



Bid Number: GEM/2022/B/2609666

Dated: 06-10-2022

Bid Document

Bid Details				
Bid End Date/Time	17-10-2022 14:00:00			
Bid Opening Date/Time	17-10-2022 14:30:00			
Bid Offer Validity (From End Date)	30 (Days)			
Ministry/State Name	Ministry Of Chemicals And Fertilizers			
Department Name	Department Of Chemicals And Petrochemicals			
Organisation Name	Hindustan Organic Chemicals Limited			
Office Name	Ambalamugal,ernakulam			
Total Quantity	2			
Item Category	Supply of 45KW VFD , Installation and commissioning of 45KW VFD			
BOQ Title	45KW VFD			
Years of Past Experience Required for same/similar service	3 Year (s)			
MSE Exemption for Years Of Experience	Yes			
Charles Francisco for Vision Of Francis	Yes			
Startup Exemption for Years Of Experience	res			
Document required from seller	1			
	Experience Criteria, Past Performance, Certificate (Requested in ATC), OEM Authorization Certificate, Additional Doc 1 (Requested in ATC), Additional Doc 2 (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			
Document required from seller	Experience Criteria, Past Performance, Certificate (Requested in ATC), OEM Authorization Certificate, Additional Doc 1 (Requested in ATC), Additional Doc 2 (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			
Document required from seller Past Performance	Experience Criteria, Past Performance, Certificate (Requested in ATC), OEM Authorization Certificate, Additional Doc 1 (Requested in ATC), Additional Doc 2 (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 80 %			
Document required from seller Past Performance Bid to RA enabled	Experience Criteria, Past Performance, Certificate (Requested in ATC), OEM Authorization Certificate, Additional Doc 1 (Requested in ATC), Additional Doc 2 (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 80 % No			
Document required from seller Past Performance Bid to RA enabled Primary product category Time allowed for Technical Clarifications	Experience Criteria, Past Performance, Certificate (Requested in ATC), OEM Authorization Certificate, Additional Doc 1 (Requested in ATC), Additional Doc 2 (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 80 % No Supply of 45KW VFD			

EMD Detail

E			ı
	Required	No	

ePBG Detail

Required	No			
Splitting				
Bid splitting not applied.				
MII Purchase Preference				
MII Purchase Preference	Yes			
MSE Purchase Preference				
MSE Purchase Preference	Yes			

- 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 / Public Listed Company 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. Preference to Make In India products (For bids < 200 Crore):Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .In case Buyer has selected Purchase preference to Micro and Small Enterprises clause in the bid, the same will get precedence over this clause.
- 5. 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% (Selected by Buyer)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 25%(selected by Buyer) percentage of

total QUANTITY.

- 6. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.
- 7. Past Performance: The Bidder or its OEM {themselves or through re-seller(s)} should have supplied same or similar Category Products for 80% 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 / Public Listed Company. 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 Of 45KW VFD

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

Due to al Titus a	
Brand Type	l Unbranded

Technical Specifications

Specification Document	<u>View File</u>
BOQ Detail Document	<u>View File</u>

Advisory-Please refer attached BOQ document for detailed consignee list and delivery period.

Consignees/Reporting Officer and Quantity

S.No.	Consignee/Reporti ng Officer	Address	Quantity	Delivery Days
1	Soumya N K	682302,HINDUSTAN ORGANIC CHEMICALS LTD, AMBALAMUGAL ERNAKULAM	1	30

Installation And Commissioning Of 45KW VFD

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively)

Technical Specifications

Sį	ecification Document	<u>View File</u>

BOQ Detail Document	<u>View File</u>
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1	Soumya N K	682302,HINDUSTAN ORGANIC CHEMICALS LTD, AMBALAMUGAL ERNAKULAM	1	30

Buyer Added Bid Specific Terms and Conditions

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 / Public Listed Company 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

Installation, Commissioning, Testing, Configuration, Training (if any - which ever is applicable as per scope of supply) is to be carried out by OEM / OEM Certified resource or OEM authorised Reseller.

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

Upload Manufacturer authorization: Wherever Authorised Distributors are submitting the bid, Manufacturers Authorisation Form (MAF)/Certificate with OEM details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid.

10. 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.

11. Scope of Supply

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

12. 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 25% of total value.

13. Purchase Preference (Centre)

Purchase Preference linked with Local Content (PP-LC) Policy:

The bid clause regarding "Preference to Make In India products" stands modified in this bid and shall be governed by the PPLC Policy No. FP-20013/2/2017-FP-PNG dated 17.11.2020 issued by MoP&NG as amended up to date. Accordingly, bidders with Local Content less than or equal to 20% will be treated as "Non Local Supplier". The prescribed LC shall be applicable on the date of Bid opening. Sanctions on the bidders for false / wrong declaration or not fulfilling the Local Content requirement shall be as per the PPLC policy. Further following additional provisions are added in the certification and verification of local content provision of the Preference to Make in India clause:

- i. In case of foreign bidder, certificate from the statutory auditor or cost auditor of their own office or subsidiary in India giving the percentage of local content is also acceptable. In case office or subsidiary in India does not exist or Indian office/subsidiary is not required to appoint statutory auditor or cost auditor, certificate from practicing cost accountant or practicing chartered accountant giving the percentage of local content is also acceptable.
- ii. Along with Each Invoice: The local content certificate (issued by statutory auditor on behalf of procuring company) shall be submitted along with each invoice raised. However, the % of local content may vary with each invoice while maintaining the overall % of local content for the total work/purchase of the pro-rata local content requirement. In case, it is not satisfied cumulatively in the invoices raised up to that stage, the supplier shall indicate how the local content requirement would be met in the subsequent stages.
- iii. The bidder shall submit an undertaking from the authorized signatory of bidder having the Power of Attorney along with the bid stating the bidder meets the mandatory minimum LC requirement and such undertaking shall become a part of the contract.

14. 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.

15. 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.

16. Certificates

The bidder is required to upload, along with the bid, all relevant certificates such as BIS licence, type test certificate, approval certificates and other certificates as prescribed in the Product Specification given in the bid document.

17. Past Project Experience

For fulfilling the experience criteria any one of the following documents may be considered as valid proof for meeting the experience criteria:

- a. Purchase Order copy along with Invoice(s) with self-certification by the bidder that supplies against the invoices have been executed.
- b. Execution certificate by client with order value.
- c. Any other document in support of order execution like Third Party Inspection release note, etc.

18. Past Project Experience

The Bidder / OEM {themselves or through reseller(s)}, should have executed project for supply and installation / commissioning of same or similar Category Products during preceding 3 financial years (i.e. current year and three previous financial years) as on opening of bid, as per following criteria:

- (i) Single order of at least 35% of estimated bid value; or
- (ii) Two orders of at least 20% each of estimated bid value; or

(iii) Three orders of at least 15% each of estimated bid value.

Satisfactory Performance certificate issued by respective Buyer Organization for the above Orders should be uploaded with bid. In case of bunch bids, the Category related to primary product having highest bid value should meet this criterion

19. 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

20. Buyer Added Bid Specific ATC

Buyer Added text based ATC clauses

1. Note: Refer Detailed specification sheet.

- 2. Type of Certificates:
 - a. Detailed Catalog should be submitted along with offer.
 - b. Routine Test certificates and warranty certificates (12 months from date of installation OR 18 months from date of supply whichever is earlier) should be forwarded along with supply.
- 3. Commercial Terms, Bid security declaration, Compliance form for land border as per given annexures should be filled, signed and submitted.

21. Buyer Added Bid Specific ATC

Buyer uploaded ATC document Click here to view the file.

Disclaimer

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization. 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. Any clause incorporated by the Buyer such as demanding Tender Sample, incorporating any clause against the MSME policy and Preference to make in India Policy, mandating any Brand names or Foreign Certification, changing the default time period for Acceptance of material or payment timeline governed by OM of Department of Expenditure shall be null and void and would not be considered part of bid. Further any reference of conditions published on any external site or reference to external documents/clauses shall also be null and void. 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. Also, GeM does not permit collection of Tender fee / Auction fee in case of Bids / Forward Auction as the case may be. Any stipulation by the Buyer seeking payment of Tender Fee / Auction fee through ATC clauses would be treated as null and void.

This Bid is also governed by the General Terms and Conditions

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.

---Thank You---



हिंदुस्तानऑर्गेनिककेमिकल्सलिमिटेडHINDUSTAN ORGANIC CHEMICALS LTD (भारतसरकारकाउद्यमA Government of India Enterprise) अंबलमुगल,कोचीAMBALAMUGAL, COCHIN – 682 302

दूरभाषPhone: (0484) 2720911, फ़ैक्सFAX No. (0484) 2720893

MAT/PUR/22169/22

03.10.2022

Sl.No	Material ITEM DESCRIPTION		Quantity
	No.		
1	63491226	Supply, installation and commissioning of 45KW VFD along with input choke, output choke, HMI with 3 or 4 line alpha numeric display for driving two numbers of 45KW motors (one at a time). Motor specification KW-45, Ampere-79, Speed -2955RPM, Motor make –Crompton greaves. Detailed specification attached	1 No.

Type of Certificate:

- 1. Detailed Catalog should be submitted along with offer.
- 2. Routine Test certificates and warranty certificates (12 months from date of installation OR 18 months from date of supply whichever is earlier) should be forwarded along with supply.

NOTE: REFER DETAILED SPECIFICATION SHEET

DETAILED SPECIFICATION

1. Scope of supply

The scope of supply includes design, manufacture, painting, assembling wiring, testing, inspection, packing, delivery, installation and commissioning of 45 KW 415V+/- 10% 3PHAC Variable frequency drive (VFD) input choke, output choke and complete accessories with panel for feeding water pump.

The 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.VFD is intended to drive two different motors of same capacity (one at a time). 3 position selector switch should be provided for motor 1 off and motor 2.

Motor specification KW-45, Ampere-79, Speed -2955RPM, Motor make –Crompton greaves.

2. Description of panel

- a) The equipment shall be non-draw out type, 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 glands (2 No.) 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.
- j) Panel should be designed and manufactured for connecting two motors (one running at a time), selector switch shall be provided in panel.
- k) Adequate panel cooling arrangement should be provided with air filters which are removable and cleanable.
- 1) Panel should be dust and vermin proof with IP42 protection.
- m) Manuals should be supplied in hard copy(2 nos) and soft copy(C.D).
- n) Drawing should be supplied in hardcopy (2 set) and soft copy.

3. Technical specification

- a) Rating:45 KW
- b) Supply voltage: 3 Phase 415V ±10%
- c) Frequency: 50Hz ±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: 4 Nos for Start stop trip and VFD temperature,

j) Analog input: 4-20mA 2 numbers

k) Analog Output:4-20mA 2 numbers

1) Panel should be dust and vermin proof with IP42 protection.

m) Altitude: 150 meters

n) 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 cables used inside the panel for internal wiring purpose should be 1.1KVgr, 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) Front and side view of the panels.
- c) LT component layout diagram.
- d) Wiring diagram.

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) Megger 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.

The scope of supply includes design, manufacture, painting, assembling wiring, testing, inspection, packing, delivery, installation and commissioning of 45 KW 415V+/- 10% 3PHAC Variable frequency drive (VFD) input choke, output choke and complete accessories with panel for feeding water pump.

The 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.VFD is intended to drive two different motors of same capacity (one at a time). 3 position selector switch should be provided for motor 1 off and motor 2.

Motor specification KW-45, Ampere-79, Speed -2955RPM, Motor make –Crompton greaves.