORMANCE TO BE GIVEN BY E.C.
(TO BE SUBMITTED BEFORE SIGNING OF THE AGREEMENT)**

THIS GUARANTEE MADE THIS _____ day of _____, Two thousand fifteen, by the _____ Bank, having its branch office at _____, (hereinafter called 'The Guarantor' which expression shall, unless repugnant to the context or contrary to the meaning thereof, include its successors and assignees) of the one part in favour of Name of Sugar Mill _____ (UTTAR PRADESH) (hereinafter called 'The Purchaser' which expression shall, unless repugnant to the context or contrary to the meaning thereof include its successors and assignees) of the other part.

WHEREAS, M/s _____, a company registered under the Indian Companies Act, 19___ having its registered office at _____ and chief place of business at _____, (hereinafter called 'The E.C.' which expression shall unless repugnant to the subject or context include their legal representatives, administrator, successors or permitted assignees) has entered into with the Purchaser an Agreement dated _____, (hereinafter called the said Agreement) for Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency /modernization of following 10 co-operative sugar mills in specific areas to achieve technically argeted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow on EPC basis (Supply, erection and commissioning including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) as per specifications and scope of work given in the bid document:-

AND WHEREAS under clause 12.3 of the said Contract, the E.C. are required to furnish to the Purchaser a Bank Guarantee in respect of guaranteed performance of the Machinery and Equipment erected & commissioned by the erectors as referred to in clause 12.3 of the said Agreement for Rs. _____ (Rupees _____ only) representing 10% (ten per cent) of the total Contract Price mentioned in the Contract in section 1.1 of the Agreement dated

AND WHEREAS the Guarantor has at the request of the E.C. agreed to give the guarantee as hereinafter appearing.

NOW THIS DEED WITNESSES AS FOLLOWS:

1. In consideration of the promises the Guarantor hereby undertakes to pay to the Purchaser within 3 (three) days of demand and without demur such a sum not exceeding Rs. _____/- (Rupees _____ only) representing 10% (ten per cent) of the Total Contract Price (mentioned in clause 1.1 of Agreement) as the Purchaser may demand, and if the Guarantor fails to pay the same within the said period, the Guarantor shall also pay, on the sum demanded, interest at the bank lending rate then prevailing reckoned from the said three days till the date of payment.
2. The Guarantor shall pay to the Purchaser on demand the sum under Clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to them, it being understood and agreed, FIRSTLY that the Purchaser shall be the sole judge of and as to whether the E.C. have committed breach/ or breaches, of any of the terms and conditions of the Agreement and to the extent of loss, damage, costs, charges and expenses caused to or suffered by the Purchaser from time to time shall be final and binding on the Guarantor and SECONDLY that the right of the Purchaser to recover from the Guarantor any amount due to the Purchaser shall not be affected or suspended by reasons of the fact that any dispute or disputes have been raised by the E.C. with regard to their liability or that proceedings are pending before any Tribunal, Arbitrator(s) or Court with regard thereto or in connection therewith, and THIRDLY that the Guarantor shall

immediately pay the aforesaid guaranteed amount to the Purchaser on demand and it shall not be open to the Guarantor to know the reasons of or to investigate or to go into the merits of the demand or to question or to challenge the demand or to know any fact affecting the demand and LASTLY that it shall not be open to the Guarantor to require proof of the liability of the E.C. to pay the amount before paying the aforesaid guaranteed amount to the Purchaser.

3. This guarantee is in addition to and not in substitution for any other guarantee executed by the Guarantor in favour of the Purchaser on behalf of the E.C.
4. The E.C. and the Purchaser will be at liberty to vary and modify the terms and conditions of the said Agreement without affecting this guarantee, notice of which modifications to the Guarantor is hereby waived and the same shall be deemed to have been done with the accent of the Guarantor.
5. This guarantee shall not be affected by any change in the constitution of the Guarantor or of the E.C. nor shall the guarantee be affected by the change in the constitution of the Purchaser or by amalgamation or absorption with any other body corporate and this guarantee will be available to or enforceable by such body corporate.
6. The neglect or forbearance of the Purchaser in enforcing any payment of moneys, the payment whereas is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way release the Guarantor from its liability under this deed.
7. The guarantee is irrevocable except with the written consent of the Purchaser.
8. This guarantee shall come into force from the date hereof and shall remain valid till 30 days after the end of second crushing season but if the period of the contract is for any reason extended and upon such extension if the E.C. fail to furnish a fresh or renewed guarantee for the said extended period, the Guarantor shall pay to the Purchaser the sum of Rs. _____/- (Rupees _____ only) or such lesser sum as the Purchaser may demand.
9. The invocation of this guarantee shall be by a letter signed by the Purchaser and countersigned by Managing Director, U. P. Copperative Sugar Factories Federation Limited.
10. Notwithstanding anything stated hereinbefore the liability of the Guarantor under this guarantee is restricted to Rs. _____/- (Rupees _____ only). This guarantee shall remain in force up to the end of two months after the end of warrantee period unless a demand or action under this guarantee is presented to the Guarantor in writing within three months from the date of expiry all rights of the Purchaser under this guarantee shall be forfeited and the Guarantor shall be released and discharged from all liabilities hereunder.

IN WITNESS WHEREOF _____ for and on behalf of the Guarantor have signed this deed on the day and year above written.

Witnesses:

For and on behalf of the Guarantor.

SECTION III (E): CAPABILITY STATEMENT (CS)

1. (a) Name and complete mailing address of the business/sales office of the bidder.

- (b) Name of Authorized Official
(c) Phone:
(d) Fax:
(e) E-mail:
(f) Principal place of business
(g) Website of Bidder's Firm

Parties Will Have To Furnish Under Noted Information During The Technical Discussions With Documentary Proof:

1	Address of main workshop where the major portion of the plant and machinery will be	
2	Address for sending all communication (letters) during the execution of the project	
3	Name of Banker with full address. Type of account and account no.	
4	Details of atleast two turn key projects of similar type of technical upgradation work executed in existing mills as per CS1 proforma.	
5	Complete Heat and mass balance, fuel, water, steam, power and condensate balance in order to achieve steam consumption @45%on cane and other desired results.	
6	Power consumption per tonne of cane to be achieved in co-operative sugar mills after upgradation work.	
7	Balancing of plant calculations with respect to exhaust steam generation and exhaust steam consumption (including desuperheater gains)	
8	Enclose the performance certificate of the above projects from the Purchaser specially reduction in steam consumption and over all improvement after upgradation work	
9	Enclose M.O.U. of consortium, if any, as per proforma enclosed	
10	Detail of Tender Fee	
11	Detail of E.M.D.	
12	The total turnover in each year of last three financial years (i.e., 2015-16 ,2016-17 & 2017-18) should be not less than Rs. 4 crores FOR EACH PROJECT/SUGAR MILL. In proof of it the bidder should submit the detail of last three years turnover duly certified by Chartered Accountant, along with last three years Balance Sheet.	
13	Audited balance sheet and profit and loss account for the last 3 years (latest 2017-18)	
14	Networth certificate from Bank of not less than Rs. 5 crores FOR EACH PROJECT/SUGAR MILL. As per proforma mentioned in Bid document	
15	Registration of GST with documentary proof	
16	PAN No. with documentary proof (attested copy of PAN CARD)	

17	Registration No. of ESI and PF	
18	Status of the Proprietary Firm/Partnership Firm/ Companies/ Consortium of Companies along with names of Directors/Partners/Proprietor. Submit relevant registration certificate, Deeds, Article and Memorandum of Association etc.	
19	Authority letter of authorized representative of bidder.	
20	Whether the firm has any criminal suits pending (Give Details)	
21	Affidavit that the bidder has not been blacklisted	
22	Declaration as per clause 27 of section II of Bid Document	
23	The bidder shall submit complete specifications with steam, water, power balances of the plant intended to be supplied.	

Seal and signature of the bidder _____
 With Name of Authorized
 Official signing the Agreement.

DETAILS OF SIMILAR TYPE UPGRADATION WORK EXECUTION IN PAST 05 YEARS AND PERFORMANCE OBTAINED

S. No.	Name of Sugar Mill	Capacity (T.C.D.)	Year of Upgradation work executed	Address of Mill	Responsible person name & contact number	Steam Consumption % Cane		Losses % Cane	
						Before	After	Before	After

S. No.	Name of Sugar Mill	Power Consumption (kw/TCH)		ICUMSA value of sugar produced	
		Before	After	Before	After

Note: Documentary proof in support of above achievements are to be provided by the seller.

Please submit hard copy of capability statement and annexure CSI SEPERATELY at the time of opening of technical bid in addition to part of technical bid document as a whole.

SECTION – III (F)

ANNEXURE: FORMAT FOR MEMORANDUM OF UNDERSTANDING FOR THE CONSORTIUM

This Memorandum of Understanding (“MOU”) entered into this ----- day of ----- 2018 at -----
-

Between

(hereinafter referred as”-----“) and having office ----- India Party of
the

First part
AND

(hereinafter referred as”-----“) and having office ----- India Party of
the
Second part

AND

(hereinafter referred as”-----“) and having office ----- India Party of
the
Third part

AND

(hereinafter referred as”-----“) and having office ----- India Party of
the
Fourth part

The party of the First part, party of the Second part, party of the Third part and party of the Fourth part are individually referred to as “Party” and collectively as “Parties”.

WHEREAS U.P. Co-operative Sugar Factories Federation Ltd.,(UPCSFFL) has invited e-bids for

Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) for technical upgradation/modernization work in the field of energy conservation & improvement of sugar quality for achieving specifically identified qualitative parameters for enhancement of working efficiency in each sugar mill on EPC basis for Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of following Cooperative Sugar Mills under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow as per specifications and scope of work given in the bid documentThe Seller will also operate the **system** for season 2019-20 as per performance parameter and warranty of the equipments/systems will be for 24 months from the date of commissioning of equipments/systems at (Name of Sugar Mill)

IT IS HEREBY AS MUTUAL UNDERSTANDING OF THE PARTIES AGREED & DECLARED AS FOLLOWS:-

In consideration of the above promises and agreements all the parties to this consortium do hereby now agrees as follows:

- 1 The members to the consortium do hereby agree that M/s _____ shall act as lead member and further declare and confirm that we shall jointly and severly be bound for the successful performance of the contract. Lead member will be fully responsible for supply, erection and commissioning The Seller will also operate the **system** for season 2019-20 as per performance parameter and warranty of the equipments/systems will be for 24 months from the date of commissioning of equipments/sysyem
- 2 The lead member of the consortium M/s _____ is majority stakeholder and the percentage of his stake in consortium is -----.
- 3 In case of any breach of the said contract by the lead member or other constituent member of the consortium, the lead member do hereby agree to be fully responsible for the successful performance of the contract and to carry out all the obligations and responsibilities under the contract in accordance with the requirement of the contract.
- 3 Further if the UPCSFFL suffers any loss or damage on account of any breach of the contract, the lead member of these presents undertake to promptly make good such loss or damages caused to the UPCSFFL, on its demand without any demur. It shall not be necessary or obligaroty to the UPCSFFL to proceed against lead member to these presents before proceeding against or dealing with the other partner(s).
- 4 The financial liability of the member of this consortium to the UPCSFFL, with respect to any of the claims arising out of the performance or non performance of the obligations setforth in the said consortium, read in conjunction with the relevant conditions of the contract shall, however, not be limited in any way so as to restrict or limit the liabilities of any of the members of the agreement.
- 5 This consortium shall be construed and interpreted in accordand with the laws of India and the courts of ---
----- shall have the exclusive jurisdiction in all the matter arising there under.
- 6 In case of an award of a contract all the members of the consortium do hereby agree that we shall be jointly and severly responsible for the scope of the tender respectively executed and lead member shall furnishing a bank guarantee for security deposit/ performance guarantee in favour of the UPCSFFL in the forms acceptable to UPCSFFL.
- 7 The lead members shall be solely responsible for execution of contract to the full satisfaction of UPCSFFL.
- 8 It is further agreed that the consortium shall be irrevocable and shall form an integral part of the contract and shall continue to the enforceable till the UPCSFFL discharges the same. It shall be effective from the date first mentioned above for all purposes and intents.

In witness whereof the parties affirm that the information provided is accurate and true and have caused this MOU to be duly executed on the date and year herein above mentioned.

Common Seal of
M/s -----
Has been affixed in my/our presence
Pursuant to Board Resolution dated -----

Signature
Designation

Note: The members of consortium may add any other terms and conditions as may be mutually decided by them and which are not inconsistent with terms and conditions mentioned above.

SECTION III (G)

TO WHOM IT MAY CONCERN

I (Full Name), aged about, S/O Shri (Full Name), is resident of

AFFIDAVIT IN RELATION To..... (Permanent address/present address), is the director/representative/partner of M/s (address of registered office), do hereby solemnly affirm and state on oath as under;

1. I/We state and confirm that I/we or our holding company/subsidiary company have not been convicted by any court of law or indicated or adverse orders passed by a Regulatory Authority or Government of India/State Governments/ Undertakings or any FIR related to economic or criminal offence has been lodged against the directors/senior officials of the Company/Firm/me which would cast a doubt on our ability to manage/deal with the public sector unit or which relates to grave offence that outrages the moral sense of the community.
2. I/We further state and confirm that in regard to matters relating to security and integrity of the country, I/we have not been charge-sheeted/Black-Listed by any agency of the Government of India/State Governments/Undertakings and/or not been convicted for any offence by any court of law by me/us or by any of our holding/subsidiary company.
3. I/We undertake that in case of any change in the facts and circumstances during the Agreement period, such change would attract the provisions of disqualification mentioned in tender document.
4. I/We state and confirm that I/we have not been debarred/disqualified from participating in the tender process of Government of India or State Governments or their instrumentalities.
5. I/We state and confirm that the applicant or in case of a Consortium, any member of the Consortium has made, incorrect, misleading or false misrepresentation in the forms, statements and attachments submitted, whether intentionally or unintentionally be dropped from further consideration.

Deponent

Verification

I above named (authorized signatory), do hereby verify the contents of para 1-5 are true to my personal knowledge.

Signed and verified on

Deponent

I identify the deponent who has signed before me.

Advocate

SECTION IV : FINANCIAL e-Bid

SECTION IV(A): e -bid FORM

IFB No. UPSUGARFED/GMT/2018-19/709

Date :

To:

The Managing Director,
U.P. Co-operative Sugar Factories federation Ltd,
9-A, Rana Pratap Marg Lucknow (U.P)-226001

Dear Sir,

Having examined the e-Bid Documents, we, the undersigned, offer to deliver technical upgradation/modernization work in the field of energy conservation & improvement of sugar quality for achieving specifically identified qualitative parameters for enhancement of working efficiency in each sugar mill on EPC basis for Supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of following Cooperative Sugar Mills under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow as per specifications and scope of work given in the bid document Sugar Mill at --(name of the Sugar Mill / Sugar Mills)-- as per specifications and scope of work

In addition to this, the particulars of our organization such as legal status, details of experience & past performance, capability statement & required e-bid EMD* for Rs. ----- in the form of demand draft in favour of U.P. Co-operative sugar factories fed. Ltd., Lucknow is furnished with this e-bid form.

We further undertake, if our e-Bid is accepted for supply, erection and commissioning (including designing, engineering, manufacturing, procurement of bought out items, civil and structural works etc.) of system Sugar Mill as per specifications and scope of work given in the bid document to deliver the goods in accordance with the delivery schedule specified in the schedule of Requirements .

We agree to abide by this e-Bid for the e-Bid validity period specified in Clause 13.1 of the ITB and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

Until a formal contract is prepared and executed, this e-Bid, together with your written acceptance thereof and your Letter of Intent shall constitute a binding contract between us.

We undertake that, in competing for (and, if the award is made to us, in executing) the above contract, we will strictly observe the laws against fraud and corruption in force in India namely "Prevention of Corruption Act 1998".

We understand that you are not bound to accept the lowest or any e-Bid you may receive.

Dated this.....day of.....20.....

Signature

(in the capacity of)

Duly authorized to sign e-Bid for and on behalf of.....

Note --* Details of D.D. and Name of the Sugar Mill should be mentioned.

SECTION IV(B): PRICE SCHEDULE BOQ

Validate	Print	Help	15			
Tender Inviting Authority: - U.P. Cooperative Sugar Factories Federation, Lucknow. >						
Name of Work: Techno-commercial proven technology jobs regarding technical upgradation for improvement in working efficiency/modernization of following 10 co-operative sugar mills in specific areas to achieve technically targeted identified qualitative parameters in each sugar mill under the aegis of U.P.Cooperative Sugar Factories Federation Ltd. Lucknow						
Contract No: UPSUGARFED/GMT/2018-19/709						
Name of the Bidder/ Bidding Firm/ Company:						
PRICE SCHEDULE (DOMESTIC TENDERS - RATES ARE TO GIVEN IN RUPEES (INR) ONLY)						
(This BOQ template must not be modified/replaced by the bidder and the same should be updated after filling the relevant columns, else the bidder is liable to be rejected for this tender. Bidders are allowed to enter the Bidder Name and Values only)						
NUMBER #	TEXT #	NUMBER #	NUMBER #	NUMBER #	TEXT #	
Sl. No.	Item Description	BASIC RATE in Figures To be entered by the Bidder in Rs. P	GST Amount in INR Rs. P	TOTAL AMOUNT Without Taxes col (13) = (4) x (7) in Rs. P	TOTAL AMOUNT With Taxes col (14) = sum (8) to (13) in	TOTAL AMOUNT in Words
1	Name of Sugar Mill : Nanauta					
1.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
1.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
1.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
1.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
2	Name of Sugar Mill : Sarsawa					
2.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
2.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
2.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
2.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
3	Name of Sugar Mill : Sampurnanagar					
3.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
3.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
3.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
3.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
4	Name of Sugar Mill : Nanpara					
4.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
4.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
4.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
4.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
5	Name of Sugar Mill : Belrayan					
5.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
5.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
5.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
5.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
6	Name of Sugar Mill : Bagpat					
6.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
6.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
6.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
6.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
7	Name of Sugar Mill : Anoopahahr					
7.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
7.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
7.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
7.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
8	Name of Sugar Mill : Semkhera					
8.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
8.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
8.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
8.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
9	Name of Sugar Mill : Powayan					
9.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
9.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
9.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
9.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
10	Name of Sugar Mill : Bitaipur					
10.01	Supply as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
10.02	Erection & commissioning of equipments & machinery as per Scope of Work given in bid document.			0.00	0.00	INR Zero Only
10.03	Operation & maintenance of newly supplied, erected and commissioned equipments/systems for season 2019-20.			0.00	0.00	INR Zero Only
10.04	Total	0.00	0.00	0.00	0.00	INR Zero Only
Total in Figures				0.00	0.00	INR Zero Only
Quoted Rate in Words				INR Zero Only		