



OIL INDIA LIMITED
(A Government of India Enterprises)
PO : Duliajan – 786602
Assam (India)

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FORWARDING LETTER

Tender No. : SDI4822P21 DT: 06.08.2020
Tender Fee : NIL
Bid Security : Applicable
Bidding Type : SINGLE STAGE TWO BID SYSTEM
Bid Closing on : 24.09.2020 (11.00 HRS IST)
Bid Opening on : 24.09.2020 (14.00 HRS IST)
Performance Security : Applicable
Integrity Pact : Applicable

The complete bid documents and details for purchasing bid documents, participation in E-tenders are available on OIL's e-procurement portal <https://etender.srm.oilindia.in/irj/portal> as well as OIL's website www.oil-india.com.

NOTE: All addenda, Corrigenda, time extension etc. to the tenders will be hosted on above website and e- portal only. Bidders should regularly visit above website and e-portal to keep themselves updated.

The items covered by this enquiry shall be used by Oil India Limited in the PEL/ML areas which are issued/renewed after 01/04/99 and hence concessional rate of GST @5% against Essentiality Certificate for invoice value 1 Lakh and above will be applicable as per Notification No. 3/2017- Integrated/ Central Tax (Rate) dated 28th June, 2017.

In the event of order, OIL will issue Essentiality Certificate (EC), where concessional rate of GST @5% will be applicable. Supplier shall affect dispatch only on receipt of this certificate from OIL, failing which all related liabilities shall be to Supplier's account.

OIL invites Bids for **PROCUREMENT OF INDIRECT WATER BATH HEATER – QTY = 31 NOS.** through its e-Procurement site under **SINGLE STAGE TWO BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders. The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents

The general details of tender can be viewed by opening the RFx [Tender] under RFx and Auctions. The details of items tendered can be found in the Item Data and details uploaded under **Technical RFX**.

This Tender has been floated for participation of Indigenous bidders only. Hence, only Indigenous bidders are eligible to participate against this tender.

Consortiums/Joint venture entities are not eligible to participate against this tender.

The tender will be governed by:

- a) For technical support on various matters viz. Online registration of vendors, Resetting of Passwords, submission of online bids etc, vendors should contact OIL's ERP MM Deptt at following: Tel Nos. = **0374-2807178/ 2807171/ 2807192/ 2804903**. Email id = erp_mm@oilindia.in; esupport@oilindia.in
- b) OIL's office timings are as below:

	Time (in IST)
Monday – Friday	07.00 AM to 11.00 AM; 12.30 PM to 03.30 PM
Saturday	07.00 AM to 11.00 AM
Sunday and Holidays	Closed

Vendors should contact OIL officials at above timings only.

OIL Bank Details :

	Bank Details of Beneficiary	
a	Bank Name	STATE BANK OF INDIA
b	Branch Name	Duliajan
c	Branch Address	Duliajan, Dist-Dibrugarh
d	Banker Account No.	10494832599
e	Type of Account	Current Account
f	IFSC Code	SBIN0002053
g	MICR Code	786002302
h	SWIFT Code	SBININBB479
i	Contact No.	9435554859
j	Contact Person Name	Mr. K.L.K.Banik, AGM
k	Fax No.	0374-2802729
l	Email Id	sbi.02053@sbi.co.in

- c) “General Terms & Conditions” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders.
- d) Technical specifications and Quantity as per **Annexure – IA**.
- e) The prescribed Bid Forms for submission of bids are available in the Technical RFx -> External Area -> Tender Documents.
- f) Amendments to the NIT after its issue will be published on OIL's website only. Revision, clarification, addendum, corrigendum, time extension etc. to the tender will be hosted on OIL website only. No separate notification shall be issued in the press. Prospective bidders are requested to visit website regularly to keep themselves updated.

- g) Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited).
- h) Bidders are advised to fill up the Technical bid check list (**Annexure EEE**) and Response sheet (**Annexure FFF**) given in MS excel format in Technical RFx -> External Area -> Tender Documents. The above filled up document to be uploaded in the **Technical Attachment**. For details please refer “Vendor User Manual” / “NEW INSTRUCTIONS”

Special Notes:

1.0

(I)

- a) Bidders who do not have E-tender Login ID and Password should complete their online registration **at least seven (7) days prior to the scheduled bid closing date** and time of the tender. For online registration, Bidder may visit the OIL’s E-tender site <https://etender.srm.oilindia.in/iri/portal>
- b) Necessary Login ID & Password will be issued by OIL only after submitting the complete online registration by the Bidder. In the event of late registration/incomplete registration by Bidder, OIL INDIA LIMITED shall not be responsible for late allotment of User ID & Password and request for bid closing date extension on that plea shall not be entertained by Company.
- c) The bidder claiming as MSE status (MSE-General, MSE-SC/ST, MSE - Woman) against this tender has to submit valid “Udyam Registration No” (URN) as per Gazette notification no CG-DL-E-26062020-220191 dated 26.06.2020 issued by MINISTRY OF MICRO, SMALL AND MEDIUM ENTERPRISES. The existing enterprises registered under EM- Part-II or UAM till 30th June, 2020, shall continue to be valid only for a period up to the 31st day of March, 2021.
- d) **MSE Units** (Manufacturers/Service Providers only and not their dealers/distributors) registered with District Industry Centers or Khadi & Village Industries Commission or Khadi & Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts & Handloom or any other body specified by Ministry of MSME shall submit copy of valid Registration Certificate for the items they intend to quote along with the bid. The Registration Certificate should clearly indicate the monetary limit, if any and the items for which bidder are registered with any of the aforesaid agencies. In case bidding MSE is owned by Schedule Caste or Schedule Tribe entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ST entrepreneur/Woman Entrepreneurs should also be enclosed.

The turnover related figures of the bidders claiming as MSE bidders as mentioned above shall be considered based on Bidders self-declarations to be submitted with their bid as per new gazette notification no. CG-DL-E-26062020-220191 dated 26.06.2020. However, in case of any intentional misrepresentations or attempts to suppress facts in the self-declaration, the bidder shall be liable to penalty as specified under section 27 of the Act.

The above mentioned **MSE Units** (Manufacturers/Service Providers only and not their dealers/distributors) are **exempted from payment of Bid Security (EMD)** irrespective of their monetary limit, product category and capacity mentioned in their registration, **subject to submission of valid MSE registration certificate issued by appropriate authority.**

- e) For availing benefits under Public Procurement Policy (**Purchase preference**), the interested MSE Bidders must ensure that they are the **manufacturers of the tendered item(s) and registered with the appropriate authority for the said item(s).** Bids without EMD shall be rejected, if the technical offer does not include a valid copy of relevant MSE Certificate issued by appropriate authority specifying the item as per tender. Therefore, it is in the interest of such MSE Vendors to furnish a copy of complete certificate to the concerned tender handling officer of **OIL at least seven (7) days prior to the scheduled Bid Closing Date of the tender**, seeking clarification/confirmation as to whether their MSE certificate is eligible for EMD exemption or not. **Late communication in this regard and request for bid closing date extension on that plea shall not be entertained by Company.**

(II)

In case a Startup [defined as per Ministry of Commerce and Industry (Department of Industrial Policy and Promotion, DIPP) latest notification]/ MSE is interested in supplying the tendered item but does not meet the Pre-Qualifying Criteria (PQC)/ Proven Track Record (PTR) indicated in the tender document, the Startup/MSE is requested to write a detailed proposal separately, and not against the present tender requirement, to the tender issuing authority about its product. Such proposals shall be accompanied by relevant documents in support of MSE (where applicable) or in case of Startup, following documents shall be given:

1. Certificate of Recognition issued by the Department of Industrial Policy and Promotion, Ministry of Commerce and Industry, Government of India.
2. Certificate of incorporation.
3. Audited Profit & Loss (P&L) Statement of all the Financial Years since incorporation. In case where the Balance sheet has not been prepared, bidder shall submit a certificate in original from its CEO/CFO stating the turnover of the bidding entity separately for each Financial Years since incorporation alongwith a declaration stating the reason for not furnishing the audited P&L Statement. This certificate shall be endorsed by a Chartered Accountant/Statutory Auditor.

The Proposal shall be examined by OIL and OIL may consider inviting a detailed offer from the Startup/MSE with the intent to place a TRIAL or TEST Order, provided the Startup/MSE meets the Quality and Technical Specifications.

In case the Startup/MSE is successful in the Trial Order, the vendor shall be considered for PQC exemption/relaxation (as the case may be) for the next tender for such item till the time it remains a Startup/MSE

NOTE:

In case of MSE/PSUs/ Govt. Bodies / eligible institutions etc., they must apply to concerned tender handling officer, Materials Department, Oil India Limited, P.O. Duliajan, Assam-786602 for waiver of EMD upto one week prior to the Bid closing date (or as amended in e-portal).

2.0 The tender is invited under **SINGLE STAGE-TWO BID SYSTEM**. The bidders are required to submit both the “TECHNO-COMMERCIAL UNPRICED BID” and “PRICED

BID” through electronic format in the OIL’s e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender.

2.1 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the RFx Information > Technical Attachment only. The “TECHNO-COMMERCIAL UNPRICED BID**” shall contain all techno-commercial details except the prices. Please note that no price details should be uploaded in Technical RFx Response.**

2.2 The “PRICE BID**” must contain the price schedule and the bidder’s commercial terms and conditions. For price upload area , please refer “NEW INSTRUCTIONS” Please refer Annex-BB for price schedule.**

2.3 Offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in [Annexure-CCC](#).

3.0 Please note that all tender forms and supporting documents are to be submitted through OIL’s e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **DGM- Materials, Materials Department, Oil India Limited, Duliajan - 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender.**

- a) Original Bid Security**
- b) Detailed Catalogue (if any)**
- c) Any other document required to be submitted in original as per tender requirement**

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in Duplicate.

4.0 Benefits to Micro & Small Enterprises (MSEs) as per OIL’s Public Procurement Policy for Micro and Small Enterprises (MSEs) shall be given. Bidders are requested to go through ANNEXURE – I of MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders for more details.

5.0 Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the NIT or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.

6.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that above documents which are to be submitted in a sealed envelope are also submitted at the above mentioned address before the bid closing date and time failing which the offer shall be rejected.

7.0 Bid must be submitted electronically only through OIL’s e-procurement portal. Bid submitted in any other form will be rejected.

8.0 **SINGLE STAGE TWO BID SYSTEM shall be followed for this tender and only the PRICED-BIDS of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.**

9.0 a) The Integrity Pact is applicable against this tender. Therefore, please submit the Integrity Pact document duly signed along with your quotation as per BRC. OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Annexure DDD of the tender document. This Integrity Pact proforma has been duly signed

digitally by OIL's competent signatory. The proforma has to be submitted by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.

b) The name of the OIL's Independent External Monitors at present are as under:

1. SHRI SUTANU BEHURIA, IAS (Retd.)
E-Mail ID: sutanu2911@gmail.com
2. SHRI JAGMOHAN GARG
Ex-Vigilance Commissioner, CVC
E-mail ID: jagmohan.garg@gmail.com
3. SHRI RUDHRA GANGADHARAN, IAS (RETD.)
Ex-Secretary, Ministry of Agriculture
E-mail ID: rudhra.gangadharan@gmail.com

10.0 The tender shall be governed by the Bid Rejection & Bid Evaluation Criteria given in enclosed **Annexure-CCC**. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (as per **Annexure-CCC**) contradict the Clauses of the tender and / or "General Terms & Conditions" as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders elsewhere, those in the BEC / BRC shall prevail.

11.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

12.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.

13.0 If Bank Guarantee is submitted towards 'Bid Security', then bidders have to ensure that the Bank Guarantee issuing bank indicate the name and detailed address (including e-mail) of their higher office from where confirmation towards genuineness of the Bank Guarantee can be obtained.

14.0 Bidders are requested to refer to the enclosed **Annexure – BBB** for the Taxes and Duties clauses under GST regime.

15.0 Delivery/collection Instructions in cases where transportation is in OIL's scope:

(i) the suppliers shall be required to deliver the Sundry consignments of weight less than 3 (Three) Tons at the godown/office/collection point of OIL's authorized transporter in various cities.

(ii) consignments weighing more than 3(Three) Tons shall be collected from the supplier's premises/loading points by OIL's authorized transporter.

(iii) the names of OIL's current authorized transporter is:

M/s Western Carriers (India) Ltd.

Bidder's are requested to note the above delivery/collection instructions while submitting their offers.

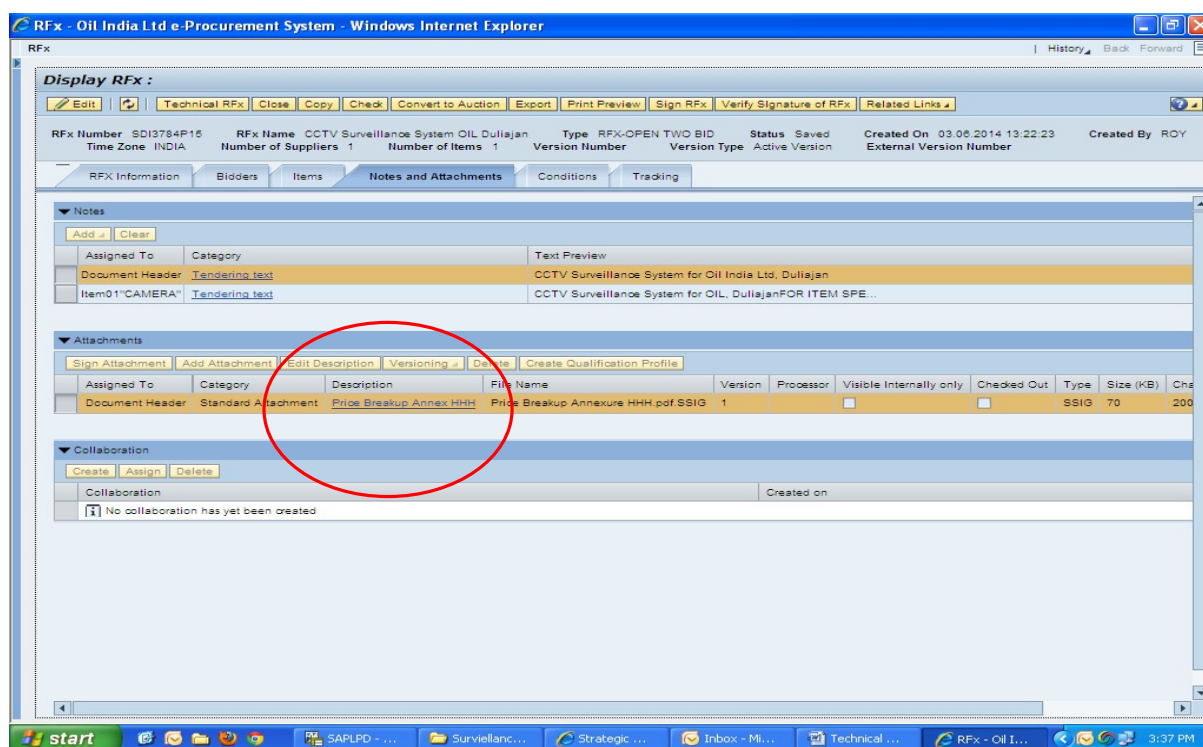
16.0 While submitting the offers bidders are requested to refer to the enclosed **Annexure – BB (Price Bid Format and Evaluation Criteria)**.

17.0 The applicable GST on the Liquidated Damage if any, shall have to be borne by the seller. Accordingly, the Liquidated Damage shall be recovered from the seller along with applicable GST.

18.0 Bidders should fill-up and submit alongwith their bid an **UNDERTAKING** towards **authenticity of information/documents** furnished by them, as per enclosed **ANNEXURE-K**.

19.0 Price Breakup:

Bidders should submit the price breakup of all the items as per “Annexure HHH” which has been uploaded under “Notes & Attachments” > “Attachments” as shown below. The price breakup “Annexure HHH” should be filled up, signed and uploaded under “Notes & Attachments” > “Attachments” only. **The filled up price breakup of all the items should not be uploaded in Technical Attachment.**



20.0 For convenience of the qualified Bidders and to improve transparency, the rates/costs quoted by bidders against OIL's e-tenders shall be available for online viewing by such Bidders whose price bids are opened by Company. A Bidder can view item-wise rates/ costs of all other such peer bidders against the tender immediately after price bid opening, if the e-tender is floated by Company with PRICE CONDITION. In case the Price-Bid is invited by Company through attachment form under "Notes & Attachment" (i.e., NO PRICE Condition), Bidders must upload their detailed Price-Bid as per the prescribed format under "Notes & Attachment", in addition to filling up the "Total Bid Value" Tab taking into account the cost of all individual line items and other applicable charges like freight, tax, duties, levies etc. Under NO PRICE Condition (i.e.,

Price Bid in attachment form), the "Total Bid Value" as calculated & quoted by the Bidder shall only be shared amongst the eligible bidders and Company will not assume any responsibility whatsoever towards calculation errors/ omissions therein, if any. Notwithstanding to sharing the "Total Bid Value" or the same is whether filled up by the Bidder or not, Company will evaluate the cost details to ascertain the inter-se-ranking of bidders strictly as per the uploaded attachment and Bid Evaluation Criteria only. Online view of prices as above shall be available to the Bidders only upto seven days from the date of Price-Bid opening of the tender.

21.0 DISCLAIMER: Rates/Costs shown above are as calculated/quoted by the respective Bidder. Company does not assume any responsibility and shall not be liable for any calculation error or omissions. However, for placement of order/award of contract, Company shall evaluate the cost details to determine the inter-se-ranking of Bidders strictly as per their Price-Bids and Bid Evaluation Criteria of the Tender. OIL INDIA LTD accepts no liability of any nature resulting from mismatch of "Total Bid Value" & price submitted under "Notes & Attachment" by any bidder and no claim whatsoever shall be entertained thereof.

Please do refer “**NEW INSTRUCTION TO BIDDER FOR SUBMISSION**” for the above two points and also please refer “**New Vendor Manual (effective 01.03.2019)**” available in the login Page of the OIL’s E-tender Portal.



Oil India Limited e-Procurement

User ID *

Password *

Logon Problems? [Get Support](#)

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[Important Note for New Portal Users:](#)

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[General Guidelines to bidders](#)

[Click for User Manuals](#)

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Click here for the New Manual &

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non compliance to all the terms and conditions of the NIT.

Yours Faithfully,

-Sd-

(A J SARMAH)

CHIEF MANAGER MATERIALS (IP)
FOR : CGM-MATERIALS (HoD)

Tender No & Date: SDI4822P21 DT: 06.08.2020

BID REJECTION CRITERIA (BRC) / BID EVALUATION CRITERIA (BEC)

The following BRC/BEC will govern the evaluation of the bids received against this tender. Bids that do not comply with stipulated BRC/BEC in full will be treated as non responsive and such bids shall prima-facie be rejected. Bid evaluation will be done only for those bids that pass through the “Bid Rejection Criteria” as stipulated in this document.

Other terms and conditions of the enquiry shall be as per General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BRC / BEC) contradict the Clauses of the tender or MM/LOCAL/E-01/2005 elsewhere, those in the BRC / BEC shall prevail.

<u>Criteria</u>	Complied / Not Complied. (Remarks if any)
<p>1.0 BID REJECTION CRITERIA (BRC):</p> <p>The bid shall conform generally to the specifications, terms and conditions given in this document. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected.</p> <p>A) TECHNICAL:</p> <p><u>1.0 Bidder's Qualification:</u></p> <p>1.1 The bidder shall be an Original Equipment Manufacturer (OEM) of the tender items.</p> <p>1.2 The bidder shall carry out the fabrication work of the tender item by engaging welders who are qualified under ASME boiler and pressure vessel code Section- IX regulations. Documentary evidence in regard of welder qualifications shall be submitted by the bidder along with the bid. The list of welder(s), who will be engaged for fabrication of the tender item, along with respective welder performance qualification test report carried out within last 05 years preceding original bid closing date of this tender, shall be submitted along with the technical bid.</p> <p><u>2.0 Bidder's Experience:</u></p> <p>2.1 The bidder shall have the experience of successful execution of order(s) for not less than 10 Nos. of Indirect Heater or any of the crude oil process equipment as detailed below, to Oil & Gas Industries and/or to E&P Company in last 07 years from the original bid closing date of the tender:</p> <p>(a) Indirect Heater of working pressure of 105.46 kg/cm² or above.</p> <p>(b) Steam jacket of working pressure of 105.46 kg/cm² or above.</p>	

- (c) Crude Oil Emulsion Treater of working pressure 2.0 kg/cm² or above.
(d) Gas Oil Separator of minimum 200 KLPD capacities & working pressure 1.0 kg/cm² or above.

2.2 The bidder shall submit the following documents in support of successful execution of past supply /contract, as applicable under clause 2.1:

- (a) Copy(ies) of Purchase Order(s) / Contract document(s), and
(b) Any of the following documents that confirms the successful execution of the order(s)-
- Performance/Commissioning Report from the clients,
- Delivery challan / invoice etc.
- any other documentary evidence that can substantiate the successful execution of each of the above Purchase Order/ contract.

2.3 Note regarding supply experience:

- a) The Purchase Order date need not be within 7 (seven) years preceding original bid closing date of this tender. However, the execution of supply should be within 7 (seven) years preceding original bid closing date of this tender.

b) Satisfactory supply/completion/installation report (if submitted) should be issued on client's official letterhead with signature and stamp.

3.0 In the event of an order, the successful Bidder must deliver at least fifty percent (50%) ordered quantity within twelve (12) months from the date of notification of award and remaining 50% quantity within six (6) months thereafter. Thus, the delivery of entire ordered quantity must be completed within eighteen (18) months from the date of placement of order by Company. Delivery in batch/lot of five (5) complete Units shall be preferred.

The bidder must categorically confirm to comply with the above delivery schedule in their Technical Bid, failing which their bid shall be rejected.

4.0 OIL reserves the right to split the tender quantity (31 Nos.) in the ratio of 60:40, i.e. 60% quantity (19 Nos.) would be awarded on L1 Bidder and remaining 40% (12 Nos.) on other technically qualified bidder (L2, L3... and so on in that order), subject to matching their quoted rate on FOR Destination (Duliajan & Digboi) basis with L1 bidder. In the event of single acceptable bid scenario or refusal by other bidders to match with L1 rate, purchase order for full quantity of 31 Nos. may be placed on the L1 Bidder.

B) FINANCIAL:

a) **Annual Financial Turnover** of the bidder during **any of preceding 03 (three) financial / accounting years from the original bid closing date** should be at least **Rs. 3.02 Crores.**

b) Net Worth of the firm should be Positive for preceding financial / Accounting year (**FY: 2019-2020**).

Note -For (a) & (b):

Considering the time required for preparation of Financial Statements, if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial / accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that 'the balance sheet/Financial Statements for the financial year (As the case may be) has actually not been audited so far'.

Notes:

a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid:-

i) A certificate issued by a practicing Chartered Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in ANNEXURE-J.

OR

ii) Audited Balance Sheet along with Profit & Loss account.

b) In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.

C) COMMERCIAL:

i) Validity of the bid shall be **minimum 120 days** from the Bid Closing Date.

ii) **Bid security:**

The bid must be accompanied by Bid Security of **Rs. 17,58,000.00** in OIL's prescribed format as Bank Guarantee in favour of OIL. The Bid Security may be submitted manually in sealed envelope superscribed with Tender no. and Bid Closing date to GM-Materials, Materials Department, Oil India Limited, Duliajan- 786602, Assam on or before the Bid Closing Date and Time mentioned in the Tender. **The Bank Guarantee towards Bid Security shall be valid for 7 months from Bid closing date (i.e. upto 30.04.2021).**

Bid Security may also be paid online on or before the Bid Closing Date and Time mentioned in the Tender.

If bid security in ORIGINAL of above mentioned Amount and Validity is not received or paid online within bid closing date and time, the bid submitted through electronic form will be rejected without any further consideration.

For exemption for submission of Bid Security, please refer Clause No. 8.16 of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders.

The format of Bank Guarantee towards Bid Security (Annexure – VII) has been amended to Annexure – VII (Revised) and bidders should submit Bank Guarantee towards Bid Security as per Annexure – VII (Revised) only.

iii) Bids are invited under “Single Stage Two Bid System”. Bidders have to submit both the “Techno-commercial Unpriced Bids” and “Priced Bids” through electronic form in the OIL’s e-Tender portal within the bid Closing date and time stipulated in the e-tender. The Techno-commercial Unpriced bid is to be submitted as per scope of works and Technical specification of the tender and the priced bid as per the online Commercial bid format. For details of submission procedure, please refer relevant para of General Terms and Conditions vide MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders. Any offer not complying with the above shall be rejected straightway.

iv) **Performance Security:**

The successful bidder shall submit Performance Security @ 10% of PO value within 30 days of receipt of the formal purchase order failing which OIL reserves the right to cancel the order and forfeit the Bid Security. Bidders should undertake in their bids to submit Performance Security as stated above.

The Performance Security shall be in the following form :

A Bank Guarantee in the prescribed OIL’s format valid for 90 days beyond delivery period and applicable warranty/guarantee period (if any).

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and conformation to all terms and conditions of order. In case of any delay in despatch or non-confirmation to all terms and conditions of order, validity of the Performance Security is to be extended suitably as advised by OIL.

However, PBG will be applicable only if value of Purchase Order exceeds Rs. 5(five) Lakhs.

v) The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.

vi) Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

vii) All the Bids must be Digitally Signed using “Class 3” digital certificate

with Organisation's name (*e-commerce application*) as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than "Class 3 with Organisation's Name" digital certificate, will be rejected.

viii) **Technical RFx Response folder is meant for Technical bid only. Therefore, No price should be given in Technical RFx Response folder, otherwise the offer will be rejected.**

ix) Price should be maintained in the "online price schedule" only. The price submitted other than the "online price schedule" shall not be considered.

x) A bid shall be rejected straightway if it does not conform to any one of the following clauses:

(a) Validity of bid shorter than the validity indicated in the Tender.

(b) Original Bid Security not received within the stipulated date & time mentioned in the Tender.

(c) Bid Security with (i) Validity shorter than the validity indicated in Tender and/or (ii) Bid Security amount lesser than the amount indicated in the Tender.

(d) In case the Party refuses to sign Integrity Pact.

(e) Annual Turnover of a bidder lower than the Annual turnover mentioned in the Tender.

XI) DELIVERY: IN THE EVENT OF AN ORDER, THE SUCCESSFUL BIDDER MUST DELIVER AT LEAST FIFTY PERCENT (50%) ORDERED QUANTITY WITHIN TWELVE (12) MONTHS FROM THE DATE OF NOTIFICATION OF AWARD AND REMAINING 50% QUANTITY WITHIN SIX (6) MONTHS THEREAFTER. THUS, THE DELIVERY OF ENTIRE ORDERED QUANTITY MUST BE COMPLETED WITHIN EIGHTEEN (18) MONTHS FROM THE DATE OF PLACEMENT OF ORDER BY COMPANY. DELIVERY IN BATCH/LOT OF FIVE (5) COMPLETE UNITS SHALL BE PREFERRED.

THE BIDDER MUST CATEGORICALLY CONFIRM TO COMPLY WITH THE ABOVE DELIVERY SCHEDULE IN THEIR TECHNICAL BID, FAILING WHICH THEIR BID SHALL BE REJECTED.

NOTE: FOR CLAUSE NOS. C(ii) & C(iv) OF BID SECURITY/EMD AND PBG

The bidders/successful bidders are requested to advise the Bank Guarantee issuing bank to comply with the following and ensure to submit, the receipt of the copy of SFMS message as sent by the issuing bank branch, along with the original bank guarantee in OIL's tender issuing office:

**"The Bank Guarantee issuing Bank branch must ensure the following:
The Bank Guarantee issued by the Bank must be routed through SFMS platform as per following details:**

(i) MT 760 / MT 760 COV for issuance of Bank Guarantee

(ii) MT 760 / MT 767 COV for amendment of Bank Guarantee

The above message / intimation shall be sent through SFMS by the BG issuing Bank branch to HDFC Bank, Duliajan Branch, IFS Code – HDFC0002118; SWIFT Code - HDFCINBBCAL.

Branch Address: HDFC Bank Limited, Duliajan Branch, Utopia Complex, BOC Gate, Jayanagar, Duliajan, Dibrugarh, PIN – 786602.”

2.0 BID EVALUATION CRITERIA (BEC)

The bids conforming to the terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria as well as verification of original of any or all documents/ documentary evidences pertaining to BRC, will be considered for further evaluation as per the Bid Evaluation Criteria given below. **The original Bid Closing Date shall be considered by OIL for evaluation of BRC criteria even in case of any extension of the original Bid Closing Date.**

A) TECHNICAL:

- i) The manufactured product should be strictly as per OIL's tender specification.
- ii) The bids will be evaluated strictly as per NIT specifications, terms & conditions.

B) COMMERCIAL:

- i) To evaluate the inter-se-ranking of the offers, all Taxes / Levies will be considered as per prevailing Govt. guidelines as applicable on the bid opening date. Bidders may check this with the appropriate authority before submitting their offer.
- ii) Priced bids of only those bidders will be opened whose offers are found technically acceptable. The technically acceptable bidders will be informed before opening of the "priced bid".
- iii) A job executed by a bidder for its own organization / subsidiary cannot be considered as experience for the purpose of meeting BEC.
- iv) To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

NOTE:

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non-compliance to all the terms and conditions of the NIT.

-----XXXX-----

TECHNICAL SPECIFICATIONS WITH QUANTITY

Tender No & Date: SDI4822P21 DT: 06.08.2020

MATERIALS DESCRIPTION	Complied / Not Complied. (Remarks if any)
<p><u>ITEM NO. 10</u></p> <p><u>FABRICATION, PACKAGING, SUPPLY OF INDIRECT WATER BATH HEATER PACKAGE FOR PROCESSING CRUDE OIL. [QTY: 15 nos.]</u></p> <p><u>{REQUIREMENT IS FOR OIL, DULIAJAN}</u></p> <p>Double Coiled Bath Type Field Indirect Heater of heating capacity 0.88×10^6 watts (3.0 MM BTU/HR.) for heating 10,000 BBLs (1800 KLS) per day of crude oil associated with sweet natural gas at 105.46 kg/cm² pressure, generally as per OIL drawings - OIL /2670/A, OIL/5303, OIL/2672/A, OIL/ 2051/C , OIL/PDNO/P&D/001/01 .</p> <p>1.0 SERVICE CONDITION</p> <p>1.1 Fluid to be handled : Crude oil mixed with sweet natural gas & formation water</p> <p>1.2 Flow Rate : 10,000 BBLs (1800 KLS) per day</p> <p>1.3 Heating capacity : 0.88×10^6 watts (3.0 MM BTU/HR.)</p> <p>1.4 Coil operating pressure : 105.46 kg/cm² (1500 psig)</p> <p>1.5 Bath medium : Water</p> <p>1.6 Shell Operating Pressure : Water Fill-up</p> <p>1.7 Water bath temp : 90 Deg. C</p> <p>2.0 DRAWINGS: The indirect Heater shall be manufactured as per following OIL drawings</p> <p>2.1 OIL /2670/A : Bath type IH General Arrangement</p> <p>2.2 OIL/5303 : Details of Shell Sub Assembly</p> <p>2.3 OIL/2672/A : Details of Fire Tube and Chimney</p> <p>2.4 OIL/ 2051/C : Detail of Indirect Heater Coil.</p> <p>2.5 OIL/PDNO/P&D/001/01: Flame Arrester</p> <p>2.6 OIL/PDNO/P&D/024/A(1): Indirect Heater Pilot Burner</p> <p>2.7 OIL/PDNO/P&D/024/A(2) : P &ID diagram, Burner control</p> <p>3.0 APPLICABLE STANDARDS FOR MATERIAL OF CONSTRUCTION & FABRICATION:</p> <p>3.1 Fire Tube : Seamless Carbon Steel Pipe as per ASTM A106 Gr. B Standard</p> <p>3.2 Coil Pipe & return bend: Seamless Carbon Steel Pipe as per ASTM A106 Gr. B/ API 5L Gr. B,</p> <p>3.3 Shell Body : As per IS2062 Gr. B Standard</p>	

- 3.4 Coil Flange : As per ASTM 105
 3.5 Fasteners: As per IS 1364 / ASTM A 307 Standard (For non pressure parts)
 3.6 Studs & Nuts : As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard
 3.7 Fuel Gas piping system : As per ASME B31.3 Standard
 3.8 Welding : As per ASME Section IX.
 3.9 Design, fabrication & Shop testing : As per API Spec 12K
 3.10 Shell nameplate : As Per API 12K

4.0 SHELL:

Shell will conform to all the requirements and dimensions of OIL Drawing no: OIL/5303 and must have adequate nozzles for inlet, outlet of coils, fire tube and mounting, various equipment & instruments for burner, drain valves etc.

The Indirect Heater shell will have suitable lifting lugs attached for lifting and placing the same at site.

The Indirect Heater shell will have Two (2) nos plates to be welded with. 3/4" studs with nuts (1 each at one of the legs and the vessel) for electrical earthing.

Reference Drawing no: OIL/5303(Details of Shell Sub Assembly)

5.0 COILS (SEAMLESS):

- 5.1 No. of Coil : 2 (two) sets
 5.2 No. of Pass: 8 (Eight) passes for each coil.
 5.3: Coil size: 4"(101.6mm) NB x (Schedule 80/XS) for both straight pipe & return bends. .
 5.4 Coil Material : Seamless pipe as per API-5L Gr. B, ASTM A106 Gr. B .
 5.5 Coil Operating Pressure: Max: 105.46 kg/cm² (1500 psig)
 5.6 Coil Hydraulic Test Pressure: 1.5 times the maximum working pressure
 5.7 Radiography of weld joints of Coil bundle: 100 %

Reference: General Drawing: OIL/ 2051/C : Detail of Indirect Heater Coil.

6.0 COIL END CONNECTION:

- 6.1 Coil End : Flanged, 4"(101.6 mm NB) x 900 class RTJ, conforming to ANSI B16.5.
 6.2 Companion Flange : The Indirect Heater shall be complete with bevel ended companion flanges conforming to ANSI B16.5, ring joint gasket and required Nos. of high tensile studs-nuts as per ASTM A193 Gr. B-7,ASTM A194 Gr. 2H respectively.

Reference Drawing no: OIL/2051/C

7.0 FIRE TUBE & CHIMNEY:

Fire tube & Chimney shall conform all the requirements and dimensions of OIL

Drawing no: OIL/2672/A & designed natural draft.

(a) There will be only 01 no of fire tube, 01 no of chimney and 01 no of flame arrestor box for burners. Flame arrestor Box will have to accommodate 2(two) nos of main burner & 1(one no of Pilot Burner).

8.0 FLAME ARRESTED BURNER & ACCESSORIES:

Standard flame arrestor, Aluminium box type suitable for offered Bath Type Indirect Heater of following specification:

a) Make: FLAMECO or WENKO or ACL Black Gold

Reference Drawing no: OIL/PDNO/P&D/001/01 attached with the tender.

b) Fire tube shall be designed for following operating conditions:

i) Furnace capacity: 3,000,000 BTU/Hr. (Net)

ii) Temperature of bath: 26 Deg.C to 90 Deg.C

iii) Natural gas Calorific value: 1000 BTU

iv) Burner Gas Pressure: 0.7-1.05 Kg/sq. cm (10-15 Psi)

(c) Within the single flame arrestor box, there will be 02 nos of main burner (i.e. 02 nos of mixture assemblies, 02 nos of burner nozzles, 02 nos of burner orifices & 02 nos of burner pipe nipples) and 1(one no of Pilot Burner) comprising of 1 nos of mixture, 1 no of orifice, 1 no of pilot burner pipe and pilot nozzle as mentioned in clause 10.3.2 .

Kindly refer to item no 3 in drawing no OIL/PDNO/P&D/001/01 attached with the tender, for layout arrangement of 02 nos of burner assemblies within the single flame arrestor box for burners to be provided with the indirect heater.

Reference Drawing no: OIL/2672./A (Details of Fire Tube and Chimney)

d) Main Burner Assembly: Each flame arrestor should be complete with main burner assembly as below:

i) 101.6 mm (4"), The burner mixture shall be of Make Eclipse model NS 160 (016 as per new catalogue number) or equivalent, low pressure compound type atmospheric injector - 02 Nos.

ii) 101.6 mm (4") Eclipse sticktite Model ST 216 - 84 or Equivalent burner nozzle of other manufacturers: 02 Nos.

iii) 6.75 mm (17/64") Size burner orifice: 02 Nos.

iv) 101.6 mm (4") Burner Pipe nipple 36" Long: 02 Nos.

v) Couplings of different sizes as shown in drg. No. OIL/PDNO/P&D/001/01.

vi) Lifting Lug: 04 nos.

vii) Sight Glass: 01 No.

viii) Flame arrestor mounting frame shall be such as to match the bolting pattern of the fire tube of the offered heater and Drawing. No. OIL/PDNO/P&D/001/01

Reference Drawing no: OIL/PDNO/P&D/001/01 (Details of flame Arrestor for Indirect Heater)

e) Pilot Burner Assembly: Each flame arrestor should be complete with pilot burner assembly as detailed in 10.3.2 (Pilot Burner Assembly)

Reference Drawing no: OIL/PDNO/P&D/024/01 (Details of pilot burner for

Indirect Heater)

9.0 INSTRUMENTATION & CONTROL SYSTEM:

The following instrumentation & control system components shall be provided along with the Indirect Heater. However, the bidder has to include, but not limited to all the items as per the instruments specified below, such that the offered system is functionally and operationally complete in all respect.

The quantity mentioned in bracket is specified for each indirect bath water heater.

9.1 Instruments to be mounted on Shell:

a) Temperature Gauge with Thermowell: Required for bath temperature (Qty. 01 No.)

- i) Temperature Range: 0 to 150 Deg C
- ii) Thermo well Connection: 1 Inch NPT
- iii) Insertion Length : 300 mm (12 Inch)
- iv) Type: Bimetallic/ Mercury Filled
- v) Sensing Element Connection: 1/2" NPT
- vi) Material of Construction: All Stainless Steel
- vii) Accuracy: ± 0.5 Deg C
- viii) Make: Wika/ Odin / Waree / Ashcroft/ Icon /Forbes Marshall

b) Level Gauge: The Level gauge shall be of the following specification: (Qty: 1 No.)

- i) Type: Reflex Type
- ii) Connection Size: 1/2"
- iii) Isolation Valves: Required (Needle Valve)
- iv) Max.Working Pressure: 2 Kg/Sq.cm.
- v) Test Pressure: 10 Kg/Sq.cm
- vi) Max.Working Temperature: 100 Deg C.
- vii) Make: Pratolina/Levcon/Daniel/Chemtrol/Norriseal

c) Water Filling Float Valve, 25 mm (1") NB: (Qty: 1 No.)

Inlet nozzle at water inlet line on top of the bath heater must be provided with a float operated industrial valve to avoid water over flow. The float shall be made of SS.

d) Liquid level switch: Qty:1 no.

Water bath should be equipped with low water level shut down device with the following specifications:

- (i) Type: Pneumatic
- (ii) Action: ON/OFF
- (iii) Output: 15-20psig
- (iv) Supply: 20 psig
- (v) Type: Floatless type pneumatic switch with differential pilot(0-500mm)WC /

Float type

Make: Kimray/Fisher/Norrisealv) Type: Float less pneumatic switch with differential pilot (0-500 mm WC).

Make: Kimray / Fisher / Norriseal

e) Additional Thermowells : (Qty: 3 Nos.)

Three (03) nos additional thermo wells of 1" NPT of 300 mm length shall be fixed on the shell for provision of insertion other instruments.

f) Temperature Switch: (Qty: 1 No.) Water bath should be equipped with high water bath temperature shut down device with the following specification:

i) Type: Pneumatic, thermal expansion type

ii) Range: (0-150)deg. C

ii) Action: ON/OFF

iii) Output: 15-20 psig

iv) Supply: 20 psig

Make: AMOT/O'Keefe/Switzer/Kimray/ Norriseal

9.2 Instruments to be provided for mounting on Coil Inlet & Outlet:

a) Temperature Gauge with Thermowell: (Qty.: 4 Nos.)

i) Temperature Range : 0 to 100 Deg C

ii) Thermowell connection: ½" NPT

iii) Insertion Length: 3 Inch

iv) Type: Bimetallic/ Mercury Filled

v) Sensing Element Connection: 1/2"NPT

vi) Material of construction: All Stainless Steel

vii) Accuracy : ± 0.5 Deg C

Make : Wika / Odin / Waree / Ashcroft/ Icon/ Forbes Marshall

b) Pressure Gauges: Inlet pressure gauges in each of the preheat coils: (Qty.: 4 Nos.)

i) Dial Size: 150 mm (6") Minimum

ii) Range: 0 to 210 Kg/Sq. cm

iii) Pressure Element: SS Bourdon tube

iv) Material of construction: All SS

v) Accuracy: ± 1% of reading

vi) End Connection: 1/2" NPT

vii) Isolation Valves: Required (Needle Valve) as per gauge rating±

Make: Wika / Odin / Waree / Ashcroft/ Icon/Noshok/Mdanial/ Forbes Marshall

9.3 PNEUMATIC BURNER CONTROL SYSTEM:

9.3.1 Control Philosophy:

The Indirect Heaters shall be equipped with the pneumatic control system to carry out the following functions:

a) A hand operated Pilot igniter(piezo electric type) to start and monitor the pilot flame and provide a supply for the main burner SDV once pilot is confirmed. All the systems for this remote ignition shall be in Flame-proof enclosure.

b) The main burner Manual Shut-off valve shall be opened only after establishment of the pilot burner flame, to prevent backfire.

c) Main flame shall be shut down in case of:

- Pilot flame failure, through pneumatic No Flame Shut off Switch and No Flame Shut off Valve
- Low liquid level, through pneumatic Liquid Level Switch (LS) and Temperature Control Valve (TCV)
- High water temperature, through Temperature Switch (TS), Temperature Indicating Controller (TIC) and Temperature Control Valve (TCV).

d) Pilot Flame sensing shall be through thermocouple / Mercury filled sensor and signal shall be sent to pneumatic No Flame Shut Off Switch mounted on Pilot Burner gas supply line. In case of pilot flame failure, No Flame Shut Off Switch will stop gas supply to pilot burner and will also send signal to close No Flame Shut Off Valve mounted on Main burner gas supply line, so that unnecessary raw gas shall not enter into the firetube.

e) Temperature Control of the water bath shall be through Temperature Indicating Controller (TIC) and Temperature Control valve (TCV)

9.3.2 Specification for Pilot Burner and Burner Control System:

[A] Pilot Burner Assembly: (Qty: 1 set)

a) Mixer

i) Function: To maintain air-fuel ratio to the pilot burner

b) Orifice

i) Function: To maintain air-fuel ratio for the pilot burner.

ii) Feature : Suitable for Gas Mixer as above

iii) Size : Suitable for Gas Mixer as above

iv) Material of construction: Brass or SS

c) Pilot Burner Pipe

i) Function: To carry air-fuel mixture from Mixer to Pilot Burner Nozzle.

(d) Pilot Burner Nozzle with equipped Thermocouple or mercury filled sensor

i)Function: To provide and sense pilot flame in the Natural Gas fired indirect heater vessel

ii)Material of construction: SS, suitable for high temperature applications

[B] Pilot Igniter (Piezo electric): (Qty: 1 No.)

Pilot Igniter shall be inbuilt type with the pilot guard (Piezo electric type)

[C] No Flame Shut Off Switch/Pilot Guard: (Qty: 1 No.)

i) Function: To provide positive Shut-off of gas supply to both Pilot Burner and Main Burner in the event of Pilot Flame out in gas fired indirect heater.

ii) Pilot Flame Sensing element: Thermocouple/ Mercury Bulb

iii) Length of Thermocouple Cable/ Mercury bulb Capillary Tube: 5 feet (max.)

- iv) Inlet Pressure: 10 to 20 psig.
- v) Output signal pressure: 3 to 15 psig

Note: The items 10.3.2 {[A] ,[B] & [C] } for PNEUMATIC BURNER CONTROL SYSTEM mentioned above shall be preferably from the same make. Make: Canalta / ACL / FMC Invalco/GIESRL/Kimray/Maxon

[D] No Flame Fuel Shut-off Valve: (Qty: 1 No.)

- i) Function : To shut off gas supply to main burner in case of pilot flame failure
 - ii) Type : ON/OFF
 - iii) Actuator Type : Pneumatic Diaphragm Operated
 - iv) Actuator Spring : Adjustable
 - v) Diaphragm Material : Nylon reinforced Buna N/ Neoprene rubber
 - vi) Stem Material : 303 SS
 - vii) Packing Material : Standard O Ring, Buna N
 - viii) Plug Type : Soft plug for tight shut off
 - ix) Case Material : Cast Aluminium
 - x) Body Material : Ductile iron A 395
 - xi) Body Cover / Lower Diaphragm Case : Ductile iron A 395
 - xii) Gas Flow Rate: 40-130 SCM/Hr
 - xiii) Input Operating Signal Pressure: 3 to 15 psig
 - xiv) Inlet Pressure: 1 to 4 Kg/Sq.cm
 - xv) Design Pressure: 10 Kg/Sq.cm
 - xvi) Test Pressure: 15 Kg/Sq.cm
 - xvii) End Connection : 1" NPT(F)/ Flanged
- Make: Invalco/ Fisher/ Samson/ Forbes Marshall/ Combustex/ Kimray/ MIL/ Brightech/ Emerson/Murphy/Norreseal.

[E] Indicating Type Temperature Controller: (Qty: 1 No.)

- i) Type: Pneumatic Indicating PID Controller
- ii) Range : 0 to 150 Deg C
- iii) Sensor : Mercury Filled
- iv) Sensor Connection : 1/2" NPT
- v) Thermowell : Required
- vi) Thermowell Connection : 1" NPT
- vi) Insertion Length : 300 mm (12")
- vii) Input pressure: 10 to 30 psig
- viii) Output Signal pressure: 3 to 15 psig

Accessories: (To be supply with each item)

1. Pressure gauge :(Two Numbers)Dial size 2", connection 1/4" NPT (M) back connection,
Range: 0-30 psig
2. Air Filter cum pressure Regulator : Range(0-250)psi

Note: The bidder to confirm that connections inside the housing of the pressure controller i.e between bourdon tube, relay, proportional band, bellows, flapper nozzle assembly are of SS tubing.

Make & Model: Fisher /Samson/ ABB/ OMC s.r.l- Italy/Norreseal

[F] Temperature Control Valve: (Qty: 1 No.)

i) End Connection : 1" NPT / Flanged

ii) Type : Proportional

iii) Actuator : Pneumatic Diaphragm Operated

iv) Gas Flow Rate: 40-130 SCM/Hr

v) Operating signal : 3 to 15 psig.

vi) Inlet Pressure: 1 to 4 Kg/Sq.cm

vii) Design Pressure: 10 Kg/Sq.cm

viii) Test Pressure: 15 Kg/Sq.cm

Make: Invalco/ Fisher /Samson/Forbes Marshall/Combustex / Kimray/ MIL/ Brightech/ Emerson/Norriseal / OMC s.r.l- Italy

[G] Main Supply Gas Regulator: (Qty: 1 No.)

i) Type: Spring Loaded

ii) Input pressure : 30 Kg/Sq.cm

iii) Output pressure: 0 to 4 Kg/Sq. cm adjustable

iv) Connection : 1" LP Female

v) Gas Flow Rate: 40 to 130 SCM/Hr.

Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.

[I] Controller Supply Gas Regulator: (Qty: 1 No.)

i) Type: Spring loaded

ii) Input Pressure : 0 to 4 Kg/cm²

iii) Output Pressure: 0 to 20 psig adjustable

iv) Connection : 1/4" LP Female

Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.

[H] Pilot Supply Gas Regulator no 1: (Qty: 1 No.)

i) Type: Spring loaded

ii) Input Pressure : 0 to 4 Kg/cm²

iii) Output Pressure: 0 to 20 psig adjustable

iv) Connection : 1/4" LP Female

Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.

[I] Pilot Supply Gas Regulator no 2: (Qty: 1 No.)

i) Type: Spring loaded

ii) Input Supply : 0 to 20 psig

iii) Output : 0 to 5 psig adjustable

iv) Connection : 1/4" LP Female

Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.

[J] Pressure gauge in main supply gas line before and after Regulator: (Qty: 2 Nos.)

i) Range : 0 to 40 Kg/Sq.cm (before Regulator), 0 to 7 Kg/Sq.cm (after Regulator)

ii) Dial Size : 4" Fluid filled type

iii) Connection Size: 1/4"

iv) Material of Construction: All Stainless Steel

Make : Wika/ Odin / Waree / Ashcroft/Noshok/ Mdanial/ Forbes Marshall

[K] Pressure gauge in controller gas supply line after the Regulator: (Qty:1 No.)

- i) Range : 0 to 20 PSI
 - ii) Dial Size : 50 mm (2")
 - iii) Connection Size: 1/4"
 - iv) Material of Construction: All Stainless Steel
- Make : Wika/ Odin / Waree/ Ashcroft/Noshok/ Mdanial / Forbes Marshall

[L] Pressure gauge in pilot burner gas supply line after the regulator no 1: (Qty:1 No.)

- i) Range : 0 to 20 PSI
 - ii) Dial Size : 50 mm (2")
 - iii) Connection Size: 1/4"
 - iv) Material of Construction: All Stainless Steel
- Make : Wika/ Odin / Waree/ Ashcroft/Noshok/ Mdanial / Forbes Marshall

[M] Strainer:

- i) Sp. Gravity of Natural Gas: 0.6
 - ii) Flow rate of gas: 130 SCM/Hr.
 - iii) Mesh: 80 Mesh SS 304
 - iv) End Connection: 1" NPT
 - v) Working Pressure: 15 Kg/Sq.cm
 - vi) Test Pressure: 25 Kg/Sq.cm
- Make: Zoloto/Leader/Sant or equivalent

[N] Mechanical Shut off Valves:

Manual Shut off valve of Globe/Ball/Needle type with LP Female Threaded End connection shall be provided as below

- i) Main Supply Gas Manual Shut off Valve, 1" x 30 Ksc WP - 01 no
- ii) Main Burner Manual Shut off Valve , 1" x 10 Ksc WP - 01 no.
- iii) Pilot Burner Manual Shut Off Valve, 1/4" x 10 Ksc WP - 01 no.

Make: Swagelok/Parker/Hylok/Samson.

[O] Isolation & Bypass Valve for Temperature Control Valve & No Flame Shut off Valve :

Isolation & Bypass of Globe/Ball/Needle valve type with LP Female Threaded End connection shall be provided as below:

- i) Isolation Valve for Temperature Control Valve, 1" x 10 Ksc WP – 02 nos.
- ii) By Pass Valve for Temperature Control Valve, 1" x 10 Ksc WP– 01 no.
- iii) Isolation Valve for No Flame Shut off Valve , 1" x 10 Ksc WP– 02 nos.
- iv) By Pass Valve for No Flame Shut off Valve, 1" x 10 Ksc WP- 01 no.

Make : Swagelok/Parker/Hylok/Samson

[P] Tubes & Fittings: Tubes and Fittings shall be supplied of sufficient quantity to commission all the indirect heaters.

Make : Swagelok, Parker, Hylok, Sandvik

<p>[Q] Unions: Unions of suitable size & pressure rating shall be provided on both sides' valves of all controllers, control valves, shut off valves and Pilot Guard, for ease of replacement/maintenance without disturbing other components of the system.</p> <p>9.4 GENERAL NOTES FOR INSTRUMENT & CONTROL SYSTEM:</p> <p>a) All the pneumatic instruments shall be suitable for operating in natural gas as servo supply.</p> <p>b) OIL will provide necessary natural gas supply as servo upto battery limit, however the required Servo Gas Pressure Regulators for all pneumatic instruments of make: Fisher Model 67 CFR / Norgren / Maxitrol / Norriseal / OMC s.r.l.- Italy shall be provided by the bidder.</p> <p>c) The Temperature Control Valve and the Fuel Shut-off Valve shall have isolation and bypass Valves .</p> <p>b) Operation and Maintenance manuals of all the instruments shall be provided along with the supply of materials.</p> <p>d) Step by step operating procedure of remote ignition and no flame shutdown system shall be separately inscribed in a non-erasable play card in the area where its operation would be carried out.</p> <p>e) Earthing Provision: The Indirect Heater shell will have Two (2) nos plates to be welded with saddle and provision of 3/4" studs with nuts (1 each at one of the legs and the vessel) for electrical earthing.</p>	
<p><u>ITEM NO. 20</u></p> <p><u>FABRICATION, PACKAGING, SUPPLY OF INDIRECT WATER BATH HEATER PACKAGE FOR PROCESSING CRUDE OIL. [QTY: 16 nos.]</u></p> <p><u>{REQUIREMENT IS FOR EASTERN ASSET, OIL, DIGBOI}</u></p> <p>ITEM DESCRIPTION AND TECHNICAL SPECIFICATIONS SAME AS ITEM NO. 10 ABOVE</p>	

SPECIAL TERMS AND CONDITIONS:

i) The bidder shall confirm that the goods, materials to be supplied shall be new, of recent make, of the best quality & workmanship. The bidder shall confirm that the materials shall be guaranteed for a period of 18 months from the date of despatch or 12 months from the date of receipt/assembling at Fields, whichever is earlier, against defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL to the Seller shall be replaced immediately by the Seller on FOR destination basis including payment of all taxes and duties at Seller's expense. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.

ii) Suppliers are to note that the drawing supplied by OIL is purely to guide the suppliers to make the final working drawings by them. The drawings should, in no case be treated as final fabrication drawings. **Manufacturer's working drawing** should be sent to OIL for approval **along with Quality Assurance Plan (QAP)** prior to the commencement of manufacture/fabrication of the heaters. The Bidder shall confirm the same in their technical Bid

- iii) The heaters should be shop constructed and tested as per API Std. 12K (latest revision).
- iv) All the welding shall be done as per ASME section IX. Suppliers shall confirm that all coils and shell welding will be done by welders who are qualified under ASME boiler and pressure vessel code section-IX regulations.
- v) Stress relieving of the pressure coils and fire tubes shall be required. Stress relieving operations are to be conducted in automatic temperature controlled furnace. The Bidder shall confirm the same in their technical Bid.
- vi) Pressure coils and fire tubes should be hydraulically tested to the pressure specified in the drawings & technical specification. The Bidder shall confirm the same in their technical Bid.
- vii) The coils should be tested 100% radiographically. The Bidder shall confirm the same in their technical Bid.
- viii) X- Ray plate & report, radiographic test report should be produced to OIL's inspectors while inspecting and subsequently to be provided with supply of the materials.

ix) The following documents shall be forwarded with the technical bid:

- a) Typical Process and Instrumentation (P&ID) diagrams
- b) Typical General Arrangement Diagram (GAD) of the unit.
- c) Sectional drawing showing the internals of the indirect heater.
- d) Sectional drawing showing the internals of the Fuel Scrubber.
- e) Drawings showing details of Remote Ignition System of Pilot Burner and Flame Failure shutdown system.
- f) Circuit Diagram of Remote Ignition System with details of electronic components and battery.
- h) Instrument data sheets along with name of manufacturer.
- i) Make and technical specification of all the bought-out items along with technical literature, GAD etc.

x) Test Certificates: Manufacturer to provide following certificates along with the supply as per standard of manufacture & QAP. The Bidder shall confirm the same with the technical bid

- a) Raw materials: Chemical & mechanical test certificate as per standard specified in technical specification.
- b) Hydraulic test certificate, radiographic test certificate, certificate of Quality & Standard of welding.
- c) Certificate of visual inspection & measurement of dimensions.
- d) Process and Instrumentation diagrams.

xi) Third Party Inspection: The materials shall be offered for stage wise inspection by third party for the following scope-

- a) Inspection of raw materials.
- b) Inspection of radiography of welded joints.
- c) Inspection of Hydraulic testing of Process/Pressure coils.
- d) Inspection of Hydraulic testing of Fire Tube.
- e) Inspection of Water fill test of the shell.
- f) Inspection of bought-out items.
- g) Inspection of certificates in respect of raw materials, bought-out items, radiography etc.
- h) Inspection of Hydraulic testing of Fuel Scrubber.

xii) The Third Party Inspector must be OIL's authorized / recognized inspecting agencies i.e. M/s Lloyds or M/s Bureau Veritas or RITES or M/s IRS or M/s DNV or Tuboscope Vetco.

xiii) Pre-dispatch Inspection by OIL:

OIL's representative shall carry out stage wise inspection and witness Hydraulic testing of Pressure Coil, Fire tube, Shell of the Indirect Heater and final assembly prior to dispatch at vendor's works at OIL's cost.

OIL's representative shall review TPI reports, witness hydraulic testing and carry out functional testing of vessels with Instrumentation items and remote ignition system with Hand-held High Energy Igniter. Three weeks prior notice to be given to OIL for pre-dispatch inspection.

The cost of to-and-fro travel, board and lodging of OIL's officials deputed for the purpose of above inspection shall be borne by OIL.

xiv) Painting and Insulation:

- a) External surface shall be cleaned, by sand blasting to Sa2 -1/2 grade followed by 2 coats of heat resistant primer followed by high temperature aluminium paint.
- b) Inner surface will be cleaned by wire brushing and will be provided with 2 coats of heat resistant primer. Each coat will have min DFT of 35 micron.
- c) The heater body shall be thermally insulated by rock wool (Density 120) and aluminum sheet (20 gauges) covered with tight sealing, to prevent heat loss and external insertion of water and foreign elements.

xv) Marking: A name plate with all technical parameters, OIL PO no and Manufacturer name shall be provided on the vessel. Purchase order and manufacturers name shall be die stamped/weld written on the shell mounting skirt/plate of the heater.

xvi) Joint Inspection on arrival of Materials:

- a) Commissioning of the equipments will be carried out by OIL at fields. However, the supplier shall have to send their representative/ Service Engineer for the assembling of the components, mountings & Instrumentation items on each unit before deployment for field operation.
- b) On receipt of the equipments by OIL, the supplier will be intimated to depute their representative/Service engineer. The supplier shall depute their representative/ service Engineer within 20 days after receipt of official intimation. The Bidder shall confirm the same in their technical Bid.
- c) The representative/Service Engineer shall have to provide practical demonstration to operating personnel of OIL regarding safe operating procedure & maintenance of equipments & Instrumentation items.

xvii) The Bidder shall fill-up and submit Technical specification on the check list (Annexure-I) and Tender notes check list (Annexure-II), along with technical bid as per attached format. All format shall be filled up with detailed information/specification. The use of words in check lists like complied or yes or considered is not suffice the requirement of the check lists. The bidder shall categorically provide the information as per requirements of check lists.

xviii) Item No. 10 to be delivered at PSS Dept., OIL, Duliajan and Item No. 20 to be delivered at Eastern Asset, OIL, Digboi. Bidders are requested to quote freight charge considering the above delivery points. Also, bidders are requested to mention approx. Gross Weight, Volume (Length X Breadth X Height) in ready-to-be shipped condition of item nos. 10 and 20 separately.

Bidders should submit their bids (preferably in tabular form) explicitly mentioning compliance / non-compliance to all the terms and conditions of the NIT.

INTEGRITY PACT

Between

Oil India Limited (OIL) hereinafter referred to as "The Principal"

And

(Name of the bidder).....hereinafter referred to as "The Bidder/Contractor"

Preamble:

The Principal intends to award, under laid down organizational procedures, contract/s for **SDI4822P21**. The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organization "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section: 1 -Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:

1. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
2. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.

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3. The Principal will exclude from the process all known prejudiced persons.

(2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a Page 2 of 6 substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section: 2 -Commitments of the Bidder/Contractor

(1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.

1. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which h e/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.

2. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, Subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

3. The Bidder/Contractor will not commit any offence under the relevant Anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.

4. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.

(2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

(3) The Bidder/Contractor signing Integrity Pact shall not approach the Courts while representing the matters to IEMs and he/she will await their decision in the matter.

Section 3 -Disqualification from tender process and exclusion from future Contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his reliability or risibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
2. The Bidder accepts and undertakes to respect and uphold the Principal's Absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
3. If the Bidder/Contractor can prove that he has restored/recouped the Damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.
4. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.
5. Integrity Pact, in respect of a particular contract, shall be operative from the date Integrity Pact is signed by both the parties till the final completion of the contract **or as mentioned in Section 9- Pact Duration whichever is later**. Any violation of the same would entail disqualification of the bidders and exclusion from future business dealings

Section 4 -Compensation for Damages

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to Earnest Money Deposit / Bid Security.

(2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to Security Deposit / Performance Bank Guarantee.

3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 -Previous transgression

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.

2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section: 6 -Equal treatment of all Bidders/Contractor/Subcontractors

1. The Principal will enter into Pacts on identical terms with all bidders and contractors.

2. The Bidder / Contractor undertake(s) to procure from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the provisions laid down in this agreement/Pact by any of its sub-contractors/sub-vendors.

3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section: 7 -Criminal charges against violating Bidders/Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

Section: 8 -External Independent Monitor/Monitors

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the Independent External Monitor shall give an opportunity to the bidder / contractor to present its case before making its recommendations to the Principal.
6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to

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him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.

7. If the Monitor has reported to the Chairperson of the Board a Substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.

8. The word 'Monitor' would include both singular and plural.

Section:9 -Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

Section:10 -Other provisions

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi. The Arbitration clause provided in the main tender document / contract shall not be applicable for any issue / dispute arising under Integrity Pact.

2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.

3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.

4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

A J SARMAH
CMM (IP)

.....
For the Principal

.....
For the Bidder/Contractor

Witness 1:

Witness 2:

Place:DULIAJAN
Date : 06.08.2020

ANNEXURE II**Tender special notes:**

NIT clause no	Special Tender notes as per NIT	Technical Offer by the Bidder. . Note: * Bidder shall categorically state the specification, information & design parameter of the offered Equipments against corresponding NIT clause	Comments(if any)	
			Information by bidder regarding reference file no & page no in the technical bid.	Scrutiniz er Remarks
i)	i) The bidder shall confirm that the goods, materials to be supplied shall be new, of recent make, of the best quality & workmanship. The bidder shall confirm that the materials shall be guaranteed for a period of 18 months from the date of despatch or 12 months from the date of receipt/assembling at Fields, whichever is earlier, against defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL to the Seller shall be replaced immediately by the Seller on FOR destination basis including payment of all taxes and duties at Seller's expense. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.			
ii)	ii) Suppliers are to note that the drawing supplied by OIL is purely to guide the suppliers to make the final working drawings by them. The drawings should, in no case be treated as final fabrication drawings. Manufacturer's working drawing should be sent to OIL for approval along with Quality Assurance Plan (QAP) prior to the commencement of manufacture/fabrication of the heaters. The Bidder shall confirm the same in their technical Bid			
iii)	iii) The heaters should be shop constructed and tested as per API Std. 12K (latest revision).			
iv)	iv) All the welding shall be done as per ASME section IX. Suppliers shall confirm that all coils and shell welding will be done by welders who are qualified under ASME boiler and pressure vessel code section-IX regulations.			

NIT clause no	Special Tender notes as per NIT	Technical Offer by the Bidder. . Note: * Bidder shall categorically state the specification, information & design parameter of the offered Equipments against corresponding NIT clause	Comments(if any)	
			Information by bidder regarding reference file no & page no in the technical bid.	Scrutiniz er Remarks
v)	v) Stress relieving of the pressure coils and fire tubes shall be required. Stress relieving operations are to be conducted in automatic temperature controlled furnace. The Bidder shall confirm the same in their technical Bid.			
vi)	vi) Pressure coils and fire tubes should be hydraulically tested to the pressure specified in the drawings & technical specification. The Bidder shall confirm the same in their technical Bid.			
vii)	vii) The coils should be tested 100% radiographically. The Bidder shall confirm the same in their technical Bid.			
viii)	viii) X- Ray plate & report, radiographic test report should be produced to OIL's inspectors while inspecting and subsequently to be provided with supply of the materials.			
ix)	ix) The following documents shall be forwarded with the technical bid: a) Typical Process and Instrumentation (P&ID) diagrams b) Typical General Arrangement Diagram (GAD) of the unit. c) Sectional drawing showing the internals of the indirect heater. d) Sectional drawing showing the internals of the Fuel Scrubber. e) Drawings showing details of Remote Ignition System of Pilot Burner and Flame Failure shutdown system. f) Circuit Diagram of Remote Ignition System with details of electronic components and battery. h) Instrument data sheets along with name of manufacturer. i) Make and technical specification of all the bought-out items along with technical literature, GAD etc.			

NIT clause no	Special Tender notes as per NIT	Technical Offer by the Bidder. . Note: * Bidder shall categorically state the specification, information & design parameter of the offered Equipments against corresponding NIT clause	Comments(if any)	
			Information by bidder regarding reference file no & page no in the technical bid.	Scrutiniz er Remarks
X)	<p>x) Test Certificates: Manufacturer to provide following certificates along with the supply as per standard of manufacture & QAP. The Bidder shall confirm the same with the technical bid</p> <p>a) Raw materials: Chemical & mechanical test certificate as per standard specified in technical specification.</p> <p>b) Hydraulic test certificate, radiographic test certificate, certificate of Quality & Standard of welding.</p> <p>c) Certificate of visual inspection & measurement of dimensions.</p> <p>d) Process and Instrumentation diagrams.</p>			
Xi)	<p>xi) Third Party Inspection: The materials shall be offered for <u>stage wise inspection</u> by third party for the following scope-</p> <p>a) Inspection of raw materials.</p> <p>b) Inspection of radiography of welded joints.</p> <p>c) Inspection of Hydraulic testing of Process/Pressure coils.</p> <p>d) Inspection of Hydraulic testing of Fire Tube.</p> <p>e) Inspection of Water fill test of the shell.</p> <p>f) Inspection of bought-out items.</p> <p>g) Inspection of certificates in respect of raw materials, bought-out items, radiography etc.</p>			
Xii)	<p>xii) The Third Party Inspector must be OIL's authorized / recognized inspecting agencies i.e. M/s Lloyds or M/s Bureau Veritas or RITES or M/s IRS or M/s DNV or Tuboscope Vetco.</p>			
Xiii)	<p>xiii) Pre-dispatch Inspection by OIL OIL's representative shall carry out stage wise inspection and witness Hydraulic testing of Pressure Coils, Fire tube, Shell of the Indirect Heater and final assembly prior to dispatch at vendor's works at OIL's</p>			

NIT clause no	Special Tender notes as per NIT	Technical Offer by the Bidder. . Note: * Bidder shall categorically state the specification, information & design parameter of the offered Equipments against corresponding NIT clause	Comments(if any)	
			Information by bidder regarding reference file no & page no in the technical bid.	Scrutiniz er Remarks
	cost. OIL's representative shall review TPI reports, witness hydraulic testing and carry out functional testing of vessels with Instrumentation items and remote ignition system with Hand-held High Energy Igniter. Three weeks prior notice to be given to OIL for pre- dispatch inspection.			
xiv)	xiv) Painting and Insulation: a) External surface shall be cleaned, by sand blasting to Sa2 -1/2 grade followed by 2 coats of heat resistant primer followed by high temperature aluminium paint. b) Inner surface will be cleaned by wire brushing and will be provided with 2 coats of heat resistant primer. Each coat will have min DFT of 35 micron. c) The heater body shall be thermally insulated by rock wool (Density 120) and aluminum sheet (20 gauges) covered with tight sealing, to prevent heat loss and external insertion of water and foreign elements.			
xv)	xv) Marking: A name plate with all technical parameters, OIL PO no and Manufacturer name shall be provided on the vessel. Purchase order and manufacturers name shall be die stamped/weld written on the shell mounting skirt/plate of the heater.			
xvi)	xvi) Joint Inspection on arrival of Materials: a) Commissioning of the equipments will be carried out by OIL at fields. However, the supplier shall have to send their representative/ Service Engineer for the assembling of the components, mountings & Instrumentation items on each unit before deployment for field operation.			

NIT clause no	Special Tender notes as per NIT	Technical Offer by the Bidder. . Note: * Bidder shall categorically state the specification, information & design parameter of the offered Equipments against corresponding NIT clause	Comments(if any)	
			Information by bidder regarding reference file no & page no in the technical bid.	Scrutiniz er Remarks
	<p>b) On receipt of the equipments by OIL, the supplier will be intimated to depute their representative/Service engineer. The supplier shall depute their representative/ service Engineer within 20 days after receipt of official intimation. The Bidder shall confirm the same in their technical Bid.</p> <p>c) The representative/Service Engineer shall have to provide practical demonstration to operating personnel of OIL regarding safe operating procedure & maintenance of equipments & Instrumentation items.</p>			
Xvii)	<p>xvii) The Bidder shall filled up and submit Technical specification on the check list(annexure-I), Tender notes check list (annexure-II) along with technical bid as per attached format. All format shall be filled up with detailed information/specification. The use of words in check lists like complied or yes or considered is not suffice the requirement of check list. The bidder shall categorically provide the information as per requirements of check lists.</p>			

ANNEXURE -I**Technical specification check list for evaluation**

<u>NIT clau se no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder. . Note: * Bidder shall provide the specification, information & design parameter categorically of the offered Equipment against corresponding NIT clause</u>	<u>Comments(if any)</u>	
			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
<u>General</u>	<p>FABRICATION, PACKAGING, SUPPLY OF INDIRECT WATER BATH HEATER PACKAGE FOR PROCESSING CRUDE OIL: Quantity: 35nos</p> <p>Double Coiled Bath Type Field Indirect Heater of heating capacity 0.88×10^6 watts (3.0 MM BTU/HR.) for heating 10,000 BBLS (1800 KLS) per day of crude oil associated with sweet natural gas at 105.46 kg/cm² pressure, generally as per OIL drawings - OIL /2670/A, OIL/5303, OIL/2672./A, OIL/ 2051/C , OIL/PDNO/P&D/001/01 .</p>			
<u>1.0</u>	<p>1.0 SERVICE CONDITION</p> <p>1.1 Fluid to be handled : Crude oil mixed with sweet natural gas & formation water</p> <p>1.2 Flow Rate : 10,000 BBLS (1800 KLS) per day</p> <p>1.3 Heating capacity : 0.88×10^6 watts (3.0 MM BTU/HR.)</p> <p>1.4 Coil operating pressure : 105.46 kg/cm² (1500 psig)</p> <p>1.5 Bath medium : Water</p> <p>1.6 Shell Operating Pressure : Water Fill-up</p> <p>1.7 Water bath temp : 90 Deg. C</p>			

<u>NIT clau se no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder. . Note: * Bidder shall provide the specification, information & design parameter categorically of the offered Equipment against corresponding NIT clause</u>	<u>Comments(if any)</u>	
			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
<u>2.0</u>	<p>2.0 DRAWINGS : The indirect Heater shall be manufactured as per following OIL drawings</p> <p>2.1 OIL /2670/A : Bath type IH General Arrangement</p> <p>2.2 OIL/5303 : Details of Shell Sub Assembly</p> <p>2.3 OIL/2672./A : Details of Fire Tube and Chimney</p> <p>2.4 OIL/ 2051/C : Detail of Indirect Heater Coil.</p> <p>2.5 OIL/PDNO/P&D/001/01: Flame Arrester</p> <p>2.6 OIL/PDNO/P&D/025/A(1): Indirect Heater Pilot Burner</p> <p>2.7 OIL/PDNO/P&D/025/A(2) : P &ID diagram, Burner control</p>			
<u>3.0</u>	<p>3.0 APPLICABLE STANDARDS FOR MATERIAL OF CONSTRUCTION & FABRICATION</p> <p>3.1 Fire Tube :Seamless Carbon Steel Pipe as per ASTM A106 Gr. B Standard</p> <p>3.2 Coil Pipe & return bend :Seamless Carbon Steel Pipe as per ASTM A106 Gr. B/ API 5L Gr. B,</p> <p>3.3 Shell Body :As per IS2062 Gr. B Standard</p> <p>3.4 Coil Flange :As per ASTM 105</p> <p>3.5 Fastners:As per IS 1364 / ASTM A 307 Standard (For non pressure parts)</p> <p>3.6 Studs & Nuts :As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard</p> <p>3.7 Fuel Gas piping system : As per ASME B31.3 Standard</p> <p>3.8 Welding :As per ASME Section IX.</p> <p>3.9 Design, fabrication & Shop testing : As per API Spec 12K</p> <p>3.10 Shell nameplate : As Per API 12K</p>			

<u>NIT clau se no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder. . Note: * Bidder shall provide the specification, information & design parameter categorically of the offered Equipment against corresponding NIT clause</u>	<u>Comments(if any)</u>	
			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
<u>4.0</u>	<p>4.0 SHELL</p> <p>Shell will conform to all the requirements and dimensions of OIL Drawing no: OIL/5303 and must have adequate nozzles for inlet, outlet of coils, fire tube and mounting, various equipment & instruments for burner, drain valves etc.</p> <p>The Indirect Heater shell will have suitable lifting lugs attached for lifting and placing the same at site.</p> <p>The Indirect Heater shell will have Two (2) nos plates to be welded with. 3/4" studs with nuts (1 each at one of the legs and the vessel) for electrical earthing.</p> <p>Reference Drawing no: OIL/5303(Details of Shell Sub Assembly)</p>			
<u>5.0</u>	<p>5.0 Coils (Seamless):</p> <p>5.1 No. of Coil : 2 (two) sets</p> <p>5.2 No. of Pass: 8 (Eight) passes for each coil.</p> <p>5.3: Coil size: 4"(101.6mm) NB x (Schedule 80/XS) for both straight pipe & return bends. .</p> <p>5.4 Coil Material : Seamless pipe as per API-5L Gr. B, ASTM A106 Gr. B .</p> <p>5.5 Coil Operating Pressure: Max: 105.46 kg/cm2 (1500 psig)</p> <p>5.6 Coil Hydraulic Test Pressure: 1.5 times the maximum working pressure</p> <p>5.7 Radiography of weld joints of Coil bundle: 100 %</p> <p>Reference: General Drawing: OIL/ 2051/C : Detail of Indirect Heater Coil.</p>			
<u>6.0</u>	<p>6.0 Coil End Connection:</p> <p>6.1 Coil End : Flanged, 4"(101.6 mm NB) x 900 class RTJ, conforming to ANSI B16.5.</p> <p>6.2 Companion Flange : The Indirect Heater shall</p>			

<u>NIT clau se no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder. . Note: * Bidder shall provide the specification, information & design parameter categorically of the offered Equipment against corresponding NIT clause</u>	<u>Comments(if any)</u>	
			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	be complete with bevel ended companion flanges conforming to ANSI B16.5, ring joint gasket and required Nos. of high tensile studs-nuts as per ASTM A193 Gr. B-7, ASTM A194 Gr. 2H respectively. Reference Drawing no: OIL/2051/C			
<u>7.0</u>	7.0 Fire Tube & Chimney: Fire tube & Chimney shall conform all the requirements and dimensions of OIL Drawing no: OIL/2672/A & designed natural draft. (a) There will be only 01 no of fire tube, 01 no of chimney and 01 no of flame arrestor box for burners. Flame arrestor Box will have to accommodate 2(two) nos of main burner & 1(one no of Pilot Burner).			
<u>8.0</u>	8.0 Flame Arrested Burner & Accessories: Standard flame arrestor, Aluminium box type suitable for offered Bath Type Indirect Heater of following specification: a) Make: FLAMECO or WENKO or ACL Black Gold Reference Drawing no: OIL/PDNO/P&D/001/01 attached with the tender. b) Fire tube shall be designed for following operating conditions i) Furnace capacity: 3,000,000 BTU/Hr. (Net) ii) Temperature of bath: 26 Deg.C to 90 Deg.C iii) Natural gas Calorific value: 1000 BTU iv) Burner Gas Pressure: 0.7-1.05 Kg/sq. cm (10-15 Psi)			
<u>8.0(c)</u>	(c) Within the single flame arrestor box, there will be 02 nos of main burner (i.e. 02 nos of mixture assemblies, 02 nos of burner nozzles, 02 nos of burner orifices & 02 nos of burner pipe nipples) and 1(one no of Pilot Burner) comprising of 1 nos of mixture, 1 no of orifice, 1 no of pilot burner pipe and pilot nozzle as mentioned in clause 10.3.2 .			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	Kindly refer to item no 3 in drawing no OIL/PDNO/P&D/001/01 attached with the tender, for layout arrangement of 02 nos of burner assemblies within the single flame arrestor box for burners to be provided with the indirect heater. Reference Drawing no: OIL/2672./A (Details of Fire Tube and Chimney)			
<u>8.0(d)</u>	d) Main Burner Assembly : Each flame arrestor should be complete with main burner assembly as below: i) 101.6 mm (4")) , The burner mixture shall be of Make Eclipse model NS 160 (016 as per new catalogue number) or equivalent, low pressure compound type atmospheric injector - 02 Nos. ii) 101.6 mm (4") Eclipsessticktite Model ST 216 - 84 or Equivalent burner nozzle of other manufacturers: 02 Nos. iii) 6.75 mm (17/64") Size burner orifice: 02 Nos. iv) 101.6 mm (4") Burner Pipe nipple 36" Long: 02 Nos. v) Couplings of different sizes as shown in drg. No. OIL/PDNO/P&D/001/01. vi) Lifting Lug: 04 nos. vii) Sight Glass: 01 No. viii) Flame arrestor mounting frame shall be such as to match the bolting pattern of the fire tube of the offered heater and Drawing. No. OIL/PDNO/P&D/001/01 Reference Drawing no:. OIL/PDNO/P&D/001/01 (Details of flame Arrestor for Indirect Heater)			
<u>8.0(e)</u>	e) Pilot Burner Assembly: Each flame arrestor should be complete with pilot burner assembly as detailed in 10.3.2 (Pilot Burner Assembly) Reference Drawing no: . OIL/PDNO/P&D/024/01 (Details of pilot burner for Indirect Heater)			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
<u>9.0</u>	9.0 INSTRUMENTATION & CONTROL SYSTEM: The following instrumentation & control system components shall be provided along with the Indirect Heater. However, the bidder has to include, but not limited to all the items as per the instruments specified below, such that the offered system is functionally and operationally complete in all respect. The quantity mentioned in bracket is specified for each indirect bath water heater.			
<u>9.1(a)</u>	9.1 Instruments to be mounted on Shell a) Temperature Gauge with Thermowell: Required for bath temperature (Qty. 01 No.) i) Temperature Range: 0 to 150 Deg C ii) Thermo well Connection: 1 Inch NPT iii) Insertion Length : 300 mm (12 Inch) iv) Type: Bimetallic/ Mercury Filled v) Sensing Element Connection: 1/2" NPT vi) Material of Construction: All Stainless Steel vii) Accuracy: ± 0.5 Deg C viii) Make: Wika/ Odin / Waree / Ashcroft/ Icon /Forbes Marshall			
<u>9.1(b)</u>	b) Level Gauge: The Level gauge shall be of the following specification: (Qty: 1 No.) i) Type: Reflex Type ii) Connection Size: ½" iii) Isolation Valves: Required (Needle Valve) iv) Max.Working Pressure: 2 Kg/Sq.cm. v) Test Pressure: 10 Kg/Sq.cm vi) Max.Working Temperature: 100 Deg C. vii) Make: Pratolina/Levcon/Daniel/Chemtrol/Norriseal			
<u>9.1©</u>	c) Water Filling Float Valve, 25 mm (1") NB: (Qty: 1 No.) Inlet nozzle at water inlet line on top of the bath heater must be provided with a float operated			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	industrial valve to avoid water over flow. The float shall be made of SS.			
<u>9.1(d)</u>	d) Liquid level switch: Qty:1 no. Water bath should be equipped with low water level shut down device with the following specifications: (i) Type: Pneumatic (ii) Action: ON/OFF (iii) Output: 15-20psig (iv) Supply: 20 psig (v) Type: Floatless type pneumatic switch with differential pilot(0-500mm)WC / Float type Make: Kimray/Fisher/Norrisealv) Type: Float less pneumatic switch with differential pilot (0-500 mm WC). Make: Kimray / Fisher / Norriseal			
<u>9.1(e)</u>	e) Additonal Therowells : (Qty: 3 Nos.) Three (03) nos additional thermo wells of 1" NPT of 300 mm length shall be fixed on the shell for provision of insertion other instruments.			
<u>9.1(f)</u>	f) Temperature Switch: (Qty: 1 No.) Water bath should be equipped with high water bath temperature shut down device with the following specification: i) Type: Pneumatic, thermal expansion type ii) Range: (0-150)deg. C ii) Action: ON/OFF iii) Output: 15-20 psig iv) Supply: 20 psig Make: AMOT/O'Keefe/Switzer/Kimray/ Norriseal			
	9.2 Instruments to be provided for mounting on Coil Inlet & Outlet:			
<u>9.2(a)</u>	a) Temperature Gauge with Thermowell: (Qty.: 4 Nos.) i) Temperature Range : 0 to 100 Deg C ii) Thermowell connection: ½" NPT			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	iii) Insertion Length: 3 Inch iv) Type: Bimetallic/ Mercury Filled v) Sensing Element Connection: 1/2"NPT vi) Material of construction: All Stainless Steel vii) Accuracy : ± 0.5 Deg C Make :Wika / Odin / Waree / Ashcroft/ Icon/ Forbes Marshall			
<u>9.2(b)</u>	b) Pressure Gauges: Inlet pressure gauges in each of the preheat coils: (Qty.: 4 Nos.) i) Dial Size: 150 mm (6") Minimum ii) Range: 0 to 210 Kg/Sq. cm iii) Pressure Element: SS Bourdon tube iv) Material of construction: All SS v) Accuracy: ± 1% of reading vi) End Connection: 1/2" NPT vii) Isolation Valves: Required (Needle Valve) as per gauge rating± Make: Wika / Odin / Waree / Ashcroft/ Icon/Noshok/Mdanial/ Forbes Marshall			
<u>9.3</u>	9.3 PNEUMATIC BURNER CONTROL SYSTEM: 9.3.1 Control Philosophy: The Indirect Heaters shall be equipped with the pneumatic control system to carry out the following functions: a) A hand operated Pilot igniter(piezo electric type) to start and monitor the pilot flame and provide a supply for the main burner SDV once pilot is confirmed. All the systems for this remote ignition shall be in Flame-proof enclosure. b) The main burner Manual Shut-off valve shall be opened only after establishment of the pilot burner flame, to prevent backfire. c) Main flame shall be shut down in case of <ul style="list-style-type: none"> • Pilot flame failure, through pneumatic No Flame Shut off Switch and No Flame Shut off Valve • Low liquid level, through pneumatic Liquid Level 			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	<p>Switch (LS) and Temperature Control Valve (TCV)</p> <ul style="list-style-type: none"> • High water temperature, through Temperature Switch (TS), Temperature Indicating Controller (TIC) and Temperature Control Valve (TCV). <p>d) Pilot Flame sensing shall be through thermocouple / Mercury filled sensor and signal shall be sent to pneumatic No Flame Shut Off Switch mounted on Pilot Burner gas supply line. In case of pilot flame failure, No Flame Shut Off Switch will stop gas supply to pilot burner and will also send signal to close No Flame Shut Off Valve mounted on Main burner gas supply line, so that unnecessary raw gas shall not enter into the firetube.</p> <p>e) Temperature Control of the water bath shall be through Temperature Indicating Controller (TIC) and Temperature Control valve (TCV)</p>			
	9.3.2 Specification for Pilot Burner and Burner Control System			
9.3.2(a)	<p>[A] Pilot Burner Assembly: (Qty: 1 set)</p> <p>a) Mixer</p> <p>i) Function: To maintain air-fuel ratio to the pilot burner</p>			
9.3.2(b)	<p>b) Orifice</p> <p>i) Function: To maintain air-fuel ratio for the pilot burner.</p> <p>ii) Feature : Suitable for Gas Mixer as above</p> <p>iii) Size : Suitable for Gas Mixer as above</p> <p>iv) Material of construction: Brass or SS</p>			
9.3.2©	<p>c) Pilot Burner Pipe</p> <p>i) Function: To carry air-fuel mixture from Mixer to Pilot Burner Nozzle.</p> <p>(d) Pilot Burner Nozzle with equipped Thermocouple or mercury filled sensor</p> <p>i)Function: To provide and sense pilot flame in the Natural Gas fired indirect heater vessel</p>			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	ii)Material of construction: SS, suitable for high temperature applications			
9.3.2(d)	(d) Pilot Burner Nozzle with equipped Thermocouple or mercury filled sensor i)Function: To provide and sense pilot flame in the Natural Gas fired indirect heater vessel ii)Material of construction: SS, suitable for high temperature applications			
9.3.2[B]	[B] Pilot Igniter (Piezo electric: (Qty: 1 No.) Pilot Igniter shall be inbuilt type with the pilot guard (Piezo electric type)			
9.3.2[C]	[C] No Flame Shut Off Switch/Pilot Guard : (Qty: 1 No.) i) Function: To provide positive Shut-off of gas supply to both Pilot Burner and Main Burner in the event of Pilot Flame out in gas fired indirect heater. ii) Pilot Flame Sensing element: Thermocouple/ Mercury Bulb iii) Length of Thermocouple Cable/ Mercury bulb Capillary Tube: 5 feet (max.) iv) Inlet Pressure: 10 to 20 psig. v) Output signal pressure: 3 to 15 psig Note: The items 10.3.2 { [A], [B] & [C] } for PNEUMATIC BURNER CONTROL SYSTEM mentioned above shall be preferably from the same make. Make: Canalta / ACL / FMC Invalco/GIESRL/Kimray/Maxon			
9.3.2[D]	[D] No Flame Fuel Shut-off Valve: (Qty: 1 No.) i) Function : To shut off gas supply to main burner in case of pilot flame failure ii) Type : ON/OFF iii) Actuator Type : Pneumatic Diaphragm Operated iv) Actuator Spring : Adjustable v) Diaphragm Material : Nylon reinforced Buna N/ Neoprene rubber			

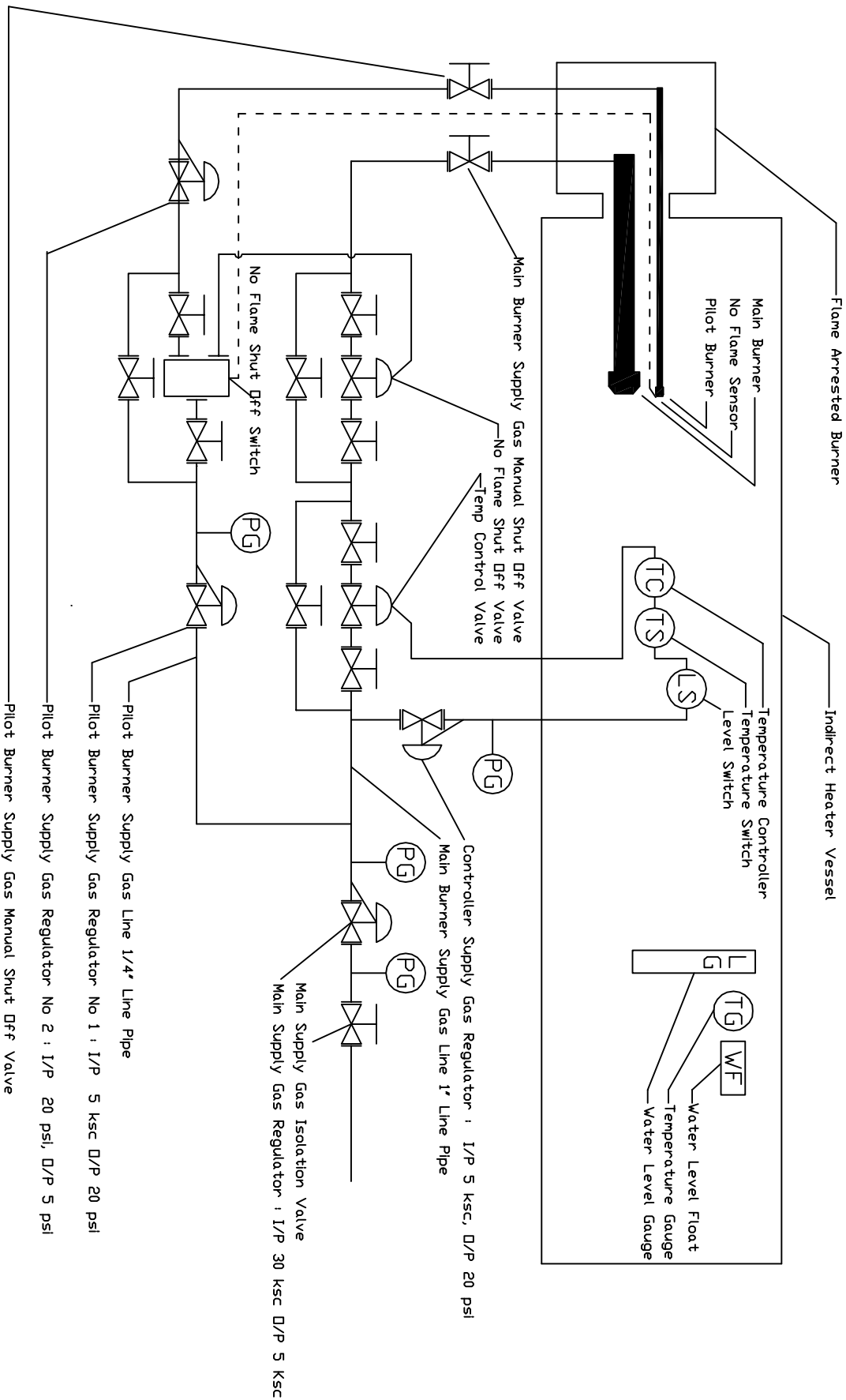
<u>NIT clau se no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder. . Note: * Bidder shall provide the specification, information & design parameter categorically of the offered Equipment against corresponding NIT clause</u>	<u>Comments(if any)</u>	
			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	vi) Stem Material : 303 SS vii) Packing Material : Standard O Rig, Buna N viii) Plug Type : Soft plug for tight shut off ix) Case Material : Cast Aluminium x) Body Material : Ductile iron A 395 xi) Body Cover / Lower Diaphragm Case : Ductile iron A 395 xii) Gas Flow Rate: 40-130 SCM/Hr xiii) Input Operating Signal Pressure: 3 to 15 psig xiv) Inlet Pressure: 1 to 4 Kg/Sq.cm xv) Design Pressure: 10 Kg/Sq.cm xvi) Test Pressure: 15 Kg/Sq.cm xvii) End Connection : 1" NPT(F)/ Flanged Make :Invalco/ Fisher/ Samson/ Forbes Marshall/Combustex/Kimray/MIL/Brightech/Emerson/Murphy/Norreseal.			
9.3.2[E]	<p>[E] Indicating Type Temperature Controller: (Qty: 1 No.)</p> i) Type: Pneumatic Indicating PID Controller ii) Range : 0 to 150 Deg C iii) Sensor : Mercury Filled iv) Sensor Connection : 1/2" NPT v) Thermowell : Required vi) Thermowell Connection : 1" NPT vi) Insertion Length : 300 mm (12") vii) Input pressure: 10 to 30 psig viii) Output Signal pressure: 3 to 15 psig Accessories: (To be supply with each item) 1. Pressure gauge :(Two Numbers)Dial size 2 ", connection 1/4"(NPT (M) back connection, Range: 0-30 psig 2. Air Filter cum pressure Regulator : Range(0-250)psi Note: The bidder to confirm that connections inside the housing of the pressure controller i.e between bourdon tube, relay, proportional band, bellows, flapper nozzle assembly are of SS tubing.			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	Make & Model: Fisher /Samson/ ABB/ OMC s.r.l- Italy/Norreseal			
9.3.2[F]	[F] Temperature Control Valve: (Qty: 1 No.) i) End Connection : 1" NPT / Flanged ii) Type : Proportional iii) Actuator : Pneumatic Diaphragm Operated iv) Gas Flow Rate: 40-130 SCM/Hr v) Operating signal : 3 to 15 psig. vi) Inlet Pressure: 1 to 4 Kg/Sq.cm vii) Design Pressure: 10 Kg/Sq.cm viii) Test Pressure: 15 Kg/Sq.cm Make :Invalco/ Fisher /Samson/Forbes Marshall/Combustex / Kimray/MIL/Brightech/Emerson/Norreseal / OMC s.r.l- Italy			
9.3.2[G]	[G] Main Supply Gas Regulator: (Qty: 1 No.) i) Type: Spring Loaded ii) Input pressure : 30 Kg/Sq.cm iii) Output pressure: 0 to 4 Kg/Sq. cm adjustable iv) Connection : 1" LP Female v) Gas Flow Rate: 40 to 130 SCM/Hr. Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.			
9.3.2[I]	[I] Controller Supply Gas Regulator: (Qty: 1 No.) i) Type: Spring loaded ii) Input Pressure : 0 to 4 Kg/cm2 iii) Output Pressure: 0 to 20 psig adjustable iv) Connection : 1/4" LP Female Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.			
9.3.2[H]	[H] Pilot Supply Gas Regulator no 1: (Qty: 1 No.) i) Type: Spring loaded ii) Input Pressure : 0 to 4 Kg/cm2 iii) Output Pressure: 0 to 20 psig adjustable iv) Connection : 1/4" LP Female Make : Fisher Model 67 CFR / Norgren / Maxitrol			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	/Norriseal / OMC s.r.l.			
9.3.2[I]	[I] Pilot Supply Gas Regulator no 2: (Qty: 1 No.) i) Type: Spring loaded ii) Input Supply : 0 to 20 psig iii) Output : 0 to 5 psig adjustable iv) Connection : 1/4" LP Female Make : Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.			
9.3.2[J]	[J] Pressure gauge in main supply gas line before and after Regulator: (Qty: 2 Nos.) i) Range : 0 to 40 Kg/Sq.cm (before Regulator), 0 to 7 Kg/Sq.cm (after Regulator) ii) Dial Size : 4" Fluid filled type iii) Connection Size: 1/4" iv) Material of Construction: All Stainless Steel Make :Wika/ Odin / Waree / Ashcroft/Noshok/ Mdania / Forbes Marshall			
9.3.2[K]	[K] Pressure gauge in controller gas supply line after the regulator: (Qty:1 No.) i) Range : 0 to 20 PSI ii Dial Size : 50 mm (2") iii) Connection Size: 1/4" iv) Material of Construction: All Stainless Steel Make :Wika/ Odin / Waree/ Ashcroft/Noshok/ Mdania / Forbes Marshall			
9.3.2[L]	[L] Pressure gauge in pilot burner gas supply line after the regulator no 1: (Qty:1 No.) i) Range : 0 to 20 PSI ii Dial Size : 50 mm (2") iii) Connection Size: 1/4" iv) Material of Construction: All Stainless Steel Make :Wika/ Odin / Waree/ Ashcroft/Noshok/ Mdania / Forbes Marshall			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
9.3.2[M]	[M] Strainer: i) Sp. Gravity of Natural Gas: 0.6 ii) Flow rate of gas: 130 SCM/Hr. iii) Mesh: 80 Mesh SS 304 iv) End Connection: 1" NPT v) Working Pressure: 15 Kg/Sq.cm vi) Test Pressure: 25 Kg/Sq.cm Make:Zoloto/Leader/Sant or equivalent			
9.3.2[N]	[N] Mechanical Shut off Valves : Manual Shut off valve of Globe/Ball/Needle type with LP Female Threaded End connection shall be provided as below i) Main Supply Gas Manual Shut off Valve, 1" x 30 Ksc WP - 01 no ii) Main Burner Manual Shut off Valve , 1" x 10 Ksc WP - 01 no. iii) Pilot Burner Manual Shut Off Valve, 1/4" x 10 Ksc WP - 01 no. Make: Swagelok/Parker/Hylok/Samson.			
9.3.2[O]	[O] Isolation & Bypass Valve for Temperature Control Valve & No Flame Shut off Valve : Isolation & Bypass of Globe/Ball/Needle valve type with LP Female Threaded End connection shall be provided as below i) Isolation Valve for Temperature Control Valve, 1" x 10 Ksc WP – 02 nos. ii) By Pass Valve for Temperature Control Valve,1" x 10 Ksc WP– 01 no. iii) Isolation Valve for No Flame Shut off Valve ,1" x 10 Ksc WP– 02 nos. iv) By Pass Valve for No Flame Shut off Valve, 1" x 10 Ksc WP- 01 no. Make : Swagelok/Parker/Hylok/Samson			
9.3.2[P]	[P] Tubes & Fittings: Tubes and Fittings shall be supplied of sufficient quantity to commission all the indirect heaters.			

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			<u>Bidder Information regarding reference file no & page no in the technical bid</u>	<u>Scrutinizer Remarks</u>
	Make : Swagelok, Parker, Hylok, Sandvik			
9.3.2[Q]	[Q] Unions: Unions of suitable size & pressure rating shall be provided on both sides' valves of all controllers, control valves, shut off valves and Pilot Guard, for ease of replacement/maintenance without disturbing other components of the system.			
10.0	<p>10.0 General notes for Instrument & Control System:</p> <p>a) All the pneumatic instruments shall be suitable for operating in natural gas as servo supply.</p> <p>b)Oil will provide necessary natural gas supply as servo upto battery limit ,however the required Servo Gas Pressure Regulators for all pneumatic instruments of make: Fisher Model 67 CFR / Norgren / Maxitrol /Norriseal / OMC s.r.l.- Italy shall be provided by the bidder.</p> <p>c) The Temperature Control Valve and the Fuel Shut-off Valve shall have isolation and bypass Valves .</p> <p>b) Operation and Maintenance manuals of all the instruments shall be provided along with the supply of materials.</p> <p>d) Step by step operating procedure of remote ignition and no flame shutdown system shall be separately inscribed in a non-erasable play card in the area where its operation would be carried out.</p> <p>e) Earthing Provision: The Indirect Heater shell will have Two (2) nos plates to be welded with saddle and provision of 3/4" studs with nuts (1 each at one of the legs and the vessel) for electrical earthing.</p>			



NOTES : 1) NOT TO SCALE
2) REFER SPECIFICATION
FOR ITEM DESCRIPTION

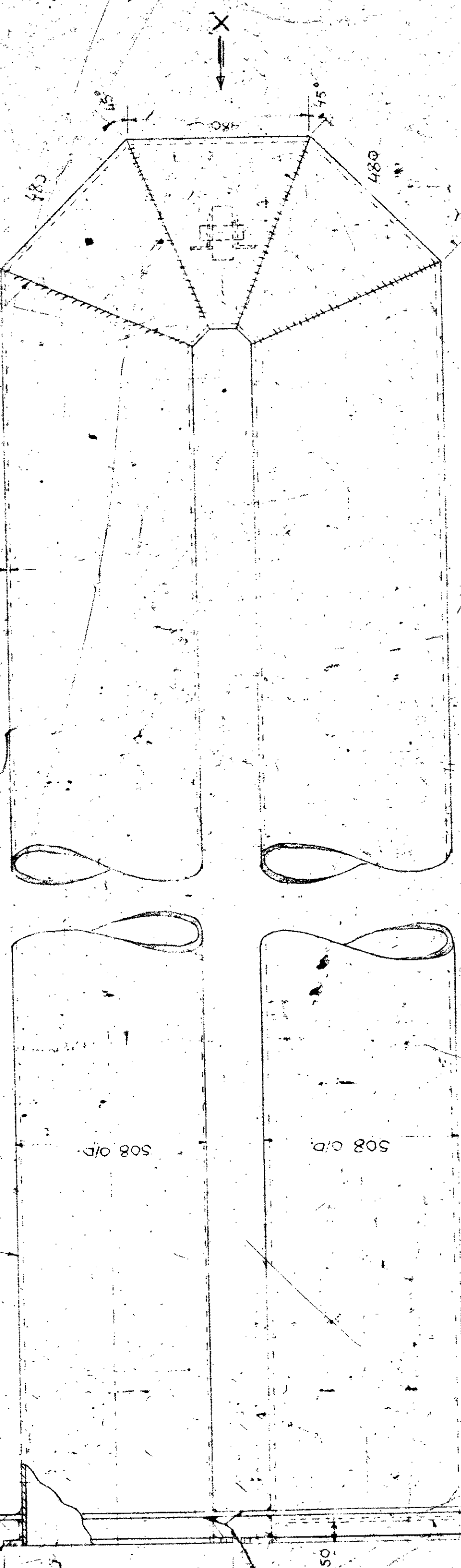
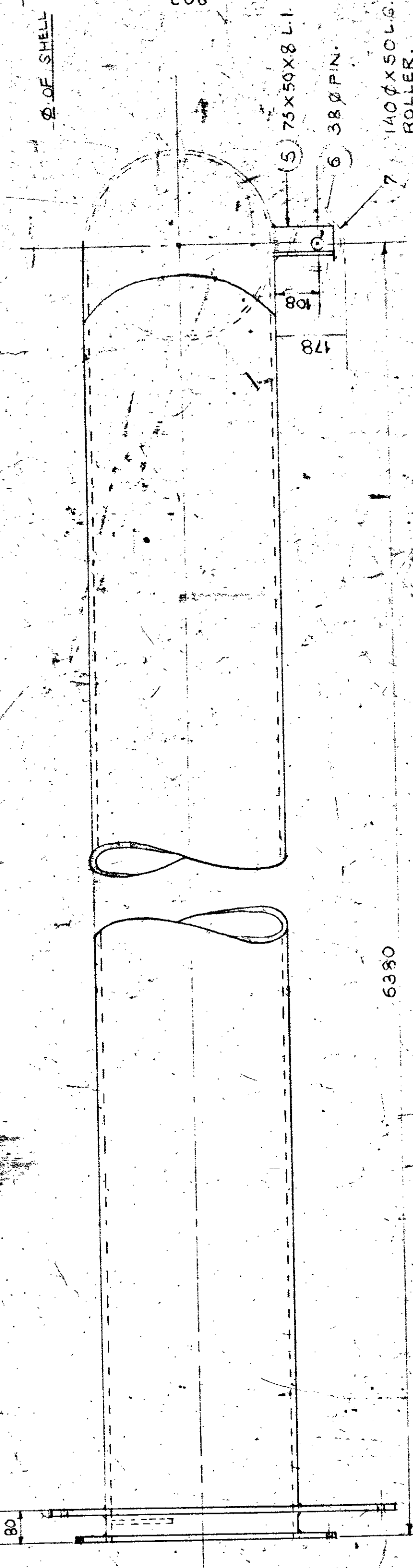
OIL INDIA LIMITED
PROD (OIL) DEPTT.
DULIAJAN 786602

INDIRECT HEATER :
P&ID DIAGRAM

DR NO

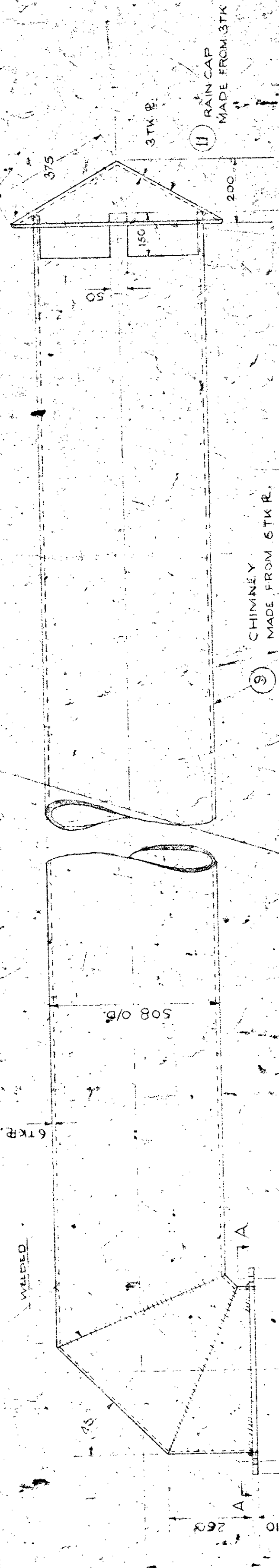
OIL/PDNO/P&D/025/A-Pg 2 of 2

DRG NO. CIV



NOTES:
1. NO. OF WELDING JOINTS SHOULD BE AS PER DRAWING ONLY.
2. 100% RADIOGRAPHIC TESTS FOR ALL WELDS HAVE TO BE DONE.
3. FIRE TUBE TO BE STRESSED RELIEVED AFTER COMPLETE WELDING.

PLAN
ALL WELDED CONSTRUCTION
DETAIL OF FIRE TUBE

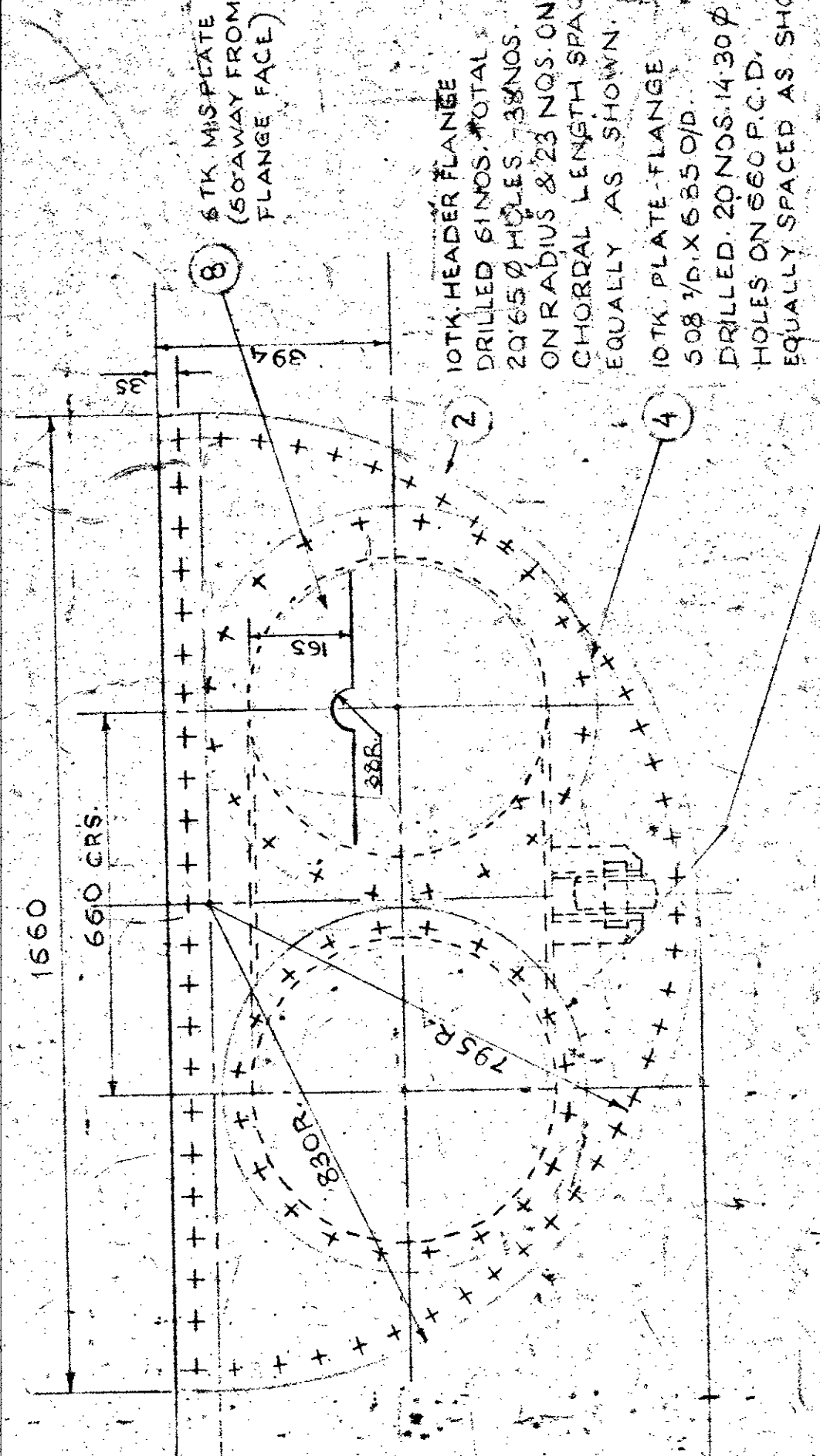


10TK PLATE FLANGE
20 NOS. 14300 HOLES
ON 558 P.C.D. EQUALLY
SPACED AS SHOWN.

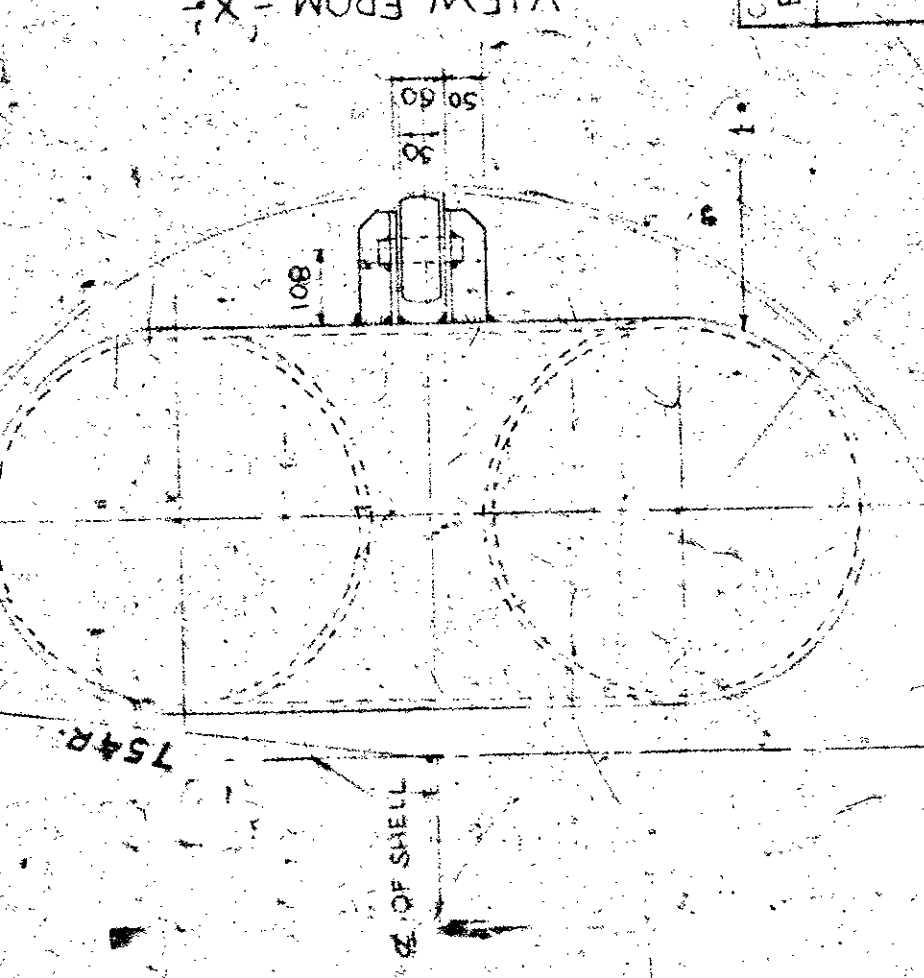
DETAIL OF CHIMNEY

ALL WELDED CONSTRUCTIONS

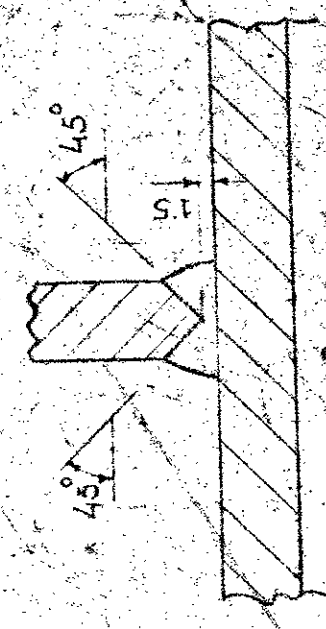
SUPERSEDES: SK NO. OIL/1610
FOR GEN. ARRGT. REFER TO DRG NO. OIL/2670.



WELDING DETAILS OF PIPE
WELDING DETAILS OF FLANGES



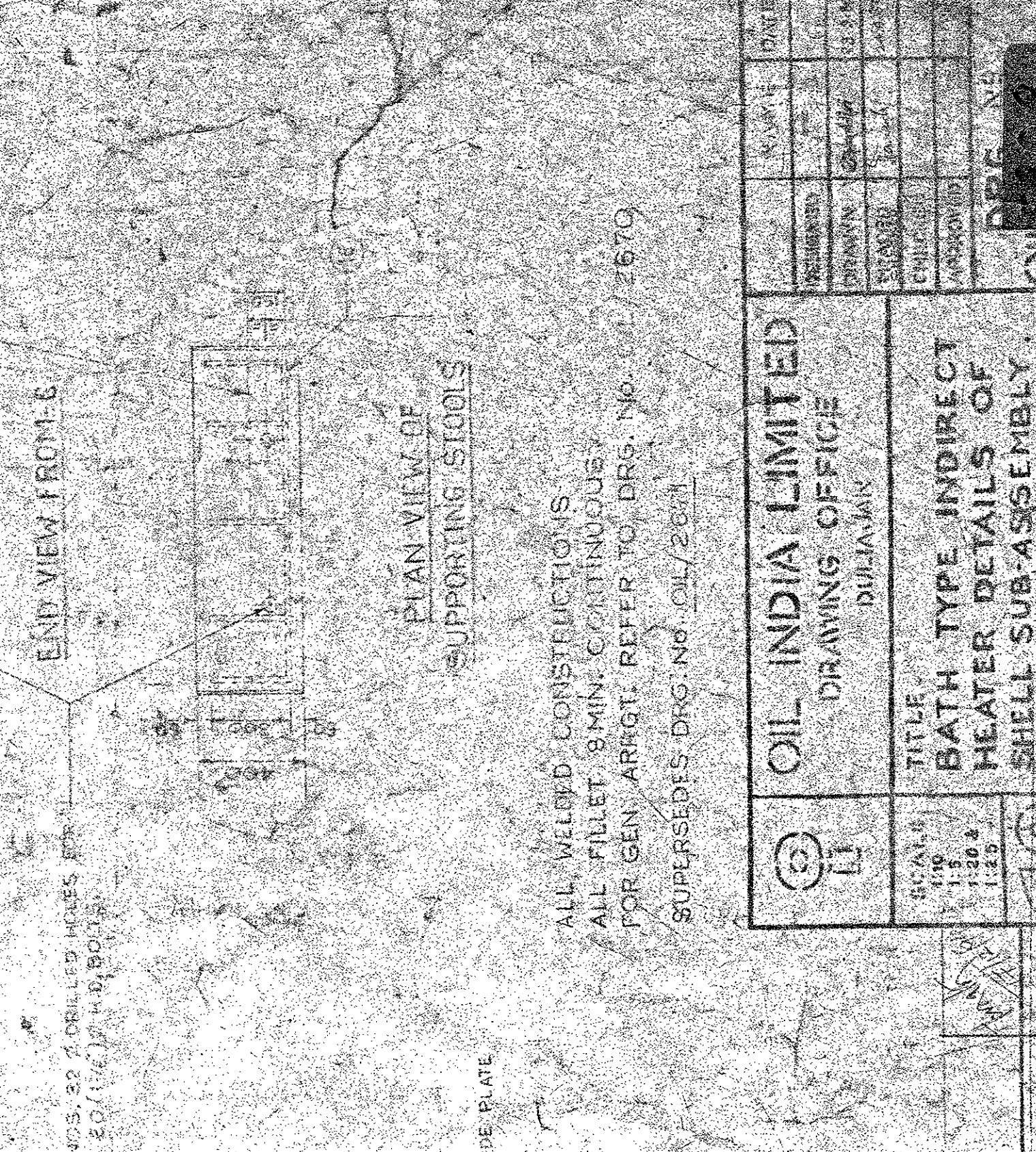
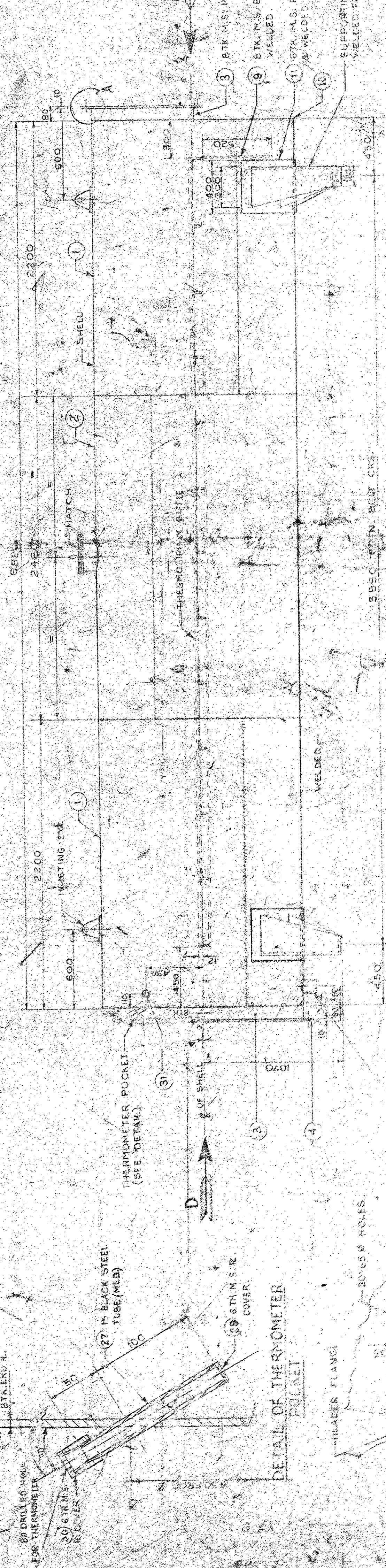
MATERIAL LIST				DRG NO. OIL/2670
COL. NO.	ITEM NO.	DESCRIPTIONS	DRG. REF.	CAT. NO. / MAJ. SUPPLIERS REF.
A	1	SEAMLESS PIPE 508 Ø/D		API 5L GR 5
	2	WALL THICKNESS 12.70 mm		IS: 226
B	1	HEADER FLANGE 10TK R.		
	2	FLANGE PLATE 10TK X 508 Ø/D X 610 CB		
C	1	FLANGE PLATE 10TK X 508 Ø/D X 585 Ø/D		
	2	75 X 50 X 8 L.L. X 150 LG.		
D	1	M.S. PLATE 165 X 6TK X 465 LG.		
	2	M.S. ROLLER 140 Ø X 50 LG.		
E	1	PIPE 508 Ø/D MADE FROM 16TK R.		
	2	FLANGE PLATE 10TK X 508 Ø/D X 610 Ø/D		
F	1	RAIN CAP - MADE FROM 16TK R.		
	2	COL-A ASSEMBLED TOGETHER MAKES A COMPLETE FIRE TUBE		
G	1	COL-B ASSEMBLED TOGETHER MAKES A COMPLETE FIRE TUBE		
	2	COL-B ASSEMBLED TOGETHER MAKES A COMPLETE CHIMNEY		



WELDING DETAILS OF
HEADER PLATE WITH FIRE TUBE

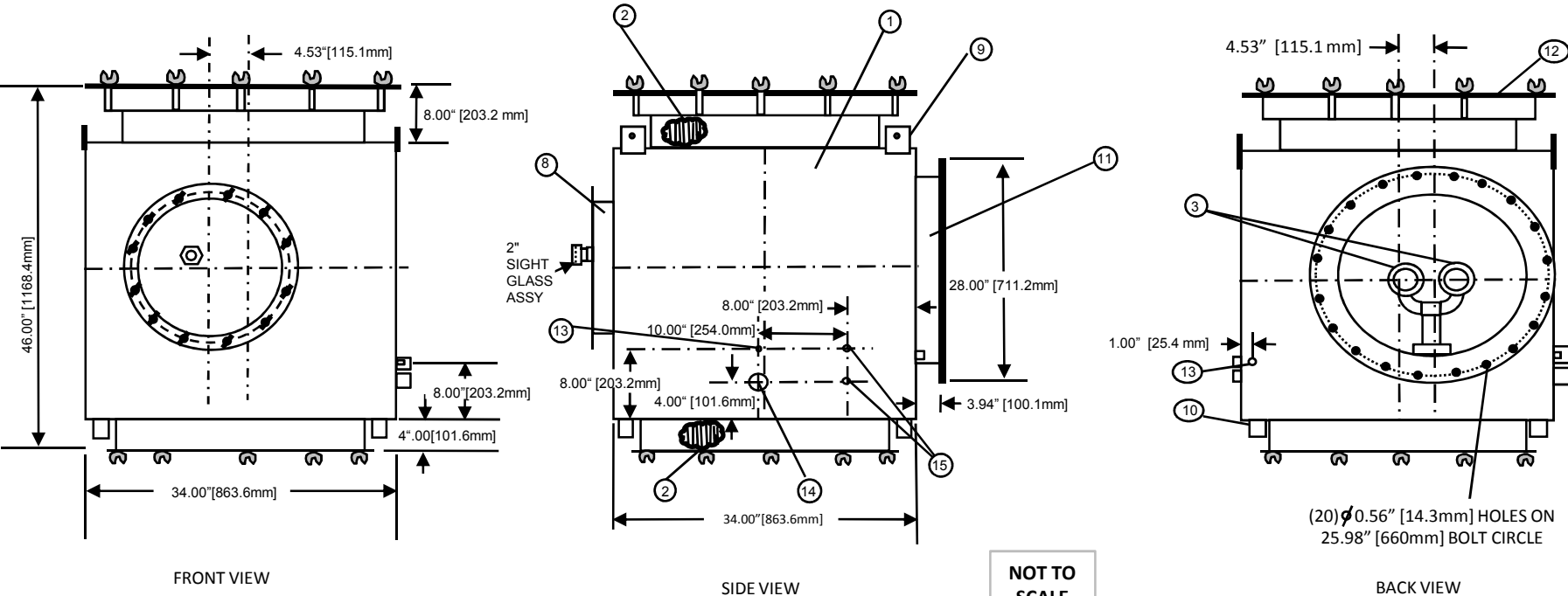
OIL INDIA LIMITED		DRAWING OFFICE		DULAIAN	
SCALE 1:10		TITLE BATH TYPE INDIRECT HEATER		DETAILS OF FIRE TUBE	
RETRACED ON 24.9.83		DRG NO. OIL/2670		OIL/2670	

COL. AT ASSEMBLED TOGETHER MAKES A COMPLETE SHIELD SUB-ASSEMBLY



ITEM NO. 1:
Details of Flame Arrestor for 3.0 MMBTU/Hr.
Indirect Heater.
Drg. No. OIL/PDNO/P&D/001/01

ENGINEERING DATA				
ITEM	QTY.	DESCRIPTION	SIZE	MATERIAL
1	1	HOUSING	0.16" THICK	ALUM.3003-H14
2	2	FLAME CELL	23" O.D. x 4" THICK	ALUM.3003-H14
3	2	MIXER	4" ECLIPSE NS-160 ASSEMBLY 300128	CAST IRON
4	2	NOZZLE (NOT SHOWN)	4" ECLIPSE STICKTITE ST-216-84	CAST IRON
5	1	PILOT (NOT SHOWN)	1/4" NPT	CARBON STEEL W/ S.S. SHIELD
6	2	BURNER PIPE NIPPLE (NOT SHOWN)	4" NPT X 36" LONG	CARBON STEEL
7	1	PILOTPPIPE NIPPLE (NOT SHOWN)	1/2" NPT X 37" LONG	CARBON STEEL
8	1	MANWAY	18" I.D.	ALUM.3003-H14
9	4	LIFTING LUG	4" X 4" X 0.16" THICK	ALUMINUM
10	4	COUPLING	1-1/2" NPT	ALUMINUM
11	1	NECK, EXTENDED W/ OUTSIDE FLANGE	20" ID. X 28" O.D.X 0.25" THICK	ALUM.3003-H14
12	1	RAIN HOOD	0.16" THICK	ALUM.3003-H14
13	2	COUPLING	1/4" NPT	ALUMINUM
14	1	COUPLING	2" NPT	ALUMINUM
15	2	COUPLING W/BUSHING	1" NPT & 1" X 1/4" NPT	ALUMINUM



Technical Bid Checklist**Annexure-EEE**

Tender No.			
Bidder's Name :			
		Compliance by Bidder	
SL. NO.	BEC / TENDER REQUIREMENTS	Indicate 'Confirmed' / 'Not Confirmed' / Not applicable	Indicate Corresponding page ref. of unpriced bid or Comments
1	Confirm that validity has been offered as per NIT.		
2	Confirm that Bid Security / Earnest Money has been submitted as per NIT (Wherever Applicable) ?		
3	Confirm that you shall submit Performance security (in the event of placement of order) (Wherever Applicable) ?		
4	Confirm that duly signed Integrity Pact has been submitted as per NIT (Wherever Applicable) ?		
5	Confirm that you have submitted documentary evidence of successfully executing one Purchase order as stipulated in NIT in any of the preceding 5 financial years (*)		
6	Confirm that you have submitted Balance Sheet and Profit and Loss Account of any of the preceding 3 financial years certified by a chartered accountant.		
7	Confirm that the bid has been signed using Class 3 digital certificate with Organisation's Name as per NIT.		
8	Confirm that you have not taken any exception/deviations to the NIT .		

NOTE: Please fill up the greyed cells only.

(*) Purchase Orders along with copies of any of the documents in respect of satisfactory execution of the Purchase Orders should be submitted – (i) Satisfactory Inspection Report (OR) (ii) Satisfactory Supply Completion / Installation Report (OR) (iii) Consignee Receipted Delivery Challans (OR) (iv) Central Excise Gate Pass / Tax , Invoices issued under relevant rules of Central Excise / VAT (OR) (v) any other documentary evidence that can substantiate the satisfactory execution of the purchase order cited above.

Response Sheet**Annexure-FFF**

Tender No.
Bidders Name

Bidders Response Sheet

SI No.	Description	Remarks
1	Place of Despatch	
2	Whether Freight charges have been included in your quoted prices	
3	Whether Insurance charges have been included in your quoted prices	
4	Make of quoted Product	
5	Offered Validity of Bid as per NIT	
6	Bid Security Submitted (if applicable)	
6	Details of Bid Security Submitted to OIL (if applicable)	
	a) Bid Security Amount (In Rs):	
	b) Bid Security Valid upto:	
7	Whether you shall submit Performance Security in the event of placement of order on you (if applicable)	
8	Integrity Pact Submitted (if applicable)	
9	Whether you have submitted documentary evidence of successfully executing one Purchase order as stipulated in NIT in any of the preceding 5 financial years (*)	
10	Whether you have submitted Balance Sheet and Profit and Loss Account of any of the preceding 3 financial years certified by a chartered accountant.	
11	Delivery Period in weeks from placement of order	
12	Complied to Payment terms of NIT (if applicable) otherwise to Standard Payment Terms of OIL or not.	
13	If bidder is MSE whether you have quoted your own product	
14	If Bid security submitted as Bank Guarantee, Name and Full Address of Issuing Bank including Telephone, Fax Nos and Email id of branch manager	

NOTE: Please fill up the greyed cells only.

(*) Purchase Orders along with copies of any of the documents in respect of satisfactory execution of the Purchase Orders should be submitted – (i) Satisfactory Inspection Report (OR) (ii) Satisfactory Supply Completion / Installation Report (OR) (iii) Consignee Receipted Delivery Challans (OR) (iv) Central Excise Gate Pass / Tax , Invoices issued under relevant rules of Central Excise / VAT (OR) (v) any other documentary evidence that can substantiate the satisfactory

ANNEXURE - GGG

**(TO BE FILLED UP BY ALL THE VENDOR IN THEIR OWN LETTER HEAD)
(ALL FIELDS ARE MANDATORY)**

Tender No. :.....
Name of Beneficiary :M/s.....
Vendor Code :.....
Address :.....
.....
Phone No. (Land Line) :.....
Mobile No. :.....
E-mail address :.....
Bank Account No. (Minimum
Eleven Digit No.) :.....
Bank Name :.....
Branch :.....
Complete Address of your
Bank :.....
IFSC Code of your Bank
a) RTGS :.....
b) NEFT :.....
PAN :.....
VAT Registration No. :.....
CST Registration No. :.....
Service Tax Registration No. :.....
Provident Fund Registration :.....

I/We confirm and agree that all payments due to me/us from Oil India Limited can be remitted to our above mentioned account directly and we shall not hold Oil India Limited responsible if the amount due from Oil India Limited is remitted to wrong account due to incorrect details furnished by us.

Office Seal

.....
Signature of Vendor

Counter Signed by Banker:
Seal of Bank:

Enclosure: Self attested photocopies of the following documents-

- 1) PAN Card
- 2) VAT Registration Certificate
- 3) Service Tax Registration
- 4) CST Registration
- 5) Provident Registration Certificate
- 6) Cancelled cheque of the bank account mentioned above (in original).
- 7) Bank Statement not older than 15 days on the date of submission.