

**HINDUSTAN ORGANIC CHEMICALS LTD**  
**(A Government of India Enterprise)**  
**AMBALAMUGAL, COCHIN – 682 032**  
**Phone: (0484) 2720911, FAX No. (0484) 2720893**

**LIMITED E- TENDER NOTICE**

HOCL Invites e Bids under the two bid system for the following item.

Sl.No.	Description of item and Tender No.	Qty (Approx.)
1	Supply of PLATE HEAT EXCHANGER ASSEMBLY as per attached RFQ No.6000021809/2537/32475 – B  HOCL tender ref : MAT/PUR/32475 - B/19	As per attached RFQ

Tender documents may be downloaded from [www.hoclkochi.com](http://www.hoclkochi.com) or  
[www.eprocure.gov.in](http://www.eprocure.gov.in)

Approved vendors may please get registered with NIC e-procurement portal (URL: <https://eprocure.gov.in/eprocure/app>) to participate in the tender. Tenders submitted other than through online procedure specified will not be accepted. Please visit the above sites regularly for any addendum/ corrigendum/extension before submitting the offers.

Earnest Money Deposit to be paid : Rs.3750/-

Soumya N K  
Manager Materials

टेलीफोन (एरणाकुलम) 2720911- 14, 2720844 - 45, 2721040 - 43.  
फॉक्स : (0484) 2720893.  
ईमेल : hoclchin@md2.vsnl.net.in वेब : www.hoclkochi.com  
Phone (Ernakulam) 2720911- 14, 2720844 - 45, 2721040 - 43.  
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e-mail : hoclchin@md2.vsnl.net.in Web : www.hoclkochi.com



हिन्दुस्तान ऑर्गेनिक केमिकल्स लिमिटेड  
(भारत सरकार का उद्यम)

**HINDUSTAN ORGANIC CHEMICALS LIMITED**  
(A Govt. of India Enterprise)

अंबलमुगल : Ambalamugal - 662 302  
एरणाकुलम जिला : Ernakulam Dist. केरल : Kerala भारत : India



आई एस ओ 9001:2008 & आई एस ओ 14001 यूनिट  
AN ISO 9001:2008 & ISO 14001 UNIT

<b>REQUEST FOR QUOTATION</b>
<b>RFQ No. 6000021809/2537/32475-B</b>
<b>RFQ DATE : 27.05.2019</b>
<b>DUE DATE/TIME : 18.06.2019/2.00 PM</b>
<b>OPEN DATE/TIME : 19.06.2019/2.00 PM</b>
<b>HOCL GSTIN : 32AAACH2663P1ZG</b>

Dear Sirs,

We shall be grateful to receive your quotation in duplicate for the supply of the under mentioned articles subject to our standard terms and conditions attached herewith. Quotations indicating price, terms of delivery, detailed specification, relevant drawings, pamphlet and literature wherever applicable shall reach us on or before the due date and time stipulated above. Kindly provide your GSTIN, HSN Code of goods and rate of GST % for all items.

SL.No.	Material Code & Description	Unit	Qty
1	48131337 PLATE HEAT EXCHANGER ASSEMBLY 28-E-004 CRUDE FEED PRE HEATER PLANT ( H2O2) AS PER THE ATTACHED SPECIFICATION SHEET	Numbers	1

**NOTE: 1.OFFER TO BE SUBMITTED IN TWO BID SYSTEM AS MENTIONED IN THE TENDER DOCUMENT.**

**2. EMD APPLICABLE IS Rs.3750/-**

**3. HYDRAULIC TEST CERTIFICATE & MATERIAL TEST CERTIFICATE & GAURANTEE  
CERTIFICATE TO BE PROVIDED ALONG WITH SUPPLY.**

**4. SUPPLIER HAS TO PROVIDE AS BUILT DRAWING AND DESIGN CALCULATION  
ALONGWITH SUPPLY**

FOR HINDUSTAN ORGANIC CHEMICALS LTD.

SOUMYA N.K.  
MANAGER (MATERIALS)

MAT/PUR/32475 - B/19

27.05.2019

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 Limited e tenders for supply PLATE HEAT EXCHANGER ASSEMBLY as per attached RFQ& Specification provided on two bid basis. Party has to submit earnest Money Deposit of Rs.3750/- along with technical bid. Please note that the material is required urgently. Kindly offer minimum delivery period.

Tender documents are uploaded in HOCL website [www.hoclkochi.com](http://www.hoclkochi.com) and [www.eprocure.gov.in](http://www.eprocure.gov.in)

The details of the tender are as shown in INDEX enclosed

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

BID SUBMISSION CLOSING DATE : 18.06.2019 AT 2.00 PM  
BID OPENING DATE : 19.06.2019 AT 2.00 PM  
EMD : RS.3750/-

Thanking you,

Yours faithfully,  
For Hindustan Organic Chemicals Ltd.

Soumya N K  
Manager Materials

INDEX - TENDER NOTICE FOR PLATE HEAT EXCHANGER ASSEMBLY

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2	Instructions to Bidders for online Bid Submission	Annexure II
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5	Commercial Terms format	Annexure-V

## **ANNEXURE- I**

### **GENERAL INSTRUCTIONS TO BIDDERS FOR E BID SUBMISSION**

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

1. HOCL has entered into an Agreement with nic for e procurement through their portal [www.eprocure.gov.in](http://www.eprocure.gov.in). Quotations shall be submitted online on or before the due date and time of closing the tender. The Techno commercial bid containing the Technical specification of the Products and Proof of satisfactorily meeting the Eligibility Criteria and all commercial terms should be uploaded as per instructions given in Annexure. The Price bid should be submitted in the uploaded BOQ .
  2. Techno commercial bid shall be opened electronically on specified date and time given in NIT. Bidders can witness the electronic opening of bid .The date and time of opening of the price bids will be intimated to the technically qualified bidders after evaluation of the Technical bids via email alerts through the valid email confirmed.
  3. 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."
  4. The bids shall be neatly typed in English language with pages consecutively numbered and shall be signed on all pages by authorized persons. Bids shall be free from over writing and all corrections shall be duly attested by the bidder.
  5. 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.
  6. HOCL reserves the right, without assigning any reason whatsoever, to accept or reject any or all bids in part or in full or cancel this enquiry.
  7. HOCL reserves the right to extend without giving any reason(s) the closing date/time of the enquiry.
  8. Bids shall be valid for a minimum of 60 days from the due date for receipt and opening of the bids.
  9. Specification of the Product : Specifications/catalogues/drawing of the product of shall be furnished along with the Technical Bid.
  10. Purchase Preference to Central Public Sector Enterprises of Govt. Of India and MSMEs shall be as per Govt. of India policy in vogue.
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**Instructions for Online Submission**

The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

information useful for submitting online bids on the CPP Portal may be obtained at: <https://eprocure.gov.in/eprocure/app>.

**REGISTRATION**

1) Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://eprocure.gov.in/eprocure/app>) by clicking on the link "**Online bidder Enrollment**" on the CPP Portal which is free of charge.

2) As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.

3) Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.

4) Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.

5) Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.

6) Bidder then logs in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

**SEARCHING FOR TENDER DOCUMENTS**

1) There are various search options built in the CPP Portal, to facilitate bidders to search active tenders by several parameters. These parameters could include Tender ID, Organization Name, Location, Date, Value, etc. There is also an option of advanced search for tenders, wherein the bidders may combine a number of search parameters such as Organization Name, Form of Contract, Location, Date, Other keywords etc. to search for a tender published on the CPP Portal.

2) Once the bidders have selected the tenders they are interested in, they may download the required documents / tender schedules. These tenders can be moved

to the respective 'My Tenders' folder. This would enable the CPP Portal to intimate the bidders through SMS / e-mail in case there is any corrigendum issued to the tender document.

3) The bidder should make a note of the unique Tender ID assigned to each tender, in case they want to obtain any clarification / help from the Helpdesk.

### **PREPARATION OF BIDS**

1) Bidder should take into account any corrigendum published on the tender document before submitting their bids.

2) Please go through the tender advertisement and the tender document carefully to understand the documents required to be submitted as part of the bid. Please note the number of covers in which the bid documents have to be submitted, the number of documents - including the names and content of each of the document that need to be submitted. Any deviations from these may lead to rejection of the bid.

3) Bidder, in advance, should get ready the bid documents to be submitted as indicated in the tender document / schedule and generally, they can be in PDF / XLS / RAR / DWF/JPG formats. Bid documents may be scanned with 100 dpi with black and white option which helps in reducing size of the scanned document.

4) To avoid the time and effort required in uploading the same set of standard documents which are required to be submitted as a part of every bid, a provision of uploading such standard documents (e.g. PAN card copy, annual reports, auditor certificates etc.) has been provided to the bidders. Bidders can use "My Space" or "Other Important Documents" area available to them to upload such documents. These documents may be directly submitted from the "My Space" area while submitting a bid, and need not be uploaded again and again. This will lead to a reduction in the time required for bid submission process.

**Note:** *My Documents space is only a repository given to the Bidders to ease the uploading process. If Bidder has uploaded his Documents in My Documents space, this does not automatically ensure these Documents being part of Technical Bid.*

### **SUBMISSION OF BIDS**

1) Bidder should log into the site well in advance for bid submission so that they can upload the bid in time i.e. on or before the bid submission time. Bidder will be responsible for any delay due to other issues.

2) The bidder has to digitally sign and upload the required bid documents one by one as indicated in the tender document.

3) Bidder has to select the payment option as "offline" to pay the tender fee / EMD as applicable and enter details of the instrument.

4) Bidder should prepare the EMD as per the instructions specified in the tender document. The original should be posted/couriered/given in person to the concerned official, latest by the last date of bid submission or as specified in the tender documents. The details of the DD/any other accepted instrument, physically sent, should tally with the details available in the scanned copy and the data entered during bid submission time. Otherwise the uploaded bid will be rejected.

5) Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BoQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BoQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BoQ file is found to be modified by the bidder, the bid will be rejected.

6) The server time (which is displayed on the bidders' dashboard) will be considered as the standard time for referencing the deadlines for submission of the bids by the bidders, opening of bids etc. The bidders should follow this time during bid submission.

7) All the documents being submitted by the bidders would be encrypted using PKI encryption techniques to ensure the secrecy of the data. The data entered cannot be viewed by unauthorized persons until the time of bid opening. The confidentiality of the bids is maintained using the secured Socket Layer 128 bit encryption technology. Data storage encryption of sensitive fields is done. Any bid document that is uploaded to the server is subjected to symmetric encryption using a system generated symmetric key. Further this key is subjected to asymmetric encryption using buyers/bid opener's public keys. Overall, the uploaded tender documents become readable only after the tender opening by the authorized bid openers.

7) The uploaded tender documents become readable only after the tender opening by the authorized bid openers.

8) Upon the successful and timely submission of bids (i.e. after Clicking "Freeze Bid Submission" in the portal), the portal will give a successful bid submission message & a bid summary will be displayed with the bid no. and the date & time of submission of the bid with all other relevant details.

9) The bid summary has to be printed and kept as an acknowledgement of the submission of the bid. This acknowledgement may be used as an entry pass for any bid opening meetings.

### **ASSISTANCE TO BIDDERS**

1) Any queries relating to the tender document and the terms and conditions contained therein should be addressed to the Tender Inviting Authority for a tender or the relevant contact person indicated in the tender.

2) Any queries relating to the process of online bid submission or queries relating to CPP Portal in general may be directed to the 24x7 CPP Portal Helpdesk.

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ANNEXURE - III

**Eligibility criteria for participating in the bid.**

**Offers of bidders who satisfy the following Eligibility Criteria only will be considered .**

1 Only manufacturers or their authorised dealers having sound financial capability and who can supply heat exchange as per the specification enclosed should submit the offers. Vendors who have been blacklisted in the past by any PSU shall not submit the bids. If you are the authorized dealer of Manufacturer Authorization letter from the manufacturer to be enclosed

2. Vendor shall give design calculation and as built drawing along with supply. Also shall provide Hydraulic Test Certificate, Material Test Certificate & Guarantee certificate along with supply.

3. Party has to furnish EMD of Rs.3750/- by the way of DD/RTGS/BG alongwith technical bid. The offers without EMD shall not be considered evaluation. PSUS and Vendors registered under MSME are exempted from EMD. Vendors has to produce documentary evidence for exemption of EMD.

4. Vendor has to submit Security Deposit @5% of order value within 21 days from the date of receipt of purchase order if HOCL shall so desire. Vendors registered with NSIC are exempted from SD upto the monetary limit mentioned in the NSIC certificate.

5. vendor has to upload 3-4 purchase order copies executed by them for similar supply.

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## **ANNEXURE-IV**

### **GENERAL CONDITIONS OF TENDER MAT/PUR/32475-B/19**

**1. VALIDITY OF OFFER :** Offer shall be valid for a minimum period of 60 days from the last date of submission stipulated for the tender.

**2. SUBMISSION OF BIDS :** Bids shall be uploaded on two bid system as per the instructions given in Annexure I.

**3. PRICED BID SUBMISSION :** BOQ :Bidders are requested to note that they should necessarily submit their financial bids in the format provided and no other format is acceptable. If the price bid has been given as a standard BOQ format with the tender document, then the same is to be downloaded and to be filled by all the bidders. Bidders are required to download the BOQ file, open it and complete the white coloured (unprotected) cells with their respective financial quotes and other details (such as name of the bidder). No other cells should be changed. Once the details have been completed, the bidder should save it and submit it online, without changing the filename. If the BOQ file is found to be modified by the bidder, the bid will be rejected.

**4. Earnest Money Deposit :** A refundable **EMD of Rs. 3750/-** to be submitted along with the technical bid. EMD may be submitted in the form of Bank transfer through our banker M/s State Bank Of India, Ambalamedu Branch, A/c No:10342163665; IFS Code:SBIN0001108. Details of bank transfer should be indicated in your technical offer. EMD may also be submitted by way of Bank Guarantee from any scheduled banks. EMD of the successful tender may be adjusted against the security Deposit payable. EMD of unsuccessful bidder will be returned after finalization of the tender. EMD of a tenderer shall be forfeited if he withdraws or amends his tender or impairs or derogates from the tender in any respect within the validity period of the tender.

PSUs and Vendors registered under MSME need not submit EMD, but have to submit valid documentary proof to this effect (NSIC/UAM etc) along with the Techno-commercial bid.

**5. Security Deposit:** Successful bidder will have to pay a **Security deposit of 5%** of the order value towards satisfactory performance of the contract if HOCL shall so desire. SD has to be submitted by way of Bank Guarantee from a Scheduled bank within 21 days of placement of Order. SD will be forfeited in the event of any breach of contract by the supplier. SD will be refunded to the contractor within 60 days of completion of contract. Vendors registered with NSIC are exempted from SD to the monetary limit mentioned in the certificate.

**6. SIGNING AND SEALING ON ALL PAGES OF BIDS** : The vendor shall sign and seal on all the pages of the bids uploaded, failing which bids are liable to be rejected

**7. DISPUTES**: In the event of a contract being executed, all cases of disputes between seller and buyer shall be settled through arbitration as per Indian arbitration and Conciliation act 1996 or any amendments from time to time. The decision of the arbitration shall be final and binding on both the parties

**8. 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) Vendor not agreeing with the general conditions of the tender. (e) Not enclosing any particular documents asked for (f) Any other valid reason.

**9. PRICE**: Vendors to quote the prices on FOR destination basis.

**10. PAYMENT TERMS**: Payment shall be released by HOCL within 30 days of receipt and acceptance of the material at HOCL site

**11. INSURANCE** : HOCL shall arrange the transit insurance for the materials.. However, the vendor shall promptly inform HOCL regarding despatches for arranging insurance.

**12. SUPPLY SCHEDULE**: Material shall be delivered at our site after inspection by the delivery date indicated in the Purchase Order .

**13. RIGHT TO PROCURE FROM ALTERNATIVE SOURCE** : In the event of non-supply by the vendor on whom purchase order is placed, HOCL reserves the right to procure material of same quality from an alternative source at the cost and risk of the Vendor.

**14. OPENING OF BIDS** : Techno commercial bids will be opened electronically **at 2.00 pm on 19.06.2019**, after evaluation of the techno commercial bids, will subsequently inform all those technically acceptable vendors regarding the date and time of opening of the price bids.

**15. PURCHASE/PRICE PREFERENCE**: Purchase /Price Preference or any other concessions applicable for SSI Units /PSUs will be as per latest Government Of India Directives. For availing this benefit, the bidder should make their claim in the Technical Bids itself and enclose necessary documentary evidence to prove their eligibility.

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**ANNEXURE V**

**COMMERCIAL TERM FORMAT**  
*(To be printed on your letter head& uploaded)*

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

Name and Address of Organization :

Phone & Fax No :

GSTIN :

e-mail id for correspondence :

Contact Person Name and Mobile No:

Are you registered under MSME : Yes/No,

if yes please upload necessary documentary proof

Payment Term offered.

Terms of delivery offered :

P&F if any

Freight Charges if any :

Validity of offer :

Delivery period :

Taxes Applicable :

Certificates provided alongwith supply.

Deviation in specification if any

Signature and Stamp





1	Rev.	Info
2		Customer: HINDUSTAN ORGANIC CHEMICAL
3		Location: COCHIN
4		Plant: H <sub>2</sub> O <sub>2</sub>
5		Plant section: CONCENTRATION UNIT
6		
7		Design code: MANUFACTURERS STD.
8		Arranged <input type="checkbox"/> in series <input type="checkbox"/> in parallel <input type="checkbox"/> stand-by
9		MODEL NO: V20-SAT-LP-5G-CH

			FLUID I		FLUID II		
			INLET	OUTLET	INLET	OUTLET	
11	Fluid		51% (WT) H <sub>2</sub> O		35% (WT) H <sub>2</sub> O		
12	Total flow	kg/h	1169.80		1872.4		
13	Vapour / Gas	kg/h					
14	Steam	kg/h					
15	Inerts	kg/h					
16	Liquid	kg/h	1169.8	1169.8	1872.4	1872.4	
17	Water	kg/h					
18	Operating temperature	°C	57.2	35	30	43	
19	Operating pressure (gauge)	bar					
20	Operating pressure (abs.)	bar	5.0	4.5	5.0	4.5	
21	LIQUID	Density	kg/m <sup>3</sup>	1169.1	1187.6	1124.5	1115.5
22		Specific heat	kJ/kg K	3.39	3.38	3.63	3.63
23		Thermal conductivity	W/m K	0.596	0.571	0.585	0.601
24		Dynamic viscosity	mPa s	0.649	0.893	0.722	0.745
25		Boiling point	°C				
26		Heat of evaporation	kJ/kg				
27		Solidification point	°C				
28	VAPOUR / GAS	Molar mass	kg/kmol				
29		Density	kg/m <sup>3</sup>				
30		Specific heat	kJ/kg K				
31		Thermal conductivity	W/m K				
32		Dynamic viscosity	mPa s				
33		Dew point	°C				
34		Heat of condensation	kJ/kg				
35	* Number of passes per heat exchanger			1		1	
36	* Velocity (mean)	m/s		0.06		0.11	
37	* Pressure drop, max. admissible / calculated	bar		0.5 / 0.02		0.5 / 0.04	
38	Heat transfer coefficient	W/m <sup>2</sup> K					
39	Fouling factor	m <sup>2</sup> K/W		0.00012		0.00012	
40	* Corrected mean temp. difference	K			8.84		
41	* (Overall) Heat transfer rate	W/m <sup>2</sup> K			1532.83		
42	Heat duty	kW			24.5		

44	<b>DESIGN CRITERIA</b>					
45	Design temperature	°C		90		90
46	Design pressure (gauge)	bar		-1 / 7.5		-1 / 7.5
47	Material	Plates	FRAMC / NOZZLES	SS316 / CS-EPOXY PAINTED /	SS316 L	
48		Gaskets		TEFLON COATED EPDM		
49	* Number of plates assembled		13	WEIGHT (DRY/FLOODED) -	172 / 187	
50	* per heat exchanger max.		50			
51	NOTES - 1) ALL PARTS IN CONTACT WITH PROCESS FLUID TO BE IN SS316					
52	2) WELDINGS TO BE BRUSHED DOWN WITH SS BRUSH AND FINISH					
53	3) EQUIPMENT TO BE WELL CLEANED OUT WITH ALCOHOL OR BENCH					
54	WIPER AFTER ASSEMBLY.					
55	4) INSULATION IS NOT IN VENDOR'S SCOPE					

U Item 22E004

0052-PE-US-0010

NOZZLE INDEX AND ORIENTATION

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
Nozzle Symbol *	Designation *	Size INCH *	Rating #	Standard	Flange type	Flange facing	Pipe dimensions mm	Nozzle length mm	Dist. from ref. level mm	Orientation circumf.	Notes																						
N1	PRODUCT INLET	2	150	ANSI	WN	RF																											
N2	PRODUCT OUTLET	2		B16.5		RF																											
N3	FEED INLET	2				RF																											
N4	FEED OUTLET	2				RF																											
NOTE :- DELETED																																	
Name plate Bracket																																	
Earthing boss 1																																	
Earthing boss 2																																	

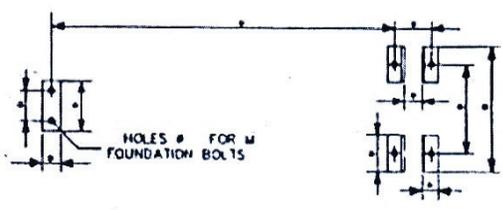
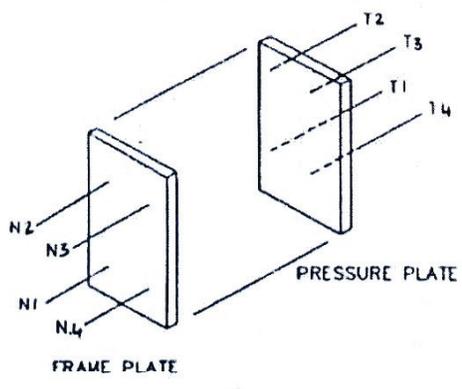
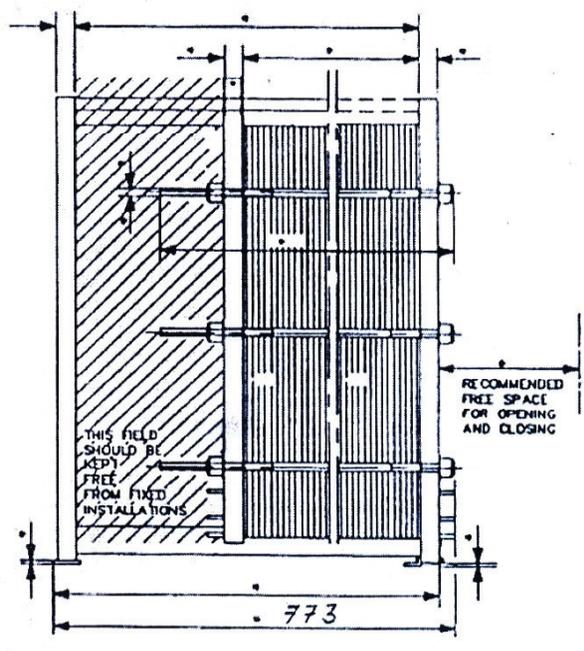
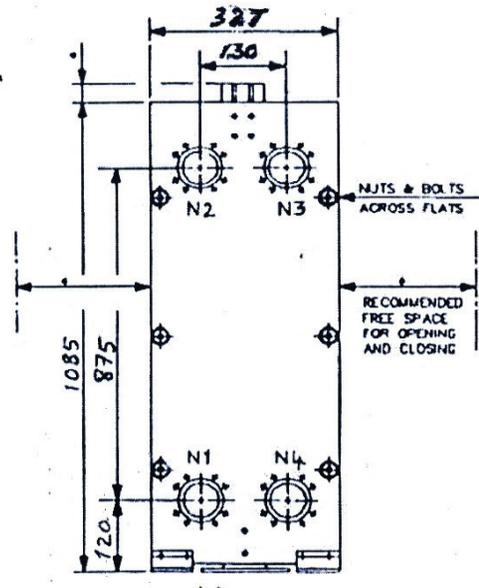
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\* To be filled up by process Engineer. Name:                      Date: 10 10 97

- 51 1) The above nozzle index shall be reproduced on the manufacturer's drawing.
- 52 2) Nozzle length and design to UN 2000 - 01, Part 1, unless otherwise stipulated.
- 53 3) Reference level = underside bottom head  ; underside support  ; .....tangent line (TL)
- 54 4) The reference level must be shown on the drawing
- 55 5) Orientation of nozzle on circumference: 0° = north for vertical vessels; 0° = top for horizontal vessels,
- 56 Indicate direction of view, degrees to be shown for clockwise reading

57																															
58	0	17.10.97		AS	100 ENGINEER	1	9.7.96		SI	PS	FOR ORDER																				
59	Rev	Date	Name	Checked	Description	Rev	Date	Name	Checked	Description																					

HOC-II	COCHIN	4	UAN
SKETCH FOR P.H.E			66 - 0052 - 700
		TON NO	28E004



Nozzle Symbol	Designation	DN mm	PN	Standard	Flange type	Flange facing	Pipe dimensions mm	Nozzle length mm	Dist. from rel. level mm	Orientation	Notes
N1											
N2											
N3											
N4											
REFER PG NO: 3											
0	17.10.97	SL	PS	FOR ENQUIRY	1	9.2.98	SL	PS	FOR ORDER		
Pr.	Date	Name	Checked	Description	Rev.	Date	Name	Checked	Description		

<b>UHDG</b>	Uhde India Limited	Code HOC - II	Cochin	Page 5	UAN 66-0052-700	V	L	S
DETAILS OF SUPPLY					U	Item		
					28E004		0052-PE-US-0010	

I. Scope of Supply

1. Design and supply of plate heat exchangers as per UIL specification.
2. Performance testing at site
3. Documentation, inspection and testing as per UIL specification.
4. Spares for two years trouble-free operation. (GASKETS FOR 2 NOS CHANNEL PLATES & 1 NO END PLATE) } Δ
5. Foundation bolts - 1 set.
6. Commissioning spares

Note :- The spares are common for 28E004 & 28E005 } Δ

II. Inspection

The following tests shall be carried out at the vendors' works in the presence of UIL representative.

1. Material identification and checking of material test certificates.
2. Checking of x-ray report.
3. DP test
4. Ultrasonic test
5. Final hydrotest (PHE should not be dismantled after hydrotest)
6. Dimensional checking.

Performance test shall be carried out at site.

III. Guarantee

Vendor shall guarantee the performance of the plate heat exchanger against all defects, including thermal rating, pressure drop and mechanical design for a period of 12 months from the date of commissioning or 18 months from the date of supply whichever is earlier. Should any defect in design, material, workmanship develop during the first year of operation, but not later than 18 months from the date of delivery, the supplier shall agree to make all necessary or desirable repairs or replacement of defective equipments free of charge.

0	17.10.98	PS	PS	FOR ENQUIRY					
Rev.:	Date:	Name	Chkd:	Description	1	9 2 98	SI	PS	FOR ORDER
					Rev	Date	Name	Checked	Description
© - Uhde GmbH				V = process, TON (L = line, S = trans., U = unit, item)					