



Bid Number/बोली क्रमांक (बिड संख्या):
GEM/2024/B/5705991
Dated/दिनांक : 13-12-2024

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	27-12-2024 14:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	27-12-2024 14:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	60 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Chemicals And Fertilizers
Department Name/विभाग का नाम	Department Of Chemicals And Petrochemicals
Organisation Name/संगठन का नाम	Hindustan Organic Chemicals Limited
Office Name/कार्यालय का नाम	Ambalamugal,ernakulam
Total Quantity/कुल मात्रा	3
Item Category/मद केटेगरी	Supply, Installation, testing and Commissioning of 15 KW VFD with Panel , Supply, Installation, Testing and Commissioning of 55KW VFDs
GeMARPTS में खोजी गई स्ट्रिंग / Searched Strings used in GeMARPTS	Variable frequency drive 55KW
GeMARPTS में खोजा गया परिणाम / Searched Result generated in GeMARPTS	Variable Voltage Variable Frequency Drive, Split Air Conditioner Including Green AC, Wall Mount Type (V2), Frequency meter - Analog (Panel Meter)
अधिसूचना के लिए चयनित प्रासंगिक श्रेणियाँ / Relevant Categories selected for notification	<ul style="list-style-type: none">Variable Voltage Variable Frequency Drive
Years of Past Experience Required for same/similar service/उन्हीं/समान सेवाओं के लिए अपेक्षित विगत अनुभव के वर्ष	3 Year (s)
MSE Exemption for Years Of Experience/अनुभव के वर्षों से एमएसई छूट/ and Turnover/टर्नओवर के लिए एमएसई को छूट प्राप्त है	Yes
Startup Exemption for Years Of Experience/अनुभव के वर्षों से स्टार्टअप छूट/ and Turnover/ टर्नओवर के लिए स्टार्टअप को छूट प्राप्त है	Yes

Bid Details/बिड विवरण

Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Past Performance,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,OEM Annual Turnover,Additional Doc 1 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Do you want to show documents uploaded by bidders to all bidders participated in bid?/	Yes
Past Performance/विगत प्रदर्शन	70 %
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No
Type of Bid/बिड का प्रकार	Single Packet Bid
Primary product category	Supply, Installation, Testing and Commissioning of 55KW VFDs
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	2 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Evaluation Method/मूल्यांकन पद्धति	Total value wise evaluation
Arbitration Clause	No
Mediation Clause	No

EMD Detail/ईएमडी विवरण

Required/आवश्यकता	No
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ePBG Detail/ईपीबीजी विवरण

Required/आवश्यकता	No
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MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	No
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. If the bidder is a Micro or Small Enterprise as per latest definitions under MSME rules, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.
2. If the bidder is a Startup, the bidder shall be exempted from the requirement of "Bidder Turnover" criteria and "Experience Criteria" subject to their meeting of quality and technical specifications. If the bidder is OEM of the offered products, it would be exempted from the "OEM Average Turnover" criteria also subject to meeting of quality and technical specifications. In case any bidder is seeking exemption from Turnover / Experience Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer.
3. Experience Criteria: In respect of the filter applied for experience criteria, the Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for number of Financial years as indicated above in the bid document before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the Financial year. In case of bunch bids, the category of primary product having highest value should meet this criterion.
4. Purchase preference will be given to MSEs having valid Udyam Registration and whose credentials are validated online through Udyam Registration portal as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail themselves of the Purchase preference, the bidder must be the manufacturer / OEM of the offered product on GeM. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises and hence resellers offering products manufactured by some other OEM are not eligible for any purchase preference. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service and Buyer will decide eligibility for purchase preference based on documentary evidence submitted, while evaluating the bid. If L-1 is not an MSE and MSE Seller (s) has / have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such MSE Seller shall be given opportunity to match L-1 price and contract will be awarded for 25% (selected by Buyer) percentage of total quantity. The buyers are advised to refer the OM No. F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017. Benefits of MSE will be allowed only if seller is validated on-line in GeM profile as well as validated and approved by Buyer after evaluation of documents submitted.
5. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 70% of bid quantity, in at least one of the last three Financial years before the bid opening date to any Central / State Govt Organization / PSU. Copies of relevant contracts (proving supply of cumulative order quantity in any one financial year) to be submitted along with bid in support of quantity supplied in the relevant Financial year. In case of bunch bids, the category related to primary product having highest bid value should meet this criterion.

Supply, Installation, Testing And Commissioning Of 15 KW VFD With Panel (1 pieces)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Midhun Babu P	682302,HINDUSTAN ORGANIC CHEMICALS LTD, AMBALAMUGAL ERNAKULAM	1	45

Supply, Installation, Testing And Commissioning Of 55KW VFDs (2 pieces)

Technical Specifications/तकनीकी विशिष्टियाँ

Buyer Specification Document/क्रेता विशिष्टि दस्तावेज़	Download
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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Midhun Babu P	682302,HINDUSTAN ORGANIC CHEMICALS LTD, AMBALAMUGAL ERNAKULAM	2	45

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

2. Generic

Bidder financial standing: The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid.

3. Generic

Bidders are advised to check applicable GST on their own before quoting. Buyer will not take any responsibility in this regards. GST reimbursement will be as per actuals or as per applicable rates (whichever is lower), subject to the maximum of quoted GST %.

4. Generic

Bidder shall submit the following documents along with their bid for Vendor Code Creation:

- a. Copy of PAN Card.
- b. Copy of GSTIN.
- c. Copy of Cancelled Cheque.
- d. Copy of EFT Mandate duly certified by Bank.

5. **Generic**

Data Sheet of the product(s) offered in the bid, are to be uploaded along with the bid documents. Buyers can match and verify the Data Sheet with the product specifications offered. In case of any unexplained mismatch of technical parameters, the bid is liable for rejection.

6. **Generic**

Experience Criteria: The Bidder or its OEM {themselves or through reseller(s)} should have regularly, manufactured and supplied same or similar Category Products to any Central / State Govt Organization / PSU for 3 years before the bid opening date. Copies of relevant contracts to be submitted along with bid in support of having supplied some quantity during each of the year. In case of bunch bids, the primary product having highest value should meet this criterion.

7. **Generic**

Manufacturer Authorization:Wherever Authorised Distributors/service providers are submitting the bid, Authorisation Form /Certificate with OEM/Original Service Provider details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid

8. **Generic**

1. The Seller shall not assign the Contract in whole or part without obtaining the prior written consent of buyer.
2. The Seller shall not sub-contract the Contract in whole or part to any entity without obtaining the prior written consent of buyer.
3. The Seller shall, notwithstanding the consent and assignment/sub-contract, remain jointly and severally liable and responsible to buyer together with the assignee/ sub-contractor, for and in respect of the due performance of the Contract and the Sellers obligations there under.

9. **Generic**

Without prejudice to Buyer's right to price adjustment by way of discount or any other right or remedy available to Buyer, Buyer may terminate the Contract or any part thereof by a written notice to the Seller, if:

- i) The Seller fails to comply with any material term of the Contract.
- ii) The Seller informs Buyer of its inability to deliver the Material(s) or any part thereof within the stipulated Delivery Period or such inability otherwise becomes apparent.
- iii) The Seller fails to deliver the Material(s) or any part thereof within the stipulated Delivery Period and/or to replace/rectify any rejected or defective Material(s) promptly.
- iv) The Seller becomes bankrupt or goes into liquidation.
- v) The Seller makes a general assignment for the benefit of creditors.
- vi) A receiver is appointed for any substantial property owned by the Seller.
- vii) The Seller has misrepresented to Buyer, acting on which misrepresentation Buyer has placed the Purchase Order on the Seller.

10. **Generic**

While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.

11. **Scope of Supply**

Scope of supply (Bid price to include all cost components) : Supply Installation Testing and Commissioning of Goods

12. **Certificates**

Bidder's offer is liable to be rejected if they don't upload any of the certificates / documents sought in the Bid document, ATC and Corrigendum if any.

13. **Certificates**

Material Test Certificate Should Be Sent Along with The Supply. The Material Will Be Checked by Buyer's Lab & the Results of the Lab will be the Sole Criteria for Acceptance of the Item.

14. **Warranty**

Warranty period of the supplied products shall be as given in specifications from the date of final acceptance of goods or after completion of installation, commissioning & testing of goods (if included in the scope of supply), at consignee location. OEM Warranty certificates must be submitted by Successful Bidder at the time of delivery of Goods. The seller should guarantee the rectification of goods in case of any break down during the guarantee period. Seller should have well established Installation, Commissioning, Training, Troubleshooting and Maintenance Service group in INDIA for attending the after sales service. Details of Service Centres near consignee destinations are to be uploaded along with the bid.

15. **Purchase Preference (Centre)**

Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for percentage of 100% of total value.

16. **Buyer Added Bid Specific ATC**

Buyer Added text based ATC clauses

GENERAL TERMS AND CONDITIONS FOR E BID SUBMISSION

This document has to be duly filled, signed and stamped on all pages and submitted along with the Bid Document.

Please submit your e-bids conforming to the specifications and the terms and conditions attached as per instructions given below:

1. The bid shall contain as integral part of the same the following compliance statement: "We have read, understood and accepted the terms and conditions of purchase and related documents forming part of this enquiry and agree to supply the goods in compliance with the same."
2. Bidders should carefully study the documents of this enquiry. All terms and conditions set out there in the enquiry shall be binding on the bidders unless

conflicting with any terms and conditions expressly stated by HOCL while accepting any bid, in the event of such acceptance.

3. Bids shall be valid for a minimum of 60 days from the due date for receipt and opening of the bids.
4. Specification of the Product: Specifications offered product shall be uploaded along with technical bid.
5. Payment terms shall be: GeM standard Payment terms - within 10 days.
6. Tenderer should agree for inspection of material at their site, if desired by HOCL. The inspection may be carried out by the representative of HOCL or by a third party or jointly.
7. The Tenderer must specify their GSTIN No & HSN code of material offered in the BID.
8. The successful tenderer shall, if so desired by HOCL, deposit an amount equivalent to 5% of the value of order as security deposit within 21 days of the order towards satisfactory execution of the order. No interest will be paid on this amount by HOCL. Security Deposit, if applicable, will be refunded within 60 days against written request from party.
9. Delivery within 45 days. The delivery schedule shall be given by HOCL and you shall be responsible for arranging supplies as per the schedule. In case the supplier fails to deliver the consignment within the period prescribed, HOCL shall be entitled, if so desired by HOCL, to recover from supplier's pending bills against the order or from any other bills a penalty of 0.5% of the price of the goods in arrears per week at discretion of the HOCL subject to maximum of 5%.
10. Manufacturers test certificate in original or attested, guarantee certificates in original, drawings in original etc. as applicable shall be provided along with the supply.
11. Tenderer may attach necessary catalogues / drawings / detailed specifications of the items wherever required. Also clearly specify the make / model of the item offered.
12. Purchase preferences, EMD/SD Exemption etc for PSUs/SSI units etc will be applicable as per GOI directives from time to time. For this, the tenderer should claim their eligibility along with the supporting documents in their offer itself.

13. RIGHT TO REJECT A BID: HOCL reserves the right to reject any bid due to reasons such as

- a. Vendor not following above bidding procedures.
- b. Vendor not being technically acceptable to HOCL.
- c. Non submission of EMD payment details with the techno commercial bid or EMD paid being lesser than the stipulated amount.
- d. Vendor not agreeing with the general conditions of the tender.
- e. Not enclosing any particular documents asked for
- f. Vendor currently not having BIS certification for barrels
- g. Any other valid reasons.

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14. PRICE: The price quoted shall be for delivery at our factory at Ambalamugal, Ernakulam District, Kerala state. The price quoted by the vendor shall remain firm during the period of contract.

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15. Restriction on procurement from Bidder who shares the land border with India

- a. Any bidder from a country which shares a land border with India will be eligible to bid, only if the bidder is registered with the Department for promotion of Industry and Internal Trade (DPIIT). (Pl. refer office Memorandum no. 6/18/2019-PPD dated 23rd July 2020) Such bidders should submit the valid copy of registration certificate along with tender. However the said requirement of registration will not be applicable to bidders from those country to which Govt. of India has extended lines of credit or in which Govt. of India is engaged in development of projects. Bidders may appraise themselves of the updated lists of such countries available in the website of Ministry of External Affairs.
- b. All Bidders shall furnish compliance certificate with respect to above clause as per the format in Annexure-V along with the bid.

16. The GeM standard term for delivery, payment and price is as follows:

- a. GeM Std. Payment terms: 100% payment will be released within 10 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and submission of bills.
- b. Delivery: Free Delivery at Site basis including loading/unloading.
- c. Price: Quoted price is all inclusive (i.e., freight, taxes and duties etc.)

17. JURISDICTION: All questions, disputes or differences arising under or in connection with this contract shall be subject to the exclusive jurisdiction of the courts in Ernakulam, Kerala, India only.

18. ARBITRATION OF DISPUTES: All disputes, differences, questions and claims arising out of, under or touching upon this Tender /Agreement/ Purchase Order/ Work Order shall be settled amicably between the parties through mutual discussion. If the parties fail to resolve the dispute by such mutual consultation within 21 days, then such disputes, difference, questions or claims shall be referred for resolution through arbitration by either of the parties to the India International Arbitration Centre or a Sole Arbitrator mutually agreed upon by the parties from a panel of arbitrators. The award of Arbitration shall be final and binding on the parties. The seat of the Arbitration shall be at Kochi, K

erala, India and the proceedings of the arbitration shall be held at Kochi, Kerala, India in accordance with the India International Arbitration Centre Act 2019 / Indian Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof for the time being in force.

When the contract is with foreign vendor, the vendor has the option to choose arbitration in accordance with the provisions of The India International Arbitration Centre Act 2019 / The Indian Arbitration and Conciliation Act, 1996 / UNCITRAL (United Nations Commission on International Trade Law Arbitration) Arbitration Rules."

19. SIGNING AND SEALING ON ALL PAGES OF BID: The vendor shall duly fill, sign and seal on all the pages of the bids submitted failing which bids are liable to be rejected.

17. Buyer Added Bid Specific ATC

Buyer uploaded ATC document [Click here to view the file.](#)

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. If any clause(s) is / are incorporated by the Buyer regarding following, the bid and resultant contracts shall be treated as null and void and such bids may be cancelled by GeM at any stage of bidding process without any notice:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process. (However, in bids for [attached categories](#), trials are allowed as per approved procurement policy of the buyer nodal Ministries)
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export experience.
11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer

is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्रवाई का आधार होगा।

---Thank You/धन्यवाद---



हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड
HINDUSTAN ORGANIC CHEMICALS LTD
(भारत सरकार का उद्यम, A Government of India Enterprise)
अंबलमुगल, कोची AMBALAMUGAL, COCHIN – 682 302
दूरभाष Phone: (0484) 2720911, ईमेल E-mail: kochi@hoclindia.com

MAT/PUR/22482/24

13.12.2024

M/s.

Dear Sir,

Hindustan Organic Chemicals Ltd. is a Govt. of India Undertaking manufacturing Phenol, Acetone & Hydrogen Peroxide at its plant at Kochi, Kerala, India.

HOCL invites e-tenders: **VARIABLE FREQUENCY DRIVES.**

You may submit your offer on single bid system online before the due date and time specified.

Thanking you,

Yours faithfully,
For Hindustan Organic Chemicals Ltd.

B. Balachandran
General Manager (Materials/MSS)

SPECIFICATION SHEET OF VARIABLE FREQUENCY DRIVES

Sl. No.	Material No.	Item Description	Quantity
1	63491225	VFD, 15KW for Jockey Pump Motor as per enclosed specification and scope of work.	1.0000 NOS
2	63491220	VFD, 55KW for Hydrogenator feed pumps as per enclosed specification.	2.0000 NOS

Note:

1. Catalogue and GA Drawing for the offered product should be submitted along with the bid.
2. Test and Warranty Certificate should be submitted along with the supply.
3. The specification sheet should be signed and submitted along with the offer. If any deviations you should mention it clearly.

एच ओ सी

DETAILED SPECIFICATION**I. Item No.1: Supply, Installation, testing and Commissioning of 15 KW VFD with Panel - 1No.****1. Scope of work**

The scope includes design, manufacture, painting, assembling wiring, testing, inspection, packing, delivery, installation and commissioning of 15 KW, 415V+/- 10% 3PH,AC Variable frequency drive (VFD) with input choke, output choke and complete accessories enclosed in a panel for feeding Jockey Pump Motor at HOCL, Ambalamugal.

The VFD module must be provided with a panel mounted operator HMI, connected to module through flexible communication cable. The HMI must be 3 or 4-line alpha numeric display clearly showing all operating parameters in plain English text.

Acceptable makes of VFDs: Amtech Electronics/Fuji Electric/Siemens/ABB/Yaskawa/Rockwell automation (Allen Bradley).

Motor specification: KW-15, Ampere-26, Speed -2930RPM, Motor make –Crompton greaves.

2. Description of panel

- a) The Panel shall be non-draw out type, suitable for indoor application, Floor/wall mounting rigid free-standing type. The design shall be totally enclosed dust proof and fabricated out of CRCA sheet of minimum 2 mm thick with modular construction. The entire sheet surface shall be free from hammer marks. On completion of fabrication all the internal and external surface of the CRCA sheet work shall be subjected to the pre-treatment in seven tanks processing before the powder coat painting work and clear coat protection cover. All metallic portion of the panel shall be painted with powder coating clear coat protection cover from both inside and outside of the panel. Panel enclosure shall be provided with suitable size cooling fan for effective heat transfer from VFD cubicle.
- b) Supplied item shall be conforming to Indian standard specifications/Central Electrical Inspectorate standards, necessary certificates should be produced along with supply of item.
- c) Cable entry is from the bottom side via removable gland plates.
- d) The panel shall be provided with earth terminals (2 Nos.) for providing earth bus connection to the panel.
- e) Lifting eye of adequate strength shall be provided.
- f) The equipment shall have uniform height and depth throughout the length.
- g) Operating control shall be provided on the front side of panel such in the form of Switch, HMI etc. LED indication lamps such as ON, OFF, Trip on Fault, Input power supply status, Control ON etc. shall be provided on the panel front cover. Local/Remote selector switch shall be provided on the panel front cover. Push buttons

for Local start and stop, speed raise, speed lower etc. shall also be incorporated in the Panel cover.

- h) Panel will be front access type. Panels cover shall be of hinged type and Cam locking type.
- i) Required quantity of DIN rail, connectors, fastening/fixing materials and internal connecting leads, Bus Bar support, CTs etc. are to be provided. Drive module boards with original at least 3C2 coating, for protection of cards against corrosion due to humidity or other chemicals.
- j) Panel should be designed and manufactured for running the motor in DOL and VFD modes. Suitable rating VFD/DOL selector switch shall be provided in the panel.
- k) Adequate panel cooling arrangement by means of axial panel cooling fan, air filters which are removable and cleanable shall be provided.
- l) Panel enclosure or VFD cubicle should be dust and vermin proof with minimum IP54 protection.
- m) Separate Power contactors shall be provided for VFD and DOL modes. Control supply voltage of contactors shall be 110VAC and Panel cooling fan shall be 230VAC. It is to be noted that input power supply shall be 415VAC, 3PH, 3 wire. Hence, Vendor shall provide suitable control transformer with primary suitable for 415VAC, 3PH, 3 wire and secondaries with 110VAC, 230VAC tapings.
- n) Isolation facility by means of SFU/MCCB of appropriate rating shall be provided to input power supply. Input SFU/MCCB shall have provision for applying LOTO facility.
- o) Manuals should be supplied in hard copy (2 nos) and soft copy (C.D).
- p) Drawing should be supplied in hardcopy (2 set) and soft copy.

3. Technical specification

- a) Rating: 15 KW heavy duty as per IEC146
- b) Supply voltage: 3 Phase 415VAC $\pm 10\%$
- c) Frequency: 50Hz $\pm 5\%$
- d) Overload capacity: 150% for 1min
- e) Acceleration time: 0-300 Sec
- f) Deceleration time: 0-300 Sec
- g) Ambient temperature: 50 degree Celsius
- h) Digital I/P: 4 Nos
- i) Digital O/P: 3 Nos
- j) Analog input: 4-20mA 2 numbers
- k) Analog Output: 4-20mA 2 numbers
- l) Altitude: 150 meters
- m) VFD must have LCD backlit display for showing parameters.

4. Motor Protections

Following protections should be available.

- a) Over voltage protection
- b) Under voltage protection
- c) Instantaneous Over current protection

- d) Over current protection
- e) Under current protection
- f) Phase failure protection
- g) Earth fault protection
- h) Thermal overload protection

5. Bus Bars

- a) Bus bar shall be suitably sized to withstand the fault level.
- b) Bus bar shall be suitably supported.
- c) Bus bar shall be color coded.
- d) Bus bar shall be provided with PVC sleeves for insulation.

6. Components

Components are of DIN rail mounting type. CT, Fuse Base and Fuse carrier, fuse and neutral link etc should be reputed make. All power and control wires used inside the panel for internal wiring purpose should be 1.1KV grade, flame retardant, low smoke cable of reputed make. The power and control cable wiring shall be terminated with marking / numbering / tagging on terminal blocks / boards of rated capacity.

7. Drawings

You shall submit the following documents along with tender documents for technical approval.

- a) Line diagram and component ratings.
- b) Wiring diagram.
- c) GA drawings.

8. Inspection and Tests

Following inspection and tests should be done at various stages of manufacturing and supply.

- a) Visual inspection and dimensional check.
- b) Clearance measurement of Bus Bar.
- c) Mechanical operation of switch gears,
- d) Insulation resistance test.
- e) Operation and testing of circuits.
- f) Testing of protective systems.
- g) Other relevant tests applicable as per IS.

Copies of test certificate shall be furnished by the supplier after completion of all tests. The certificates shall be produced along with the supply.

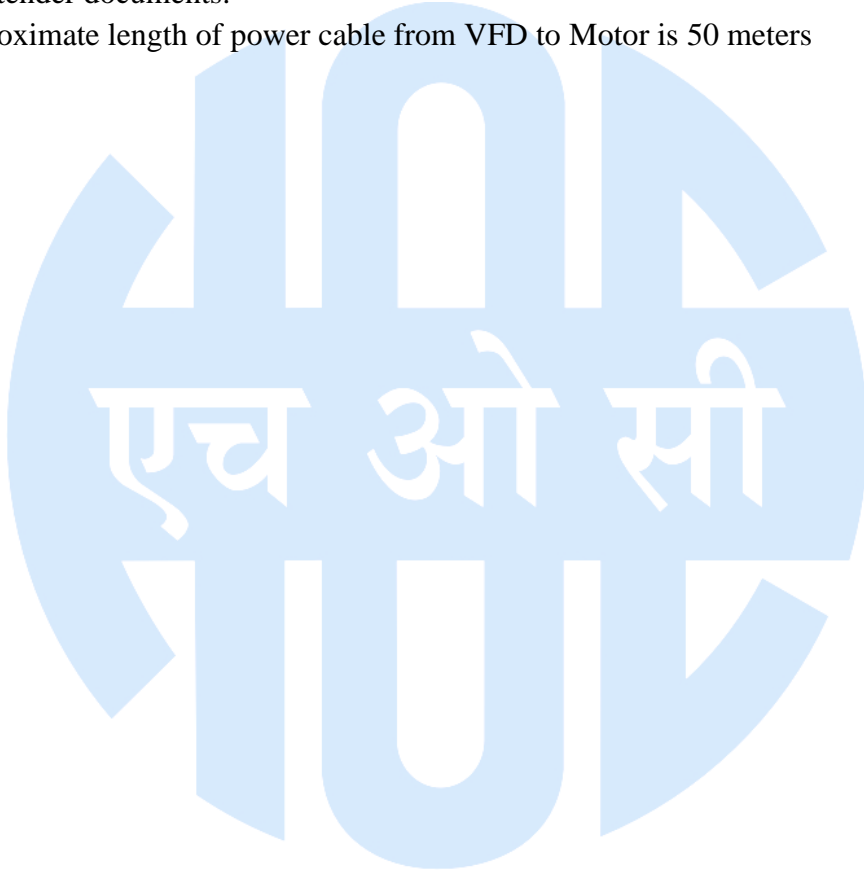
9. Operator interface

- a) The module must be provided with a flexible panel mounted operator HMI, Connected to module through flexible communication cable. The HMI must be 3 or 4-line alpha numeric display clearly showing all operating parameters in plain English text.

- b) The HMI should continuously log all the operating parameters in its built-in SD card for a detailed analysis for drive/ load performance analysis at any required time.

10. Other Requirements

- a) Supplied VFD model shall be of latest design and architecture (not more than 5 years from date of launching). Catalog of offered VFD shall be submitted along with technical bid.
- b) Vendor shall provide after sales service and support for minimum of 10 years for the supplied VFDs.
- c) VFD shall have minimum of one-year warranty from date of commissioning OR 18 months from date of supply whichever is earlier.
- d) Vendor shall submit copy of Authorization certificate from VFD Manufacturer along with tender documents.
- e) Approximate length of power cable from VFD to Motor is 50 meters



DETAILED SPECIFICATION**II. Item No.2: Supply, Installation, Testing and Commissioning of 55KW VFDs - 2 Nos****Scope of Work**

Includes removal of existing VFD from panel located at H2O2 plant of Hindustan Organic Chemicals, Ambalamugal, Kochi and install the newly supplied 55KW VFDs as per below technical requirements. Work includes disconnection and reconnection of control wires and power wiring. The rate offered shall be inclusive of rate of supply, installation, testing and commissioning of VFDs. Unskilled labor for installation work shall be arranged by HOCL. Vendor may consider minimum 2-man days for installation, testing and commissioning of 2 sets of requested 55KW VFDs. The requested VFD shall be installed in our existing panel. Hence, dimension of offered VFD shall be suited to our panel. Vendor is requested to make a site visit prior to offer the quotation.

Technical specification of VFD

1. Input voltage: 3 phase AC, 415 V +/-10% ,50Hz.
2. Altitude: 100 Mts from sea level
3. Ambient temperature: 50 degc
4. Humidity: <95% RH (no condensation)
5. Power rating: 55kw heavy duty as per IEC146 , 150% OL for 1min
6. Output current: Derated to 50Deg C and shall match the motor FLC at 50Deg C
7. Digital input: 4 Nos
8. Analog Input: 2 Nos, 4-20ma from DCS
9. Digital outputs: Min 3 numbers
10. Analog outputs: 2 Nos, 4-20ma. (Motor rpm to DCS, Motor current or Kw to DCS)

Acceptable makes of VFDs: Amtech Electronics / Fuji Electric / Siemens / ABB / Yaskawa / Rockwell automation (Allen Bradley).

Protections

1. Drive module boards with original at least 3C2 coating, for protection of cards against corrosion due to humidity or other chemicals
2. As already a control panel is available for VFD, separate enclosure for mounting the new VFD is not required
3. Module shall have choke for suppression of harmonics and capacitors protection.
4. All statutory protections of module and motor to be built in the module to provide instant trip such as momentary overcurrent, overload, overvoltage, undervoltage, momentary power loss, heatsink overheat, stalling, earth fault etc.

Operator interface

1. The module must be provided with a flexible panel mounted operator HMI, Connected to module through flexible communication cable. The HMI must be 4 line alpha numeric display clearly showing all operating parameters in plain English text.

2. The HMI should continuously log all the operating parameters in its builtin SD card for a detailed analysis for drive/ load performance analysis at any required time.

Other Requirements

1. Approximate length of power cable from VFD to Motor is 150 meters.
2. Supplied VFD model shall be of latest design and architecture (not more than 5 years from date of launching). Catalog of offered VFD shall be submitted along with technical bid.
3. Vendor shall provide after sales service and support for minimum of 10 years for the supplied VFDs.
4. VFD shall have minimum of one-year warranty from date of commissioning OR 18 months from date of supply whichever is earlier.
1. Vendor shall submit copy of Authorization certificate from VFD Manufacturer along with tender documents.



ELIGIBILITY CRITERIA FOR PARTICIPATING IN THE BID

**OFFERS OF BIDDERS WHO SATISFY THE FOLLOWING ELIGIBILITY
CRITERIA ONLY WILL BE CONSIDERED**

- a) Vendor should submit Balance sheet of last 3 financial Years.
- b) Vendor should have upload work order copies of Minimum 3 Nos. of Reputed Customers preferably PSUs/Govt. Organizations for similar items.
- c) Repeat works order copies or satisfactory performance certificates issued by reputed organizations preferably PSUs for similar items.
- d) Client list.

Vendor should provide documentary evidences for all the above along with the Technical Bid. HOCL registered vendors for said item are exempted from furnishing above document as in point nos. 1 to 4. MSE vendors as well as starts ups are eligible for relaxation on condition of prior turn over and prior experience subject to meeting of quality and technical specifications.

GENERAL TERMS AND CONDITIONS FOR E BID SUBMISSION

This document has to be duly filled, signed and stamped on all pages and submitted along with the Bid Document.

Please submit your e-bids conforming to the specifications and the terms and conditions attached as per instructions given below:

1. The bid shall contain as integral part of the same the following compliance statement: “We have read, understood and accepted the terms and conditions of purchase and related documents forming part of this enquiry and agree to supply the goods in compliance with the same.”
2. Bidders should carefully study the documents of this enquiry. All terms and conditions set out there in the enquiry shall be binding on the bidders unless conflicting with any terms and conditions expressly stated by HOCL while accepting any bid, in the event of such acceptance.
3. Bids shall be valid for a minimum of 60 days from the due date for receipt and opening of the bids.
4. Specification of the Product: Specifications offered product shall be uploaded along with technical bid.
5. Payment terms shall be: GeM standard Payment terms - within 10 days.
6. Tenderer should agree for inspection of material at their site, if desired by HOCL. The inspection may be carried out by the representative of HOCL or by a third party or jointly.
7. The Tenderer must specify their GSTIN No & HSN code of material offered in the BID.
8. The successful tenderer shall, if so desired by HOCL, deposit an amount equivalent to 5% of the value of order as security deposit within 21 days of the order towards satisfactory execution of the order. No interest will be paid on this amount by HOCL. Security Deposit, if applicable, will be refunded within 60 days against written request from party.
9. Delivery within 45 days. The delivery schedule shall be given by HOCL and you shall be responsible for arranging supplies as per the schedule. In case the supplier fails to deliver the consignment within the period prescribed, HOCL shall be entitled, if so desired by HOCL, to recover from supplier's pending bills against the order or from any other bills a penalty of 0.5% of the price of the goods in arrears per week at discretion of the HOC subject to maximum of 5%.

10. Manufacturers test certificate in original or attested, guarantee certificates in original, drawings in original etc. as applicable shall be provided along with the supply.
11. Tenderer may attach necessary catalogues / drawings / detailed specifications of the items wherever required. Also clearly specify the make / model of the item offered.
12. Purchase preferences, EMD/SD Exemption etc for PSUs/SSI units etc will be applicable as per GOI directives from time to time. For this, the tenderer should claim their eligibility along with the supporting documents in their offer itself.
13. **RIGHT TO REJECT A BID:** HOCL reserves the right to reject any bid due to reasons such as
 - a. Vendor not following above bidding procedures.
 - b. Vendor not being technically acceptable to HOCL.
 - c. Non submission of EMD payment details with the techno commercial bid or EMD paid being lesser than the stipulated amount.
 - d. Vendor not agreeing with the general conditions of the tender.
 - e. Not enclosing any particular documents asked for
 - f. Vendor currently not having BIS certification for barrels
 - g. Any other valid reasons.
14. **PRICE:** The price quoted shall be for delivery at our factory at Ambalamugal, Ernakulam District, Kerala state. The price quoted by the vendor shall remain firm during the period of contract.
15. Restriction on procurement from Bidder who shares the land border with India
 - a. Any bidder from a country which shares a land border with India will be eligible to bid, only if the bidder is registered with the Department for promotion of Industry and Internal Trade (DPIIT). (Pl. refer office Memorandum no. 6/18/2019-PPD dated 23rd July 2020) Such bidders should submit the valid copy of registration certificate along with tender. However the said requirement of registration will not be applicable to bidders from those country to which Govt. of India has extended lines of credit or in which Govt. of India is engaged in development of projects. Bidders may appraise themselves of the updated lists of such countries available in the website of Ministry of External Affairs.
 - b. All Bidders shall furnish compliance certificate with respect to above clause as per the format in Annexure-V along with the bid.
16. The GeM standard term for delivery, payment and price is as follows:
 - a. GeM Std. Payment terms: 100% payment will be released within 10 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and submission of bills.
 - b. Delivery: Free Delivery at Site basis including loading/unloading.

c. Price: Quoted price is all inclusive (i.e., freight, taxes and duties etc.)

17. JURISDICTION: All questions, disputes or differences arising under or in connection with this contract shall be subject to the exclusive jurisdiction of the courts in Ernakulam, Kerala, India only.

18. ARBITRATION OF DISPUTES: All disputes, differences, questions and claims arising out of, under or touching upon this Tender /Agreement/ Purchase Order/ Work Order shall be settled amicably between the parties through mutual discussion. If the parties fail to resolve the dispute by such mutual consultation within 21 days, then such disputes, difference, questions or claims shall be referred for resolution through arbitration by either of the parties to the India International Arbitration Centre or a Sole Arbitrator mutually agreed upon by the parties from a panel of arbitrators. The award of Arbitration shall be final and binding on the parties. The seat of the Arbitration shall be at Kochi, Kerala, India and the proceedings of the arbitration shall be held at Kochi, Kerala, India in accordance with the India International Arbitration Centre Act 2019 / Indian Arbitration & Conciliation Act 1996 or any statutory modification or re-enactment thereof for the time being in force.

When the contract is with foreign vendor, the vendor has the option to choose arbitration in accordance with the provisions of The India International Arbitration Centre Act 2019 / The Indian Arbitration and Conciliation Act, 1996 / UNCITRAL (United Nations Commission on International Trade Law Arbitration) Arbitration Rules."

19. SIGNING AND SEALING ON ALL PAGES OF BID: The vendor shall duly fill, sign and seal on all the pages of the bids submitted failing which bids are liable to be rejected.

Pls. note that no deviation is allowed in the above terms, so please ensure that the rate quoted against GeM tender is all inclusive value i.e. inclusive of all taxes and duties and on delivered basis and also the payment term shall be within 10 days from the date of receipt & acceptance of material at site.

COMMERCIAL TERM FORMAT

(Please fill up the details mentioned below in your letter head and upload along with your bid)

FOR OFFERS THROUGH GEM PORTAL (AS PER GEM STANDARD TERMS AND CONDITIONS ONLY, NO DEVIATION WILL BE ALLOWED)

PAYMENT TERM IS WITHIN 10 DAYS OF RECEIPT AND ACCEPTANCE OF MATERIAL AT SITE

RATE QUOTED SHOULD BE INCLUSIVE OF GST AND FREIGHT CHARGES TO DELIVER THE MATERIAL AT SITE

Sl. No.	DETAILS REQUIRED	
1	Name and Address of Organization	
2	Phone No.	
3	GSTIN	
4	E-mail id for correspondence	
5	Contact Person Name and Mobile No.	
6	Whether registered with MSME/NSIC (If so pl. enclose documentary proof)	
7	Whether manufacturer of offered item	O Yes O No
8	Validity of offer	
9	Delivery period	
10	Certificates provided along with supply, if any	
11	Deviation in specification, if any	

I/We here by confirm that, I/We have not been blacklisted in the past by any Public Sector Undertakings/ Government organizations.

Signature and Stamp

(KINDLY FILL THIS SHEET AND SUBMIT IN -COMMERCIAL/TECHNICAL BID)

Name of Bidder:		
Sl. No.	Commercial Clauses	Bidder Confirmation (Please put \checkmark in front of your confirmation)
1	Whether bidder (a proprietary concern, Partnership Firm, Company) is currently on holiday list/black list/de-listed or has been put on holiday/blacklisted/de-listed at any PSU/govt. Organization. If so, give details.	<input type="checkbox"/> Yes, We are on holiday List/Black List/De-List <input type="checkbox"/> No
2i	Whether the party is registered under Micro/Small/Medium Enterprises act 2006 (Please furnish the proof)	<input type="checkbox"/> Micro <input type="checkbox"/> Medium <input type="checkbox"/> Small <input type="checkbox"/> No
2ii	Status of MSE Bidder	<input type="checkbox"/> Manufacturer <input type="checkbox"/> Services <input type="checkbox"/> Not Applicable
2iii	Whether MSE bidder is offering product manufactured by him/her	<input type="checkbox"/> Yes <input type="checkbox"/> No
3i	All MSE bidders shall register / declare their UAM Number on CPP Portal and copy of this registration / declaration shall be attached with the offer; failing which such bidders will not be able to enjoy benefits as per PP Policy for MSME order, 2012. <u>SSI/MSME/NSIC/UAM/DIC registration certificate</u>	<input type="checkbox"/> Mention UAM Number <input type="checkbox"/> Not Applicable
3ii	Submitted valid document against clause no 3i	<input type="checkbox"/> Submitted <input type="checkbox"/> Not Applicable
4i	Whether the proprietor of "MSME" enterprise is from SC/ST category (Please attach caste certificate issued by competent authority)	<input type="checkbox"/> Yes <input type="checkbox"/> No
4ii	Whether the proprietor of "MSME" enterprise is woman (i.e. Woman proprietorship, or holding minimum 51% shares in case of Partnership/Private Limited Companies)	<input type="checkbox"/> Yes <input type="checkbox"/> No
4iii	Submitted certificate against clause no 4ii	<input type="checkbox"/> Submitted <input type="checkbox"/> Not Applicable
5	AGREED TO ALL TERMS AND CONDITIONS OF ENQUIRY: It is hereby stated that the quotation/offer submitted is in full compliance with the documents issued against the enquiry and also further confirmed that there is no deviation from all the terms and conditions as per the enquiry. Non-acceptance or deviation to HOCL's standard terms and conditions mentioned in enquiry documents may lead to rejection of offer, no correspondence shall be done for clarifications	<input type="checkbox"/> Agreed <input type="checkbox"/> Not Agreed
DATE :		
SIGN AND STAMP OF BIDDER		

ANNEXURE-V

BID SECURITY DECLARATION

ANNEXURE TO BE SUBMITTED ALONG WITH THE BID AGAINST TENDER
NO _____

I/We.....hereby declare
that:

1. I will not revoke the tender within the stipulated period/ validity period OR increase the quoted rates.
2. I will commence the work on receipt of Purchase Order.
3. I will not withdraw or amend the tender or impair or derogate from the tender in any respect within the period of validity of the tender.
4. I will furnish the required performance security within the specified period.

NAME AND ADDRESS OF THE BIDDER

PLACE :

DATE :

SIGNATURE AND STAMP OF THE BIDDER

ANNEXURE-VI

**COMPLIANCE TO CLAUSE W.R.T MANADATORY REGISTRATION OF
VENDORS FROM COUNTRIES SHARING LAND BORDER WITH INDIA,
WITH DPIIT**

Date: _____

TO WHOMSOEVER IT MAY CONCERNS

"I have read The clause titled restrictions on procurement from a bidder of a country which shares a land border with India.

I certify that M/s.....(Name Bidder) is not from such a country

Or

I hereby certify that M/s.(name of Bidder) is from a country which shares land border with India and fulfills all requirements in this regard and is eligible to be considered. Enclosed herewith Valid Registration Certificate

Or

I hereby certify that M/s..... (Name of Bidder) is from such a country which shares land border with India, however the said requirement of registration will not be applicable to bidders as Govt. of India has extended lines of credit or in which Govt. of India is engaged in development of projects. Enclosed herewith documentary evidence in this regards

We confirm that if it is established that we have provided any false information in pursuance to above clause, while competing for this contract then our Bid shall be rejected.

We further confirms that, if it is established that we have not complied with terms of aforesaid clause, during execution of contract, this would be a sufficient ground for immediate termination of the contract as per tender provision and shall be dealt accordingly

Name of the Bidder

Stamp & Signature of the Bidder



हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड
HINDUSTAN ORGANIC CHEMICALS LTD
(भारत सरकार का उद्यम, A Government of India Enterprise)
अंबलमुगल, कोची AMBALAMUGAL, COCHIN – 682 302
दूरभाष Phone: (0484) 2720911, ईमेल E-mail: kochi@hoclindia.com

MAT/PUR/22482/24

13.12.2024

Sl. No.	Material No.	ITEM DESCRIPTION	Quantity
1	63491220	VFD, 55KW for Hydrogenator feed pumps as per enclosed specification.	2.0000 NOS

NOTE:

1. Acceptable makes of VFDs: Amtech Electronics / Fuji Electric / Siemens / ABB / Yaskawa / Rockwell automation (Allen Bradley).
2. Catalogue and GA Drawing for the offered product should be submitted along with the bid.
3. Test and Warranty Certificate should be submitted along with the supply.
4. The specification sheet should be signed and submitted along with the offer. If any deviations you should mention it clearly.

DETAILED SPECIFICATION

II. Item No.2: Supply, Installation, Testing and Commissioning of 55KW VFDs - 2 Nos

Scope of Work

Includes removal of existing VFD from panel located at H2O2 plant of Hindustan Organic Chemicals, Ambalamugal, Kochi and install the newly supplied 55KW VFDs as per below technical requirements. Work includes disconnection and reconnection of control wires and power wiring. The rate offered shall be inclusive of rate of supply, installation, testing and commissioning of VFDs. Unskilled labor for installation work shall be arranged by HOCL. Vendor may consider minimum 2-man days for installation, testing and commissioning of 2 sets of requested 55KW VFDs. The requested VFD shall be installed in our existing panel. Hence, dimension of offered VFD shall be suited to our panel. Vendor is requested to make a site visit prior to offer the quotation.

Technical specification of VFD

1. Input voltage: 3 phase AC, 415 V +/-10% ,50Hz.
2. Altitude: 100 Mts from sea level
3. Ambient temperature: 50 degc
4. Humidity: <95% RH (no condensation)
5. Power rating: 55kw heavy duty as per IEC146, 150% OL for 1min
6. Output current: Derated to 50Deg C and shall match the motor FLC at 50Deg C
7. Digital input: 4 Nos
8. Analog Input: 2 Nos, 4-20ma from DCS
9. Digital outputs: Min 3 numbers
10. Analog outputs: 2 Nos, 4-20ma. (Motor rpm to DCS, Motor current or Kw to DCS)

Acceptable makes of VFDs: Amtech Electronics / Fuji Electric / Siemens / ABB / Yaskawa / Rockwell automation (Allen Bradley).

Protections

1. Drive module boards with original at least 3C2 coating, for protection of cards against corrosion due to humidity or other chemicals
2. Drive electronics to be completely sealed to IP44 or above for protection of components from environmental ingress. As already a control panel is available for VFD, separate enclosure for mounting the new VFD is not required
3. Module shall have choke for suppression of harmonics and capacitors protection
4. All statutory protections of module and motor to be built in the module to provide instant trip such as momentary overcurrent, overload, overvoltage, undervoltage, momentary power loss, heatsink overheat, stalling, earth fault etc.

Operator interface

1. The module must be provided with a flexible panel mounted operator HMI, Connected to module through flexible communication cable. The HMI must be 4 line alpha numeric display clearly showing all operating parameters in plain English text.
2. The HMI should continuously log all the operating parameters in its builtin SD card for a detailed analysis for drive/ load performance analysis at any required time.

Other Requirements

1. Approximate length of power cable from VFD to Motor is 150 meters.
2. Supplied VFD model shall be of latest design and architecture (not more than 5 years from date of launching). Catalog of offered VFD shall be submitted along with technical bid.
3. Vendor shall provide after sales service and support for minimum of 10 years for the supplied VFDs.
4. VFD shall have minimum of one-year warranty from date of commissioning OR 18 months from date of supply whichever is earlier.
5. Vendor shall submit copy of Authorization certificate from VFD Manufacturer along with tender documents.



हिंदुस्तान ऑर्गेनिक केमिकल्स लिमिटेड
HINDUSTAN ORGANIC CHEMICALS LTD
(भारत सरकार का उद्यम, A Government of India Enterprise)
अंबलमुगल, कोची AMBALAMUGAL, COCHIN – 682 302
दूरभाष Phone: (0484) 2720911, ईमेल E-mail: kochi@hoclindia.com

MAT/PUR/22482/24

13.12.2024

Sl. No.	Material No.	ITEM DESCRIPTION	Quantity
1	63491225	VFD, 15KW for Jockey Pump Motor as per enclosed specification and scope of work.	1.0000 NOS

NOTE:

1. Acceptable makes of VFDs: Amtech Electronics / Fuji Electric / Siemens / ABB / Yaskawa / Rockwell automation (Allen Bradley).
2. Catalogue and GA Drawing for the offered product should be submitted along with the bid.
3. Test and Warranty Certificate should be submitted along with the supply.
4. The specification sheet should be signed and submitted along with the offer. If any deviations you should mention it clearly.

DETAILED SPECIFICATION

1. Item No.1: Supply, Installation, testing and Commissioning of 15 KW VFD with Panel - 1No.

1. Scope of work

The scope includes design, manufacture, painting, assembling wiring, testing, inspection, packing, delivery, installation and commissioning of 15 KW, 415V+/- 10% 3PH,AC Variable frequency drive (VFD) with input choke, output choke and complete accessories enclosed in a panel for feeding Jockey Pump Motor at HOCL, Ambalamugal.

The VFD module must be provided with a panel mounted operator HMI, connected to module through flexible communication cable. The HMI must be 3 or 4-line alpha numeric display clearly showing all operating parameters in plain English text.

Acceptable makes of VFDs: Amtech Electronics / Fuji Electric / Siemens / ABB / Yaskawa / Rockwell automation (Allen Bradley).

Motor specification: KW-15, Ampere-26, Speed -2930RPM, Motor make –Crompton greaves.

2. Description of panel

- a) The Panel shall be non-draw out type, suitable for indoor application, Floor mounting rigid free-standing type. The design shall be totally enclosed dust proof and fabricated out of CRCA sheet of minimum 2 mm thick with modular construction. The entire sheet surface shall be free from hammer marks. On completion of fabrication all the internal and external surface of the CRCA sheet work shall be subjected to the pre-treatment in seven tanks processing before the powder coat painting work and clear coat protection cover. All metallic portion of the panel shall be painted with powder coating clear coat protection cover from both inside and outside of the panel.
- b) Supplied item shall be conforming to Indian standard specifications/Central Electrical Inspectorate standards, necessary certificates should be produced along with supply of item.
- c) Cable entry is from the bottom side via removable gland plates.
- d) The panel shall be provided with earth terminals (2 Nos.) for providing earth bus connection to the panel.
- e) Lifting eye of adequate strength shall be provided.
- f) The equipment shall have uniform height and depth throughout the length.
- g) Operating control shall be provided on the front side of panel such as Switch Illuminated (LED type) ON & OFF Push Buttons.
- h) Panel will be front access type. Panels cover shall be of hinged type and Cam locking type.
- i) Required quantity of DIN rail, connectors, fastening/fixing materials and internal connecting leads, Bus Bar support, CTs etc. are to be provided. Drive module boards with original at least 3C2 coating, for protection of cards against corrosion due to humidity or other chemicals.
- j) Panel should be designed and manufactured for running the motor in DOL and VFD modes. Suitable rating VFD/DOL selector switch shall be provided in the panel.

- k) Adequate panel cooling arrangement should be provided with air filters which are removable and cleanable.
- l) Panel should be dust and vermin proof with minimum IP42 protection.
- m) Separate Power contactors shall be provided for VFD and DOL modes. Control supply voltage shall be 110VAC.
- n) Manuals should be supplied in hard copy (2 nos) and soft copy (C.D).
- o) Drawing should be supplied in hardcopy (2 set) and soft copy.

3. Technical specification

- a) Rating: 15 KW heavy duty as per IEC146
- b) Supply voltage: 3 Phase 415V $\pm 10\%$
- c) Frequency: 50Hz $\pm 5\%$
- d) Overload capacity: 150% for 1min
- e) Acceleration time: 0-300 Sec
- f) Deceleration time: 0-300 Sec
- g) Ambient temperature: 50 degree Celsius
- h) Digital I/P: 4 Nos
- i) Digital O/P: 3 Nos
- j) Analog input: 4-20mA 2 numbers
- k) Analog Output: 4-20mA 2 numbers
- l) Altitude: 150 meters
- m) VFD must have LCD backlit display for showing parameters.

4. Motor Protections

Following protections should be available.

- a) Over voltage protection
- b) Under voltage protection
- c) Instantaneous Over current protection
- d) Over current protection
- e) Under current protection
- f) Phase failure protection
- g) Earth fault protection
- h) Thermal overload protection

5. Bus Bars

- a) Bus bar shall be suitably sized to withstand the fault level.
- b) Bus bar shall be suitably supported.
- c) Bus bar shall be color coded.
- d) Bus bar shall be provided with PVC sleeves for insulation.

6. Components

Components are of DIN rail mounting type. CT, Fuse Base and Fuse carrier, fuse and neutral link etc should be reputed make. All power and control wires used inside the panel for internal wiring purpose should be 1.1KV grade, flame retardant, low smoke cable of reputed make. The power and control cable wiring shall be terminated with marking/numbering/tagging on terminal blocks/boards of rated capacity

7. Drawings

You shall submit the following drawing for approval before starting the Fabrication work of the panel.

- a) Line diagram and component ratings.
- b) Wiring diagram.
- c) GA drawings

8. Inspection and Tests

Following inspection and tests should be done at various stages of manufacturing and supply.

- a) Visual inspection and dimensional check.
- b) Clearance measurement of Bus Bar.
- c) Mechanical operation of switch gears,
- d) Insulation resistance test.
- e) Operation and testing of circuits.
- f) Testing of protective systems.
- g) Other relevant tests applicable as per IS.

Copies of test certificate shall be furnished by the supplier after completion of all tests. The certificates shall be produced along with the supply.

9. Operator interface

- a) The module must be provided with a flexible panel mounted operator HMI, Connected to module through flexible communication cable. The HMI must be 3 or 4-line alpha numeric display clearly showing all operating parameters in plain English text.
- b) The HMI should continuously log all the operating parameters in its built-in SD card for a detailed analysis for drive/ load performance analysis at any required time.

10. Other Requirements

- a) Supplied VFD model shall be of latest design and architecture (not more than 5 years from date of launching). Catalog of offered VFD shall be submitted along with technical bid.
- b) Vendor shall provide after sales service and support for minimum of 10 years for the supplied VFDs.
- c) VFD shall have minimum of one-year warranty from date of commissioning OR 18 months from date of supply whichever is earlier.
- d) Vendor shall submit copy of Authorization certificate from VFD Manufacturer along with tender documents.
- e) Approximate length of power cable from VFD to Motor is 30 meters