



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

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FORWARDING LETTER

Tender No. : SDI7071P18 DT: 06.02.2018

Tender Fee : Rs. 1,000.00

Bid Security Amount : Applicable

Bidding Type : SINGLE STAGE COMPOSITE BID SYSTEM

Bid Closing on : As mentioned in the e-portal

Bid Opening on : -do-

Performance Security : Applicable

Integrity Pact : Not Applicable

"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 Nil Customs Duty during import will be applicable. However, concessional rate of GST @5% against Essentiality Certificate for invoice value 10 Lakh and above will be applicable.

In the event of order, OIL will issue Project Authority Certificate (PAC), where import content is declared by the bidder for availing Custom Duty benefit on the import content. Supplier shall affect dispatch only on receipt of these certificates from OIL, failing which all related liabilities shall be to Supplier's account".

OIL invites Bids for **PROCUREMENT OF TWO PHASE HORIZONTAL GAS – OIL SEPERATOR – QTY = 02 NOS** through its e-Procurement site under **SINGLE STAGE COMPOSITE BID SYSTEM**. The bidding documents and other terms and conditions are available at Booklet No. MM/LOCAL/E-01/2005 for E-Procurement LCB 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.**

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** , 0374-2807171 , 0374-2807192 ,. Email id = erp_mm@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.

c) OIL Bank Details :

	Bank Details of Beneficiary	
a	Bank Name	STAE 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

- d) “General Terms & Conditions” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005 for E-Procurement of Indigenous Tenders.
- e) Technical specifications and Quantity as per **Annexure – 1A**.
- f) The prescribed Bid Forms for submission of bids are available in the Technical RFx-> External Area - > Tender Documents.
- g) 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.
- h) 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).

- i) Bidder 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 Vendors having OIL’s User ID & password to pay Tender Fee on-line through OIL’s electronic Payment Gateway upto one week prior to the Bid closing date (or as amended in e-portal).

Vendors who do not have OIL’s User ID & password, may generate User ID & password online by the Vendor by using the link for supplier enlistment given in OIL’s e-tender portal and then pay Tender Fee on-line through OIL’s electronic Payment Gateway upto one week prior to the Bid closing date (or as amended in e-portal).

No physical tender documents will be provided. Details of NIT can be viewed using “Guest Login” provided in the e-Procurement portal. The link to e-Procurement portal has been also provided through OIL’s web site www.oil-india.com.

NOTE:

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

2.0 The tender is invited under SINGLE STAGE- COMPOSITE 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 Technical RFx Response-> Technical Attachment only. [For details please refer “NEW INSTRUCTIONS”](#). Please refer Annex-BB for price schedule.

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. MSE bidders are exempted from submission of Tender Fees and Bid Security/Earnest Money provided they are registered for the items they intend to quote.

“Purchase preference policy-linked with Local Content (PP - LC) notified vide letter no. O-27011/44/2015-ONG-II/FP dated 25.04.2017 of MoP&NG shall be applicable in this tender. The detail of the said policy is furnished vide “General Terms & Conditions for Indigenous Tender (MM/LOCAL/E-01/2005)” of this tender.

Bidders seeking benefits, under Purchase Preference Policy (linked with Local Content) (PP-LC) shall have to comply with all the provisions specified in the above Addendum and shall have to submit all undertakings / documents applicable for this policy”.

- 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 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.
- 9.0 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.
- 10.0 Please do refer the User Manual provided on the portal on the procedure How to create Response for submitting offer.
- 11.0 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.
- 12.0 Bidders are requested to refer to the enclosed **Annexure – BBB** for the Taxes and Duties clauses under GST regime.

13.0 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 transporters are:

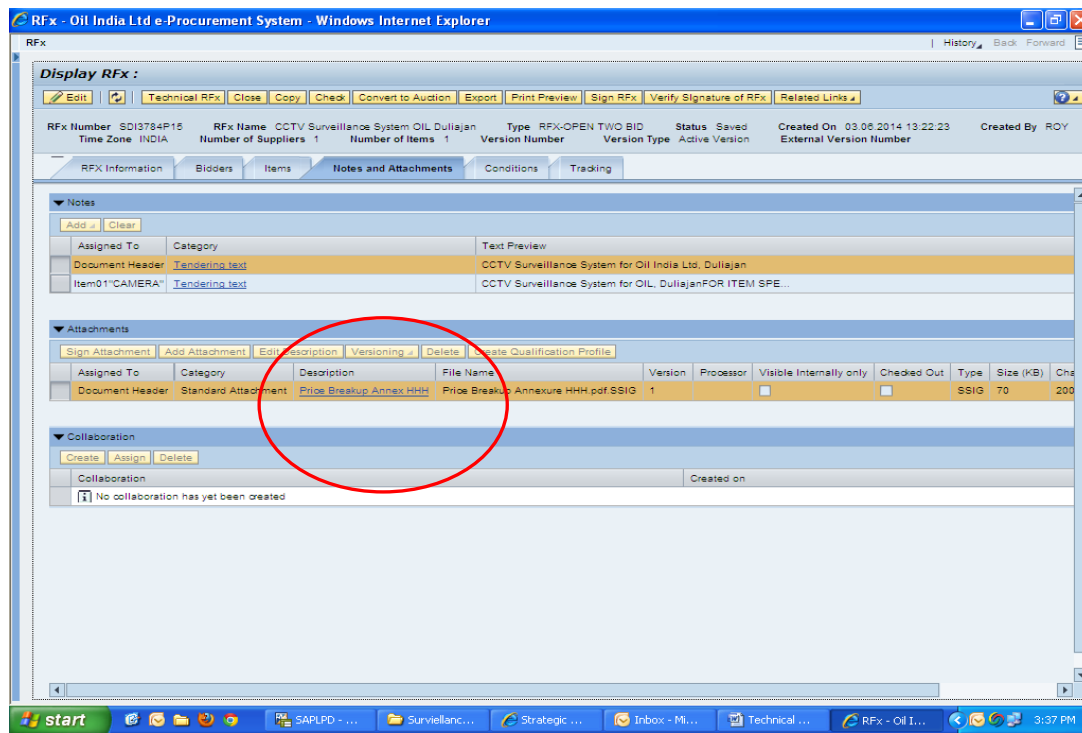
- a) M/s Western Carriers (India) Ltd.
- b) M/s DARCL Logistics Limited

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

14.0 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.



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

Please do refer “**NEW INSTRUCTION TO BIDDER FOR SUBMISSION**” for the above two points and also please refer “**New Vendor Manual (effective 12.04.2017)**” available in the login Page of the OIL’s E-tender Portal.



Oil India Limited e-Procurement

User ID *

Password *

Logon Problems? [Get Support](#)

[Supplier Enlistment for E-Tender](#)

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

[Click here to View Comptability Settings](#)

[General Guidelines to bidders](#)

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Click here for
the New
Manual &
Instruction

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NOTE:

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

Yours Faithfully

Sd-

(R BARMAN)
CMM (IP)
FOR GM-MATERIALS

Tender No & Date: SDI7071P18 DT: 06.02.2018**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)
1.0 BID REJECTION CRITERIA (BRC): 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. A) TECHNICAL: A) TECHNICAL: 1.0 Bidder's Qualification: 1.1 The bidder shall be an Original Equipment Manufacturer (OEM) of the tender items. 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 supplied 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. 2.0 Bidder's Experience: 2.1 The bidder shall have the experience of successful execution of single order for at least one number of any of the crude oil process equipment as detailed below, to an E&P Company or service provider to an E&P company, in last 05 years from the original bid closing date of the tender. a) Gas Oil Separator/scrubber/knock-out of minimum 200 KLPD capacities & working pressure 1.0 kg/cm² or above.	

- b) Indirect Heater of working pressure of 105.46 kg/cm² or above.
c) Crude Oil Emulsion Treater of working pressure 2.0 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.

3.0 **Delivery date should be of maximum 10 months** from the date of issue of LOI /Letter of Credit .The bidder should categorically confirm in their technical bid that the tendered items will be supplied within the delivery period, without which the bid will be rejected.

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. 15.45 Lakhs**.

b) Net Worth of the firm should be Positive for preceding financial / Accounting year. (FY=2016-2017)

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 90 days from the Bid Closing Date.

ii) Bid security:

The bid must be accompanied by Bid Security of **Rs. 61,800.00** 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 DGM-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 6 months from Bid closing date. (i.e. upto 15.09.2018).**

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 Composite 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.

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 forms :

A Bank Guarantee in the prescribed OIL's format valid for 3(three) months beyond the Warranty period indicated in the Purchase Order /contract agreement.

The Performance Security for capital nature items like plant and machinery etc. shall be valid for 12 months from the date of commissioning plus 3(three) months or 18 months from the date of shipment/despatch plus 3(three) months whichever concludes earlier. However, for consumables like chemicals, cement, tubular etc. the Performance Security shall be valid for 12 months from the date of shipment/despatch plus 3(three) months.

The validity requirement of Performance Security is assuming despatch within stipulated delivery period and confirmation 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.

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

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

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 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 Axis Bank, Duliajan Branch, IFS Code - UTIB0001129, Branch Address - AXIS Bank Ltd, Duliajan Branch, Daily Bazar, Jyotinagar, Duliajan, District - 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.

A) TECHNICAL:

- i) The bid will be evaluated strictly as per NIT specification, 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) A job executed by a bidder for its own organization / subsidiary cannot be considered as experience for the purpose of meeting BEC.

- iii) 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 NIT.

-----XXXX-----

Tender No. & Date : SDI7071P18 DT: 06.02.2018

	Complied /Not Complied with remarks ,if any
Item No. -10 ; Quantity – 1 No. Design, fabrication, testing and supply of TWO PHASE HORIZONTAL GAS-OIL SEPARATOR (GU-I) as per API specification 12J, ASME section VIII Div-I complete with necessary companion flanges, stud & nuts and reflex type liquid level gauge glass assembly as per OIL's Drawings. OIL Drawing No: OIL/7617/A, Sk No: OIL/3991/A A. Service requirement: The separator unit will be used in differential separation layout for processing well steam. The unit is to be designed and manufactured to meet the following service requirement: i) To separate liquid (Oil & Water) and gas efficiently from the well stream. ii) To arrest 99% entrained liquid particles from the separated gas for the particle size up to 10 micron. iv) Suitable provision to take liquid and gas samples for analysis. v) Separator Configuration: The separator should be horizontal, cylindrical shell type having dished end. Dished end shall be spun in a dished head spinning machine only. There shall be no welding in the dished ends. B. Separator Sizing Parameters: The test separator unit is to be sized to suit the following service condition: i) Well Stream Characteristics: As the separator will be used in the process layout of differential separation of crude oil, water and natural gas, the unit will be subjected to the well fluid having a wide range of characteristics. The likely range of characteristics of the well fluid is given below for design purpose. a) Water content (Produced) : 0% - 20% b) API gravity of oil : 20 Deg - 35 Deg c) Water specific gravity : 1.02 - 1.08 d) Gas gravity : 0.65 - 0.80 (Air = 1) e) Pour Point of oil : 27 Deg - 33 Deg C. f) Wax (Paraffin) content: 10% maximum by volume. g) Sand /solid/slit content: There may be some amount of sand/slit/drilling fluids content in the well stream. ii) Operating Pressure & Temperature: The separator is to be sized for the following operating conditions: Fluid handling capacity : 900 KLPD(5000 BPD)	

Design pressure	: 30 kg/cm ²
Test pressure	: 45 kg/cm ²
Working temperature	: 37 deg C average
Gas flow rate	: 8 MMSCFD
C. Material of construction & standards : 1. All pressure plates shall be IS:2002 Gr. 2A steel or SA-516 gr60/70 . Non pressure plates shall be IS: 2062 quality steel and others as per skt Sk. No. OIL/3991/A 2. All flanges should be made of forged carbon steel conforming to ASTM A 105 and dimensions as per ANSI B 16.5 std. 300 class rating.. 3. Studs & Nuts: As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard 3. Bolts and Nuts for non pressure plates shall conform to BS: 916. 4. All threads as per API standard unless otherwise stated. 5. Spot Radiographic test to be done as per as per ASME sec VIII part-I. 6. Flanges to be drilled off CRS as per ANSI class 300 rating & ANSI B16.5 Standard. 7. Pressure rating of all coupling connections shall be 3000 psi WP. 8. Heat Treatment shall be required for the whole vessel. 9. Nozzle necks are to be made of SA 106 Gr B material only and to be provided with RF plates /saddle made of the material similar to the shell material. D. Separator Mountings: The separator is to be equipped with the following mountings: a) Control gear: Internal Ball Float Type Level Controller mounted complete assembly similar to fisher type 2500-249 cage less/Procon 231-779 and mounted pilot 779k throttle type comprising of the following a. Two spring loaded valves b. Rocker arm (linkage assy.) pilot relay assembly. to give continuous output pressure proportional to rise or fall of liquid level inside the vessel and also reversible in action in field & comprising of float rod, lever. c. Counter weight, chain, adjustable screw, travel stop, & necessary link, bolt & nuts etc. with other specifications as per following: a) Material : Forged ASTM, A-105 steel. b) Mounting : Right hand c) Function : For controlling level of crude oil of API gravity 20 to 35degree centigrade d) Control function : Proportional output type e) Output signal : 0.2-1.1kg/cm² f) Rising Level : Increase out put g) Material of Float : 316 SS h) Stuffing box: SS with PTFE or Graphite asbestos packing. i) Accessories: Filter Regulator suitable for operation of natural gas at maximum 18.3.kg/cm² with drain port at bottom j) Nominal size : 254mm (10") RF as per ANSI B16.5, 300 class rating flange k) Float size : 185 mm (7.75") OD, Rating: as per design requirement. b) Pressure controller to suit the duty applications with following technical specifications: 1 no a. Type : Pneumatic, Indicating with proportional and reset action. b. Range :(0-30)Kg/cm² c. Process fluid :Natural gas d. Sensing Element :316 SS e. Output: Action: Direct/Reverse Action (Field Changeable)	

On-Off: 125% output per % input
 Proportional: 0.2 to 35% output per % input
 Reset: 0.05 to 200 repeats per minute
 Differential gap: 1 to 100 %
 f. Supply : 20 PSI
 g. Connection : Bottom connected, 1/4 inch NPT
 h. Air Consumption : 0.2 Scfm maximum
 i. Output Pressure : 3 to 15 PSI
 j. Case and Door : Glass epoxy reinforced Plastic
 k. Window : Glass/Acrylic
 l. Mounting : Vertical pipe Mount
 m. Scale size : 160 mm
 n. Pointer : SP&PV on the same linear scale
 o. Repeatability : Minimum 0.3 %
 p. Housing : Weatherproof, NEMA 3R, IP65
 q. Control : Internal Auto/Manual
 r. Accessories:
 Door Lock
 Mounting Bracket for 2 inch pipe
 Air filter regulator (Input: 100 PSI, Output: Adjustable)
 2 inch, 1/4 inch 0 to 30 psi Supply gauge
 2 inch, 1/4 inch 0 to 30 psi Output gauge

c) One - Reflex type liquid level gauge complete with cocks & glass gauge suitable protected from external damage, WP- (0-30Kg/Sq.Cm).

d) Two nos. of Pressure gauge with isolation valves with following specifications.

- Type: Direct Reading
- Mounting : Local
- Range : 0-30 kg/cm²
- Accuracy: +/-1.0% of span
- Dial Size: 6 inch (150mm)
- Dial Colour: White with black lettering
- Case Material: SS316
- Lens: Laminated Safety glass lens
- Pressure element: Bourdon tube
- Element material: SS 316
- Socket Material: SS316
- Movement material: SS316
- Connection: 1/2 inch NPT(M)
- Connection Type: Direct with bottom entry
- Operating Pressure: 21 Kg/cm²
- Units: Kg/cm², psi
- Service: Natural Gas

Item No. -20 ; Quantity – 1 No.

Design, fabrication, testing and supply of TWO PHASE HORIZONTAL GAS-OIL SEPARATOR (Stabilizer) as per API specification 12J, ASME section VIII Div-I complete with necessary companion flanges, stud & nuts and Reflex type liquid level

gauge assembly as per OIL's Drawings.
OIL Drawing No. OIL/3411/C.

A. Standards & Material of Construction: The unit shall be manufactured conforming to the following code of practices and standards.

- a) Separator: ASME section VIII, Div. I
- b) Pipe fittings, flanges etc.: ANSI B 31.3, ANSI B 16.5
- c) Safety Relief Valves: ASME section VIII, Div-I/ANSI-B-16.11
- d) Structural: IS 226
- e) All flanges should be made of forged carbon steel conforming to ASTM A 105 and dimensions as per ANSI B 16.5 std. 150 class rating.
- f) Studs & Nuts: As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard
- g) Bolts and Nuts for non pressure plates shall conform to BS: 916.
- h) All threads as per API standard unless otherwise stated

B. Service requirement: The separator unit will be used in differential separation layout for processing well steam. The unit is to be designed and manufactured to meet the following service requirement:

- i) To separate liquid (Oil & Water) and gas efficiently from the well stream.
- ii) To arrest 99% entrained liquid particles from the separated gas for the particle size up to 10 micron.
- iv) Suitable provision to take liquid and gas samples for analysis.
- v) Separator Configuration: The separator should be horizontal, cylindrical shell type having dished end. Dished end shall be spun in a dished head spinning machine only. There shall be no welding in the dished ends.

C. Separator Sizing Parameters: The test separator unit is to be sized to suit the following service condition:

i) Well Stream Characteristics: As the test unit will be used in the process layout of differential separation process, the unit will be subjected to the well stream having a wide range of characteristics. The likely range of characteristics of the well fluid is given below for design purpose.

- a) Water content (Produced) : 0% - 20%
- b) API gravity of oil : 20 Deg - 35 Deg
- c) Water specific gravity : 1.02 - 1.08
- d) Gas gravity : 0.65 - 0.80 (Air = 1)
- e) Pour Point of oil : 27 Deg - 33 Deg C.
- f) Wax (Paraffin) content: 10% maximum by volume.
- g) Sand /solid/slit content: There may be some amount of sand/slit/drilling fluids content in the well stream

iii) Operating Pressure & Temperature: The separator is to be sized for the following operating conditions:

Fluid capacity : 10,000 BBL(1800KLPD)
Design pressure : 3.5 kg/cm²
Test pressure : 5.25 kg/cm²
Working pressure : 1 Kg/cm²
Working temperature : 50 deg C
Design temperature : 80 deg C
Gas flow rate : 0.14 MMSCMD

Primary objective : Gas-Oil separation D. Separator Mountings: The separator is to be equipped with the following mountings: a) Control gear: Internal Ball Float Type Level Controller mounted complete assembly similar to fisher type 2500-249 cage less/Procon 231-779 and mounted pilot 779k throttle type comprising of I. Two spring loaded valves, II. Rocker arm (linkage assy.) III. Pilot relay assy. to give continuous output pressure proportional to rise or fall of liquid level inside the vessel and also reversible in action in field . IV. Float rod, lever. Counter weight, chain, adjustable screw, travel stop, & necessary link, bolt & nuts etc. with other specifications as per following: a) Material : Forged ASTM, A-105 steel. b) Mounting : Right hand c) Function : For controlling level of crude oil of API gravity 20 to 35degree centigrade d) Control function : Proportional output type e) Output signal : 0.2-1.1kg/cm² f) Rising Level : Increase out put g) Material of Float : 316 SS h) Stuffing box : SS with PTFE or Graphite asbestos packing similar to Accessories : Filter Regulator suitable for operation of natural gas at maximum 18.3.kg/cm² with drain port at bottom. i) Mounting Flange size : 200mm (8") RF as per ANSI B16.5, 300 class rating flange j) Float size : 185 mm (7.75") OD rating 3.5 kg/cm² (50PSI) b) Pressure controller to suit the duty applications with following technical specifications: 1 no a. Type : Pneumatic, Indicating with proportional and reset action. b. Range :0-3 kg/cm² c. Process fluid :Natural gas d. Sensing Element :316 SS e. Output: Action: Direct/Reverse Action (Field Changeable) On-Off: 125% output per % input Proportional: 0.2 to 35% output per % input Reset: 0.05 to 200 repeats per minute Differential gap: 1 to 100 % f. Supply : 20 PSI g. Connection : Bottom connected,1/4 inch NPT h. Air Consumption :0.2 Scfm maximum i. Output Pressure : 3 to 15 PSI j. Case and Door : Glass epoxy reinforced Plastic k. Window : Glass/Acrylic l. Mounting : Vertical pipe Mount m. Scale size : 160 mm n. Pointer : SP&PV on the same linear scale o. Repeatability : Minimum 0.3 % p. Housing : Weatherproof, NEMA 3R,IP65 q. Control : Internal Auto/Manual r. Accessories: Door Lock Mounting Bracket for 2 inch pipe	
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Air filter regulator (Input: 100 PSI, Output: Adjustable)

2 inch, 1/4 inch 0 to 30 psi Supply gauge

2 inch, 1/4 inch 0 to 30 psi Output gauge

c) One - Reflex type liquid level gauge complete with cocks & glass gauge suitable protected from external damage, WP (1-2.5Kg/Sq.Cm²)

d) Two-ASME safety relief valve rating ANSI 300 Class RF, to relief full gas capacity against atmosphere. Set Pressure # 1.1 Kg/Sq. Cm (15Psig)

e) Two nos. of Pressure gauge with isolation valves with following specifications:

a. Type: Direct Reading

b. Mounting :Local

c. Range : 0-3 kg/cm²

d. Accuracy: +/-1.0% of span

e. Dial Size: 6 inch(150mm)

f. Dial Colour: White with black lettering

g. Case Material: SS316

h. Lens: Laminated Safety glass lens

i. Pressure element: Bourdon tube

j. Element material: SS 316

k. Socket Material: SS316

l. Movement material: SS316

m. Connection: ½ inch NPT(M)

n. Connection Type: Direct with bottom entry

o. Operating Pressure:1 Kg/cm²

p. Units: Kg/cm²,psi

q. Service: Natural Gas

TENDER SPECIAL NOTES: (FOR BOTH THE ITEM)

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 separators. The Bidder shall confirm the same in their technical Bid

iii) The separator should be shop constructed and tested as per API specification 12J (Latest version) , ASME section VIII Div-I.

- 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) Post weld heat treatment (Stress Relieving) of the whole vessel should be carried out in an automatic temperature controlled furnace only. The Bidder shall confirm the same in their technical Bid.
- vi) All welding joints should be tested 100% radio graphically tested. The Bidder shall confirm the same in their technical Bid.
- vii) 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.
- viii) The following documents shall be forwarded with the technical bid:
- Typical General Arrangement Diagram (GAD) of the separator.
 - Sectional drawing showing the internals.
 - Make and technical specification of all the bought-out items along with technical literature, GAD etc.
- ix) 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
- Raw materials: Chemical & mechanical test certificate as per standard specified in technical specification.
 - Hydraulic test certificate, radiographic test certificate, certificate of Quality & Standard of welding.
 - Certificate of visual inspection & measurement of dimensions.
- x) Third Party Inspection: The materials shall be offered for third party inspection for the following scope-
- Inspection of raw materials.
 - Inspection of radiography of welded joints.
 - Inspection of Hydraulic testing.
 - Inspection of bought-out items.
 - Inspection of certificates in respect of raw materials, bought-out items, radiography etc.
- xi) 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.
- xii) Pre-dispatch Inspection by OIL
OIL's representative shall inspect the materials prior to dispatch at vendor's works at OIL's cost. OIL's representative shall review TPI reports, witness hydraulic testing. Three weeks prior notice to be given to OIL for pre-dispatch inspection.
- xiii) Painting and Insulation:
- 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. xiv) Marking: OIL's logo, Purchase order No. and manufacturers name shall be die stamped/weld written in the shell of the separator. xv) 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. In the check lists the use of words 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 the check lists. NOTE: BOTH THE ITEMS WILL BE PROCURED FROM THE SAME SOURCE AND EVALUATION WILL BE DONE ACCORDINGLY.	
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Annexure I

Technical specification check list for evaluation

Design, fabrication, testing and supply of TWO PHASE HORIZONTAL GAS-OIL SEPARATOR (GU-I) as per API specification 12J, ASME section VIII Div-I complete with necessary companion flanges, stud & nuts and reflex type liquid level gauge glass assembly as per OIL's Drawings.

OIL Drawing No: OIL/7617/A, Sk No: OIL/3991/A

<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>** (Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
<u>A</u>	A. Service requirement: The separator unit will be used in differential separation layout for processing well steam. The unit is to be designed and manufactured to meet the following service requirement: i) To separate liquid (Oil & Water) and gas efficiently from the well stream. ii) To arrest 99% entrained liquid particles from the separated gas for the particle size up to 10 micron. iv) Suitable provision to take liquid and gas samples for analysis. v) Separator Configuration: The separator should be horizontal, cylindrical shell type having dished end. Dished end shall be spun in a dished head spinning machine only. There shall be no welding in the dished ends.			
<u>B(i)</u>	B. Separator Sizing Parameters: The test separator unit is to be sized to suit the following service condition: i) Well Stream Characteristics: As the separator will be used in the process layout of differential separation of crude oil, water and natural gas, the unit will be subjected to the well fluid having a wide range of characteristics. The likely range of characteristics of the well fluid is given below for design purpose. a) Water content (Produced) : 0% - 20% b) API gravity of oil : 20 Deg - 35 Deg c) Water specific gravity : 1.02 - 1.08 d) Gas gravity : 0.65 - 0.80 (Air = 1) e) Pour Point of oil : 27 Deg - 33 Deg C. f) Wax (Paraffin) content: 10% maximum by volume.			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>** (Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	g) Sand /solid/slit content: There may be some amount of sand/slit/drilling fluids content in the well stream.			
<u>B(ii)</u>	ii) Operating Pressure & Temperature: The separator is to be sized for the following operating conditions: Fluid handling capacity : 900 KLPD(5000 BPD) Design pressure : 30 kg/cm2 Test pressure : 45 kg/cm2 Working temperature : 37 deg C average Gas flow rate : 8 MMSCFD			
<u>C</u>	<u>C. Material of construction & standards :</u> 1. All pressure plates shall be IS:2002 Gr. 2A steel or SA-516 gr60/70 . Non pressure plates shall be IS: 2062 quality steel and others as per skt Sk. No. OIL/3991/A 2. All flanges should be made of forged carbon steel conforming to ASTM A 105 and dimensions as per ANSI B 16.5 std. 300 class rating.. 3. Studs & Nuts: As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard 3. Bolts and Nuts for non pressure plates shall conform to BS: 916. 4. All threads as per API standard unless otherwise stated. 5. Spot Radiographic test to be done as per as per ASME sec VIII part-I. 6. Flanges to be drilled off CRS as per ANSI class 300 rating & ANSI B16.5 Standard. 7. Pressure rating of all coupling connections shall be 3000 psi WP. 8. Heat Treatment shall be required for the whole vessel. 9. Nozzle necks are to be made of SA 106 Gr B material only and to be provided with RF plates /saddle made of the material similar to the shell material.			
<u>D(a)</u>	D. Separator Mountings: The separator is to be equipped with the following mountings: a) Control gear: Internal Ball Float Type Level Controller mounted complete assembly similar to fisher type 2500-249 cage less/Procon 231-779 and mounted pilot 779k throttle type			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> ** (Note: Complete Description should be furnished by bidder)	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	comprising of the following - Two spring loaded valves - Rocker arm (linkage assy.) pilot relay assembly. to give continuous output pressure proportional to rise or fall of liquid level inside the vessel and also reversible in action in field & comprising of float rod, lever. - Counter weight, chain, adjustable screw, travel stop, & necessary link, bolt & nuts etc. with other specifications as per following: - Material : Forged ASTM, A-105 steel. - Mounting : Right hand - Function : For controlling level of crude oil of API gravity 20 to 35degree centigrade - Control function : Proportional output type - Output signal : 0.2-1.1kg/cm2 - Rising Level : Increase out put - Material of Float : 316 SS - Stuffing box: SS with PTFE or Graphite asbestos packing. - Accessories: Filter Regulator suitable for operation of natural gas at maximum 18.3.kg/cm2 with drain port at bottom - Nominal size : 254mm (10") RF as per ANSI B16.5, 300 class rating flange - Float size : 185 mm (7.75") OD, Rating: as per design requirement.			
<u>D(b)</u>	b) Pressure controller to suit the duty applications with following technical specifications: 1 no - Type : Pneumatic, Indicating with proportional and reset action. - Range :(0-30)Kg/cm2 - Process fluid :Natural gas - Sensing Element :316 SS - Output: Action: Direct/Reverse Action (Field Changeable) On-Off: 125% output per % input			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>** (Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	Proportional: 0.2 to 35% output per % input Reset: 0.05 to 200 repeats per minute Differential gap: 1 to 100 % f. Supply : 20 PSI g. Connection : Bottom connected, 1/4 inch NPT h. Air Consumption : 0.2 Scfm maximum i. Output Pressure : 3 to 15 PSI j. Case and Door : Glass epoxy reinforced Plastic k. Window : Glass/Acrylic l. Mounting : Vertical pipe Mount m. Scale size : 160 mm n. Pointer : SP&PV on the same linear scale o. Repeatability : Minimum 0.3 % p. Housing : Weatherproof, NEMA 3R, IP65 q. Control : Internal Auto/Manual r. Accessories: Door Lock Mounting Bracket for 2 inch pipe Air filter regulator (Input: 100 PSI, Output: Adjustable) 2 inch, 1/4 inch 0 to 30 psi Supply gauge 2 inch, 1/4 inch 0 to 30 psi Output gauge			
<u>D(c)</u>	c) One - Reflex type liquid level gauge complete with cocks & glass gauge suitable protected from external damage, WP- (0-30Kg/Sq.Cm).			
<u>D(d)</u>	d) Two nos. of Pressure gauge with isolation valves with following specifications. a. Type: Direct Reading b. Mounting : Local c. Range : 0-30 kg/cm ² d. Accuracy: +/-1.0% of span e. Dial Size: 6 inch(150mm) f. Dial Colour: White with black lettering g. Case Material: SS316 h. Lens: Laminated Safety glass lens i. Pressure element: Bourdon tube j. Element material: SS 316			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>**(Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	k. Socket Material: SS316 l. Movement material: SS316 m. Connection: ½ inch NPT(M) n. Connection Type: Direct with bottom entry o. Operating Pressure:21 Kg/cm2 p. Units: Kg/cm2,psi q. Service: Natural Gas			
<u>Item 20</u>	Design, fabrication, testing and supply of TWO PHASE HORIZONTAL GAS-OIL SEPARATOR (Stabilizer) as per API specification 12J, ASME section VIII Div-I complete with necessary companion flanges, stud & nuts and Reflex type liquid level gauge assembly as per OIL's Drawings. OIL Drawing No. OIL/3411/C.			
<u>A</u>	A. Standards & Material of Construction: The unit shall be manufactured conforming to the following code of practices and standards. a) Separator: ASME section VIII, Div. I b) Pipe fittings, flanges etc.: ANSI B 31.3, ANSI B 16.5 c) Safety Relief Valves: ASME section VIII, Div-I/ANSI-B-16.11 d) Structural: IS 226 e) All flanges should be made of forged carbon steel conforming to ASTM A 105 and dimensions as per ANSI B 16.5 std. 150 class rating. f) Studs & Nuts: As per ASTM A193 Gr. B7 & ASTM A194 Gr. 2H Standard g) Bolts and Nuts for non pressure plates shall conform to BS: 916. h) All threads as per API standard unless otherwise stated			
<u>B</u>	B. Service requirement: The separator unit will be used in differential separation layout for processing well steam. The unit is to be designed and manufactured to meet the following service requirement: i) To separate liquid (Oil & Water) and gas efficiently from the			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> ** (Note: Complete Description should be furnished by bidder)	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	well stream. ii) To arrest 99% entrained liquid particles from the separated gas for the particle size up to 10 micron. iv) Suitable provision to take liquid and gas samples for analysis. v) Separator Configuration: The separator should be horizontal, cylindrical shell type having dished end. Dished end shall be spun in a dished head spinning machine only. There shall be no welding in the dished ends.			
<u>C(i)</u>	C. Separator Sizing Parameters: The test separator unit is to be sized to suit the following service condition: i) Well Stream Characteristics: As the test unit will be used in the process layout of differential separation process, the unit will be subjected to the well stream having a wide range of characteristics. The likely range of characteristics of the well fluid is given below for design purpose. a) Water content (Produced) : 0% - 20% b) API gravity of oil : 20 Deg - 35 Deg c) Water specific gravity : 1.02 - 1.08 d) Gas gravity : 0.65 - 0.80 (Air = 1) e) Pour Point of oil : 27 Deg - 33 Deg C. f) Wax (Paraffin) content: 10% maximum by volume. g) Sand /solid/slit content: There may be some amount of sand/slit/drilling fluids content in the well stream			
<u>C(ii)</u>	ii) Operating Pressure & Temperature: The separator is to be sized for the following operating conditions: Fluid capacity : 10,000 BBL(1800KLPD) Design pressure : 3.5 kg/cm² Test pressure : 5.25 kg/cm² Working pressure : 1 Kg/cm² Working temperature : 50 deg C Design temperature : 80 deg C Gas flow rate : 0.14 MMSCMD Primary objective : Gas-Oil separation			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>** (Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
<u>D(a)</u>	D. Separator Mountings: The separator is to be equipped with the following mountings: a) Control gear: Internal Ball Float Type Level Controller mounted complete assembly similar to fisher type 2500-249 cage less/Procon 231-779 and mounted pilot 779k throttle type comprising of I. Two spring loaded valves, II. Rocker arm (linkage assy.) III. Pilot relay assy. to give continuous output pressure proportional to rise or fall of liquid level inside the vessel and also reversible in action in field . IV. Float rod, lever. Counter weight, chain, adjustable screw, travel stop, & necessary link, bolt & nuts etc. with other specifications as per following: l) Material : Forged ASTM, A-105 steel. m) Mounting : Right hand n) Function : For controlling level of crude oil of API gravity 20 to 35degree centigrade o) Control function : Proportional output type p) Output signal : 0.2-1.1kg/cm2 q) Rising Level : Increase out put r) Material of Float : 316 SS s) Stuffing box : SS with PTFE or Graphite asbestos packing similar to - Accessories : Filter Regulator suitable for operation of natural gas at maximum 18.3.kg/cm2 with drain port at bottom. t) Mounting Flange size : 200mm (8") RF as per ANSI B16.5, 300 class rating flange u) Float size : 185 mm (7.75") OD rating 3.5 kg/cm2 (50PSI)			
<u>D(b)</u>	b) Pressure controller to suit the duty applications with following technical specifications: 1 no a. Type : Pneumatic, Indicating with proportional and reset action.			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>** (Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	b. Range :0-3 kg/cm2 c. Process fluid :Natural gas d. Sensing Element :316 SS e. Output: Action: Direct/Reverse Action (Field Changeable) On-Off: 125% output per % input Proportional: 0.2 to 35% output per % input Reset: 0.05 to 200 repeats per minute Differential gap: 1 to 100 % f. Supply : 20 PSI g. Connection : Bottom connected,1/4 inch NPT h. Air Consumption :0.2 Scfm maximum i. Output Pressure : 3 to 15 PSI j. Case and Door : Glass epoxy reinforced Plastic k. Window : Glass/Acrylic l. Mounting : Vertical pipe Mount m. Scale size : 160 mm n. Pointer : SP&PV on the same linear scale o. Repeatability : Minimum 0.3 % p. Housing : Weatherproof, NEMA 3R,IP65 q. Control : Internal Auto/Manual r. Accessories: Door Lock Mounting Bracket for 2 inch pipe Air filter regulator (Input: 100 PSI, Output: Adjustable) 2 inch, 1/4 inch 0to 30 psi Supply gauge 2 inch, 1/4 inch 0to 30 psi Output gauge			
<u>D(c)</u>	c) One - Reflex type liquid level gauge complete with cocks & glass gauge suitable protected from external damage, WP (1-2.5Kg/Sq.Cm2)			
<u>D(d)</u>	d) Two-ASME safety relief valve rating ANSI 300 Class RF, to relief full gas capacity against atmosphere. Set Pressure # 1.1 Kg/Sq. Cm (15Psig)			
<u>D(e)</u>	e) Two nos. of Pressure gauge with isolation valves with following specifications: a. Type: Direct Reading			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Technical Offer by the Bidder</u> <u>**(Note: Complete Description should be furnished by bidder)</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	b. Mounting :Local c. Range : 0-3 kg/cm2 d. Accuracy: +/-1.0% of span e. Dial Size: 6 inch(150mm) f. Dial Colour: White with black lettering g. Case Material: SS316 h. Lens: Laminated Safety glass lens i. Pressure element: Bourdon tube j. Element material: SS 316 k. Socket Material: SS316 l. Movement material: SS316 m. Connection: ½ inch NPT(M) n. Connection Type: Direct with bottom entry o. Operating Pressure:1 Kg/cm2 p. Units: Kg/cm2,psi q. Service: Natural Gas			

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Annexure II

Tender special notes:

<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Bidder's Response</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
<u>i)</u>	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 separators. The Bidder shall confirm the same in their technical Bid			
<u>iii)</u>	iii) The separator should be shop constructed and tested as per API specification 12J (Latest version) , ASME section VIII Div-I.			
<u>iv)</u>	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.			
<u>v)</u>	v) Post weld heat treatment (Stress Relieving) of the whole vessel should be carried out in an automatic temperature controlled furnace only. The Bidder shall confirm the same			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Bidder's Response</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	in their technical Bid.			
<u>vi)</u>	vi) All welding joints should be tested 100% radio graphically tested. The Bidder shall confirm the same in their technical Bid.			
<u>vi)</u>	vi) All welding joints should be tested 100% radio graphically tested. The Bidder shall confirm the same in their technical Bid.			
<u>vii)</u>	vii) 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.			
<u>viii)</u>	viii) The following documents shall be forwarded with the technical bid: b) Typical General Arrangement Diagram (GAD) of the separator. c) Sectional drawing showing the internals. i) Make and technical specification of all the bought-out items along with technical literature, GAD etc.			
<u>ix)</u>	ix) 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.			
<u>x)</u>	x) Third Party Inspection: The materials shall be offered for third party inspection for the following scope- a) Inspection of raw materials.			

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<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Bidder's Response</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	b) Inspection of radiography of welded joints. c) Inspection of Hydraulic testing. f) Inspection of bought-out items. g) Inspection of certificates in respect of raw materials, bought-out items, radiography etc.			
<u>xi</u>	xi) 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.			
<u>Xii</u>	<u>xii) Pre-dispatch Inspection by OIL</u> OIL's representative shall inspect the materials prior to dispatch at vendor's works at OIL's cost. OIL's representative shall review TPI reports, witness hydraulic testing. Three weeks prior notice to be given to OIL for pre-dispatch inspection			
<u>Xiii</u>	<u>xiii) Painting and Insulation:</u> 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.			
<u>xiv</u>	<u>xiv) Marking:</u> OIL's logo, Purchase order No. and manufacturers name shall be die stamped/weld written in the shell of the separator.			
<u>xv</u>	xv) The Bidder shall filled up and submit Technical specification on the check list(annexure-I), Tender notes check list (annexure-II) , BRC/BEC check list (Annexure-III), along with technical bid as per attached format. All format shall be filled up with detailed information/specification. In the check lists the use of words like complied or yes or considered is not suffice the requirement of check list. The bidder shall categorically provide the information			

Tender No. SDI7071P18 DT: 06.02.2018

<u>NIT clause no</u>	<u>Technical specification as per NIT</u>	<u>Bidder's Response</u>	<u>Compliance by Bidder</u>	
			<u>Indicate Complied or Deviation if any</u>	<u>Indicate Corresponding page ref. of unpriced bid or Comments if any</u>
	as per requirements of the check lists.			

MATERIAL LIST

PARTICULARS												DRG. REF.	SKETCH NO OIL	REMARKS
COL. L	COL. K	COL. J	COL. I	COL. H	COL. G	COL. F	COL. E	COL. D	COL. C	COL. B	COL. A	ITEM NO.	CAT. NO/MATERIAL SUPPLIERS REF.	
											1-OFF 20LB	1	SHELL	IS: 2002 GR. 2A / SA 516 GR. 60/70
										2		1(a)	1250 X 3435 X 26 TK. MINIMUM M.S. PLATE	"
										3		1(b)	690 X 3435 X 26 TK. MINIMUM M.S. PLATE	"
											2-OFF	2	DISHED END (1093 O/D X 266 HT. X 28 TK.) (SEMIELLIPTICAL HEAD)	
											1-OFF 20LB	3	WELL STREAM INLET	
												3(a)	152-40 (6") SLIP ON WELDING FLANGES (300 CLASS)	DRILLED TO ANSI-B-16.5
												3(b)	152-40 (6") X 290 LONG PIPE PIECE	
												3(c)	295 O/D X 5 TK. M.S. REINFORCEMENT PLATE	
												3(d)	500 X 300 X 6 TK. M.S. PLATE	IS: 2002 GR. 2A / SA 516 GR. 60/70
												3(e)	40 X 40 X 6 L.I. 2700 LONG TO MAKE THE PRIMARY MIST EXTRACTOR	"
											1-OFF	4	RELIEF VALVE CONNECTION 50-8 (2") X 3000PSIG W.P. LINE PIPE COUPLING (FULL THREADED)	STD. WT. (ASTM 106)
											1-OFF	5	SAFETY HEAD CONNECTION 76-20 (3") X 3000PSIG W.P. LINE PIPE COUPLING	STD. WT.
											1-OFF 20LB	6	PRESSURE GAGE CONNECTION 12-70 (1/2") X 3000PSIG W.P. LINE PIPE COUPLING (NPT)	"
												7	GAS OUTLET	
												7(a)	152-40 (6") SLIP-ON WELDING FLANGES (300 CLASS)	ASTM A 105
												7(b)	152-40 (6") X 300 LONG PIPE PIECE	STD. WT. (ASTM 106)
												7(c)	295 O/D X 5 TK. M.S. REINFORCEMENT PLATE	IS: 2002 GR. 2A / SA 516 GR. 60/70
												7(d)	406-40 (16") X 200 LONG PIPE PIECE	STD. WT. (IS: 2002 GR. 2A / SA 516 GR. 60/70)
												7(e)	406-40 X 10 TK. M.S. PLATE COVER	IS: 2002 GR. 2A / SA 516 GR. 60/70
												7(f)	6 TK. X 100 X 37 M.S. STAY PIECE.	MS. IS: 2062
											2-OFF 20LB	8	HOISTING EYE	
												8(a)	20 TK. X 200 X 140 M.S. PLATE FOR THE EYES	MS. IS: 2062
												8(b)	10 TK. X 240 X 150 M.S. PLATE FOR EYE PADS.	IS: 2002 GR. 2A / SA 516 GR. 60/70
											1-OFF 20LB	9	VANE TYPE SECONDARY MIST EXTRACTOR	
												9(a)	2400 X 300 X 6 TK. M.S. PLATE SHAPED TO BEND ALONG SHELL FOR VANE SUPPORT	MS. IS: 2062
												9(b)	1000 X 300 X 6 TK. M.S. PLATE HORIZONTALLY ACROSS SHELL FOR VANE SUPPORT.	MS. IS: 2062
												9(c)	40 X 40 X 6 L.I. TO MAKE THE VANES (35100 LONG APPROXIMATELY)	MS. IS: 2062
											1-OFF	10	THERMOMETER CONNECTION 12-7 (1/2") X 3000PSIG W.P. LINE PIPE COUPLING (NPT)	STD. WT.
											1-OFF	11	WAVE BREAKER 300 X 1065 X 6 TK. M.S. PLATE	MS. IS: 2062
											2-OFF 20LB	12	12-7 (1/2") X 3000PSIG W.P. COUPLING (NPT) FOR L.G.G.A.	STD. WT.
												13	OIL OUT LET	
												13(a)	101-60 (4") SLIP-ON WELDING FLANGES (300 CLASS)	ASTM A 105
												13(b)	101-60 (4") X 165 LONG PIPE PIECE	STD. WT. (ASTM 106)
												13(c)	190 O/D X 5 TK. REINFORCEMENT PLATE	IS: 2002 GR. 2A / SA 516 GR. 60/70
											1-OFF 20LB	14	LIQUID LEVEL CONTROL	
												14(a)	254-00 (10") SLIP-ON WELDING FLANGE (300 CLASS)	ASTM A 105
												14(b)	254-00 (10") X 136 PIPE PIECE	STD. WT.
												14(c)	438-00 O/D X 5 TK. M.S. REINFORCEMENT PLATE	IS: 2002 GR. 2A / SA 516 GR. 60/70
											2-OFF 20LB	15	SUPPORTING STOOL	IS: 2062
												15(a)	650 X 300 X 16 TK. M.S. PLATE	
												15(b)	450 X 300 X 16 TK. M.S. PLATE	IS: 2002 GR. 2A / SA 516 GR. 60/70
												15(c)	810 X 150 X 16 TK. M.S. PLATE	
											2-OFF	16	101-60 (4") X 3000PSIG W.P. COUPLING (L.P. THREADED)	STD. WT.
											2-OFF	17	40 X 6 F.S. BACK-UP STRIP 400 X	MS. IS: 2062
											2-OFF	18	BELLY PLATE 400 X 786 X 5 TK. M.S. PLATE	"

COLUMN 'A' ASSEMBLED TOGETHER MAKES THE COMPLETE TWO PHASE HORIZONTAL SEPARATOR

NOTES FOR BOLTS & NUTS

FOR ITEM NO.	BOLTS FOR	NO. OF BOLTS	THREAD DESIGNATION FOR STUDS	THREAD DESIGNATION FOR NUT	MATERIAL
13	4" FLANGES	8	3/4" - 10 UNC - 2A (3/4" LONG STUD)	3/4" - 10 UNC - 2B	BOLT - B51506 - 621
3 & 7	6" FLANGES	24	3/4" - 10 UNC - 2A (3/4" LONG STUD)	3/4" - 10 UNC - 2B	GRADE A
14	10" FLANGES	16	1" - 8 UNC - 2A (6" LONG STUD)	1" - 8 UNC - 2B	NUT - B5-1506 - 162
					GRADE 2H

NB. 6 NOS. SUITABLE FOUNDATION BOLTS ARE TO BE SUPPLIED BY SUPPLIER

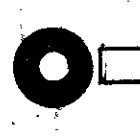
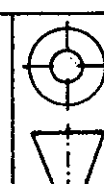
FOR GENERAL ARRANGEMENT AND DETAIL REFER TO DRG. NO. OIL/7617

ALL DIMENTIONS IN MILLIMETRE

REV. A 22.4.05 MODIFIED AS PER LETTER NO. PROD. OIL/95 /A.B.OF 22.04.05.

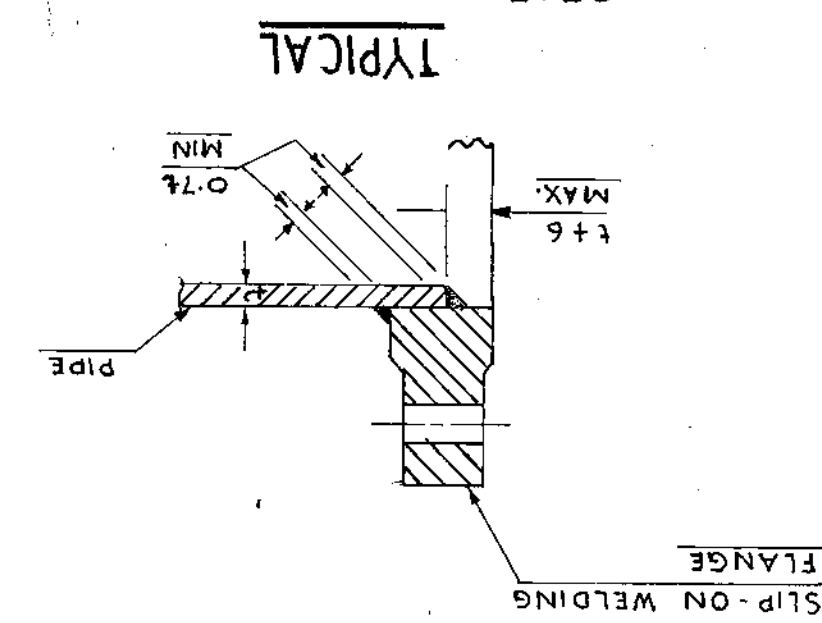
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APPROVED BY:  24.08.96 A.K. NATH SE CPP
DATE: 24.08.96 NAME: A.K. NATH DESIGNATION: SE CPP

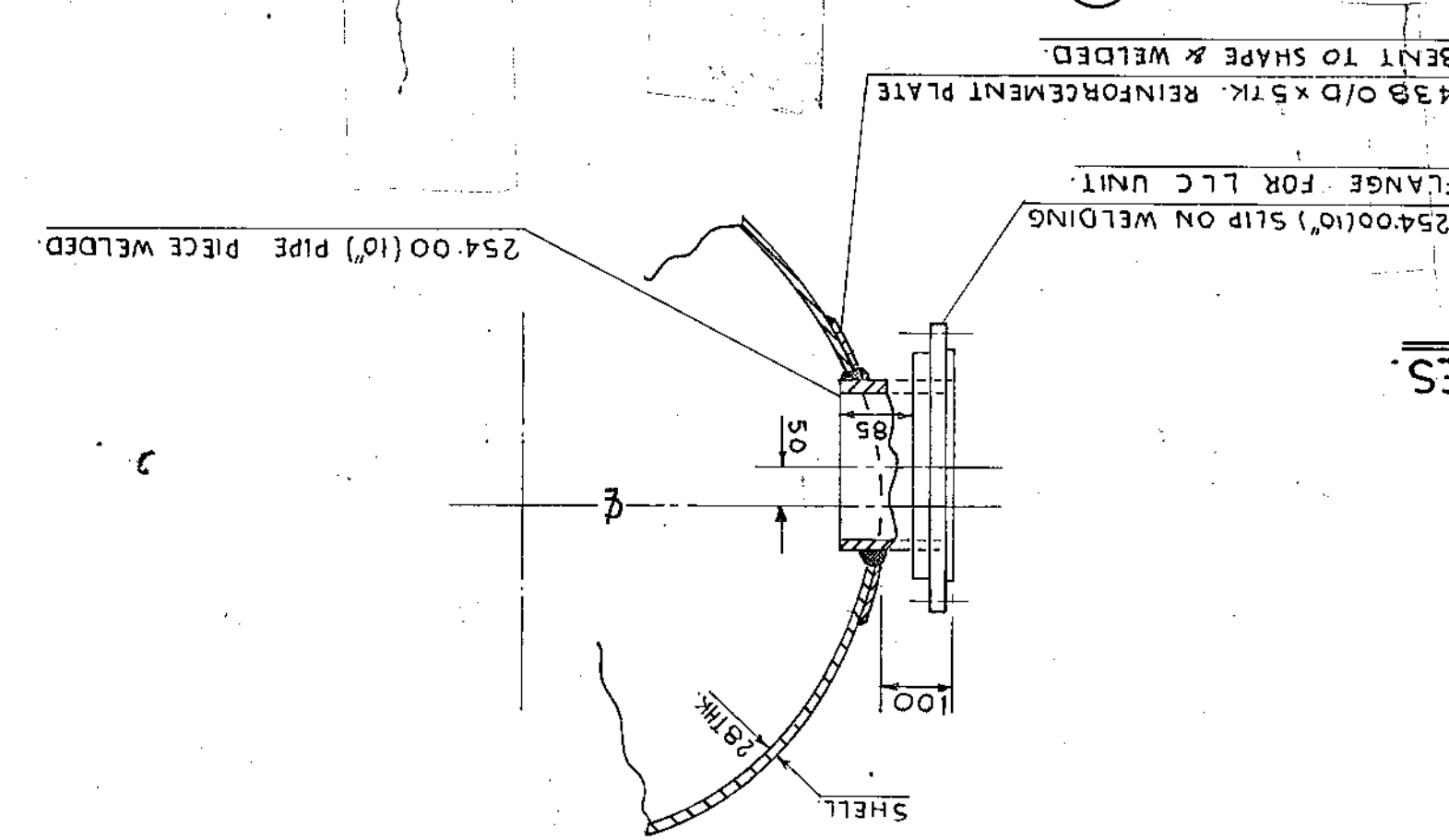
	OIL INDIA LIMITED		NAME	DATE
	DRAWING OFFICE		DESIGNED	
	DULIAJAN		DRAWN/	1.7.96.
			TRACED	
SCALE	TITLE		CHECKED	20.8.98
	2-PHASE HORIZONTAL GAS/OIL SEPARATOR MATERIAL LIST		APPROVED	
		SK. NO	OIL/3991/A	

ALL DIMENSIONS ARE IN MILLIMETRES.

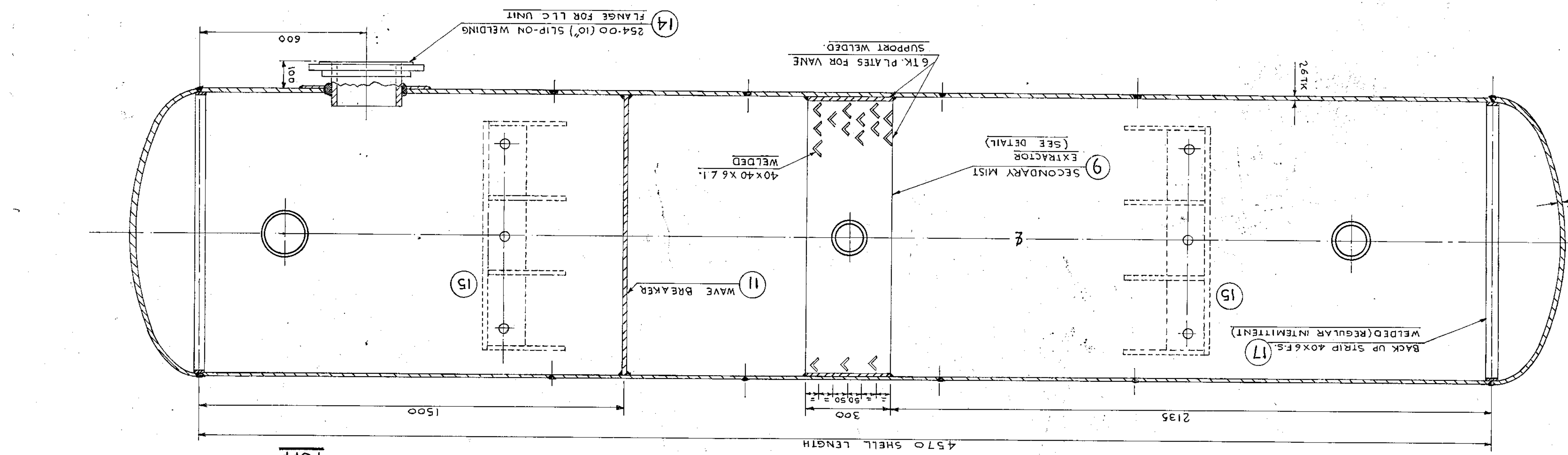
SECTIONAL WELDING DETAILS
OF SLIP ON WELDING FLANGES



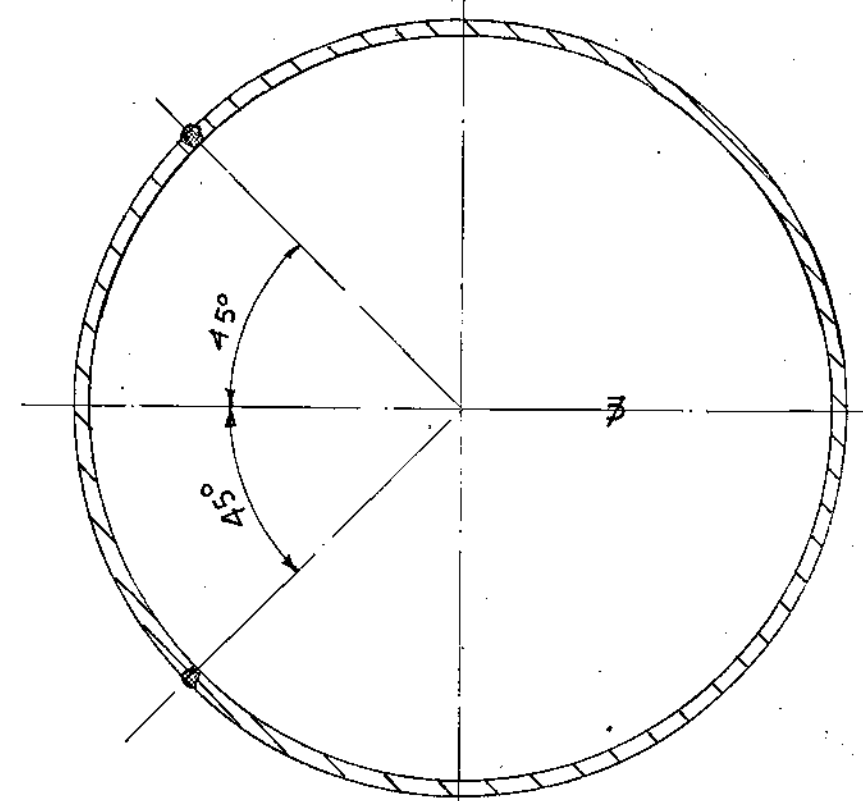
14 DETAIL OF LLC UNIT CONNECTION



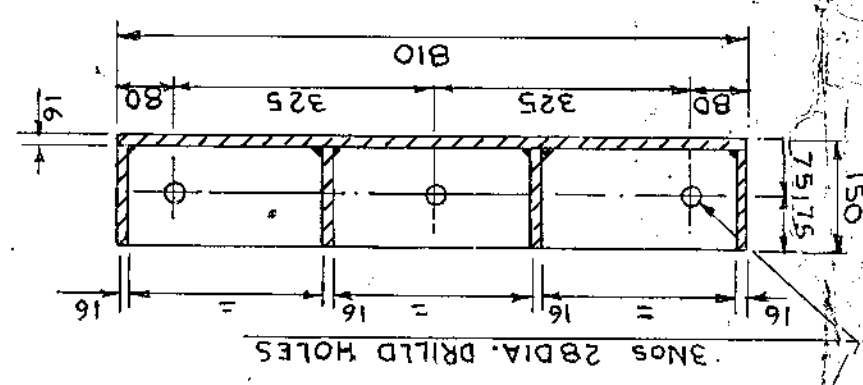
SECTIONAL PLAN ON E-E



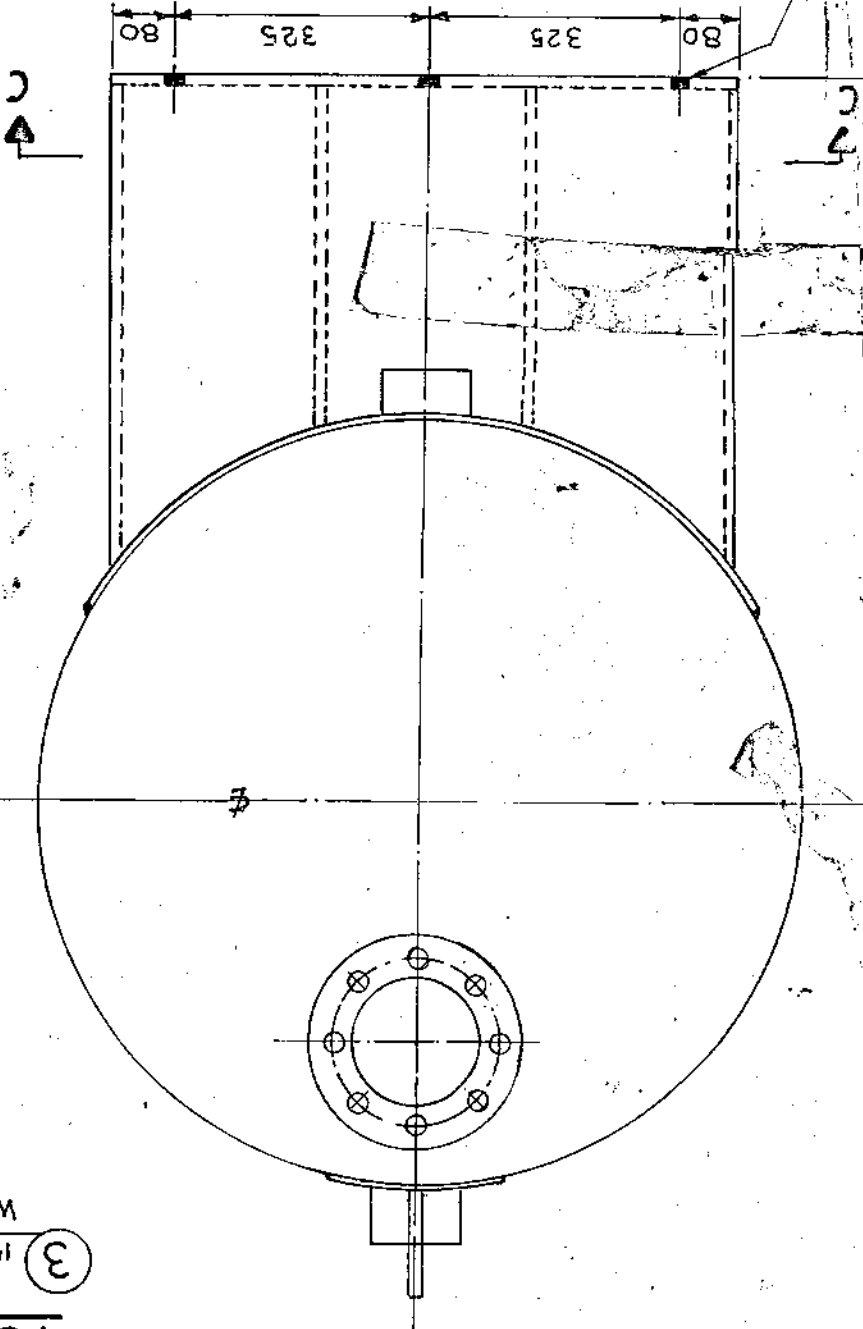
DETAIL OF SHELL WELDING



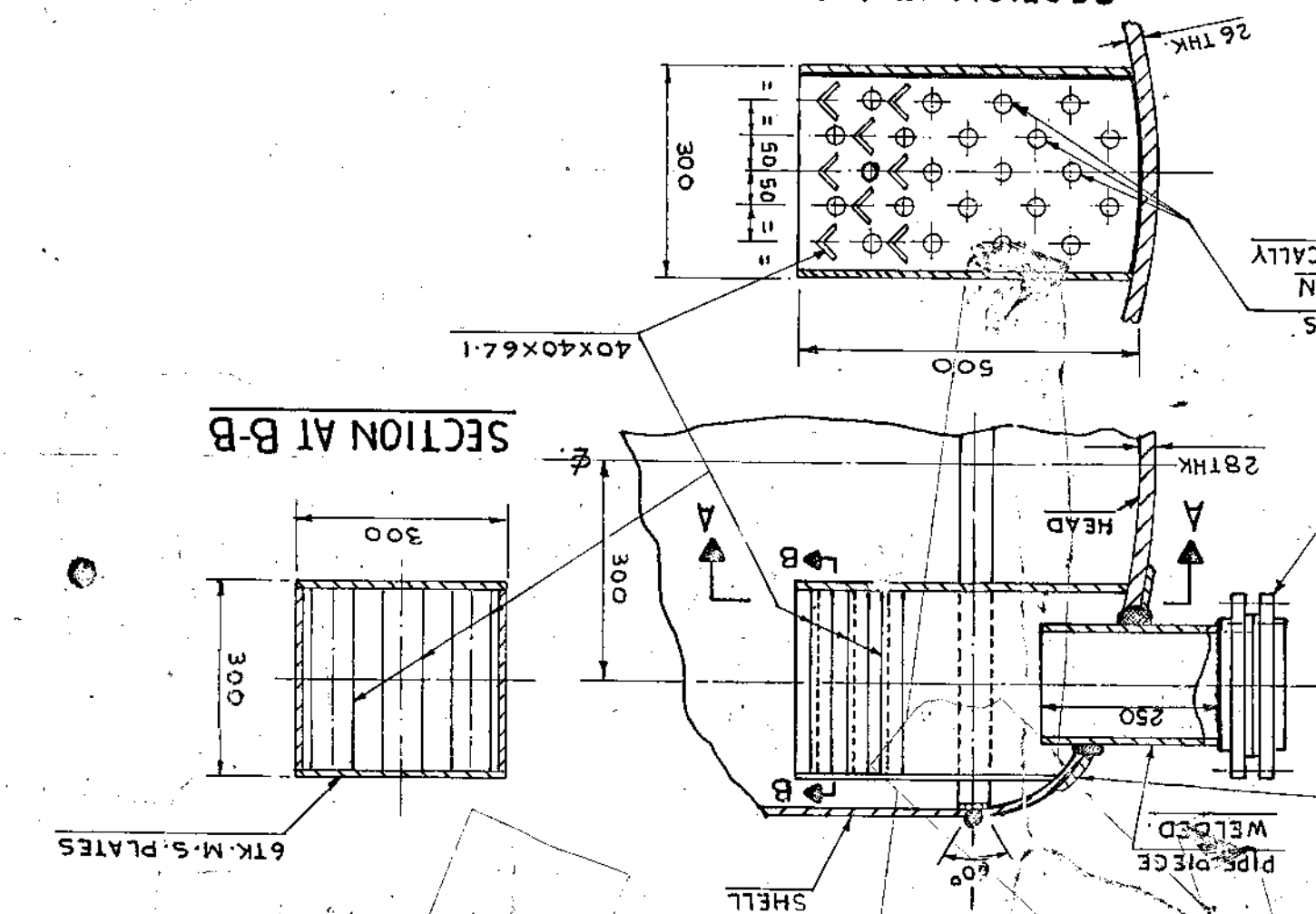
SECTION ON C-C



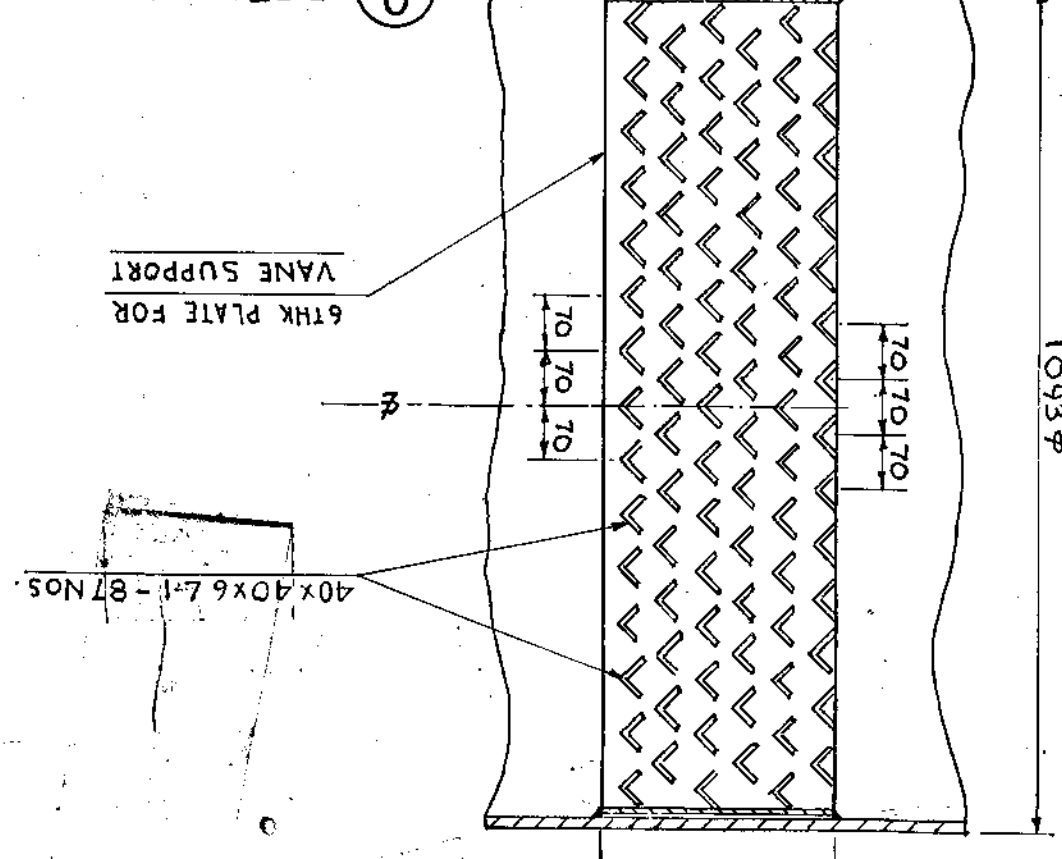
END VIEW LOOKING FROM-X



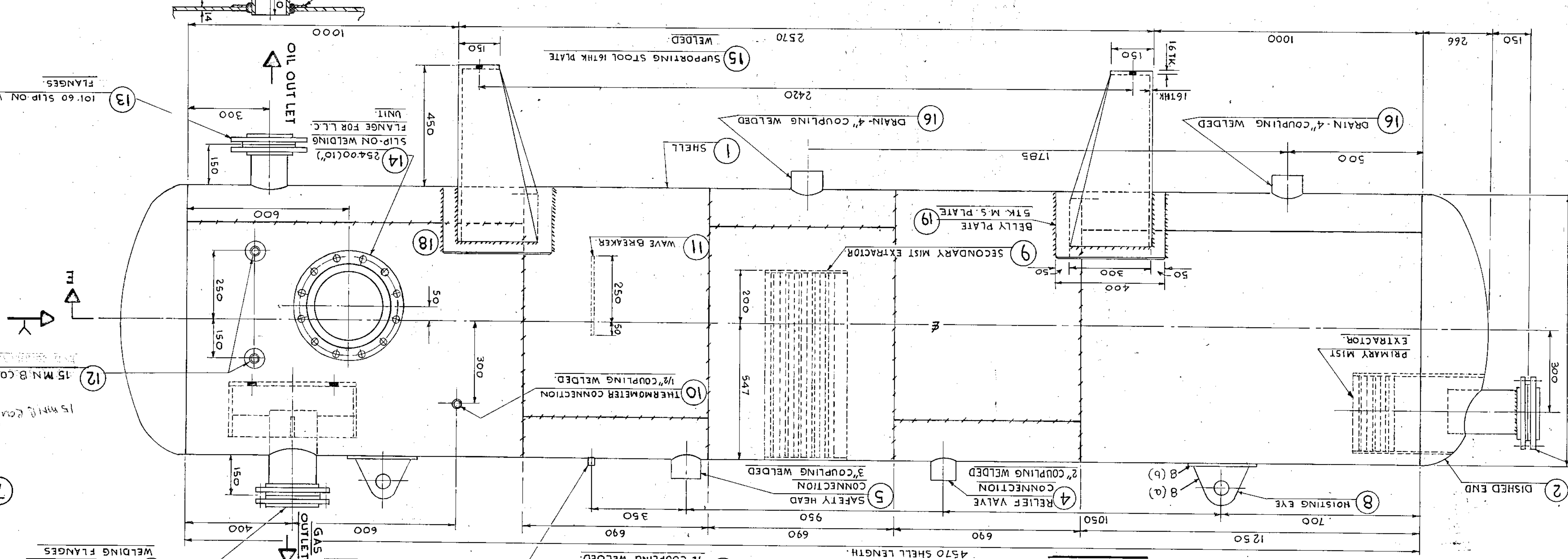
3 DETAIL OF WELL STREAM INLET



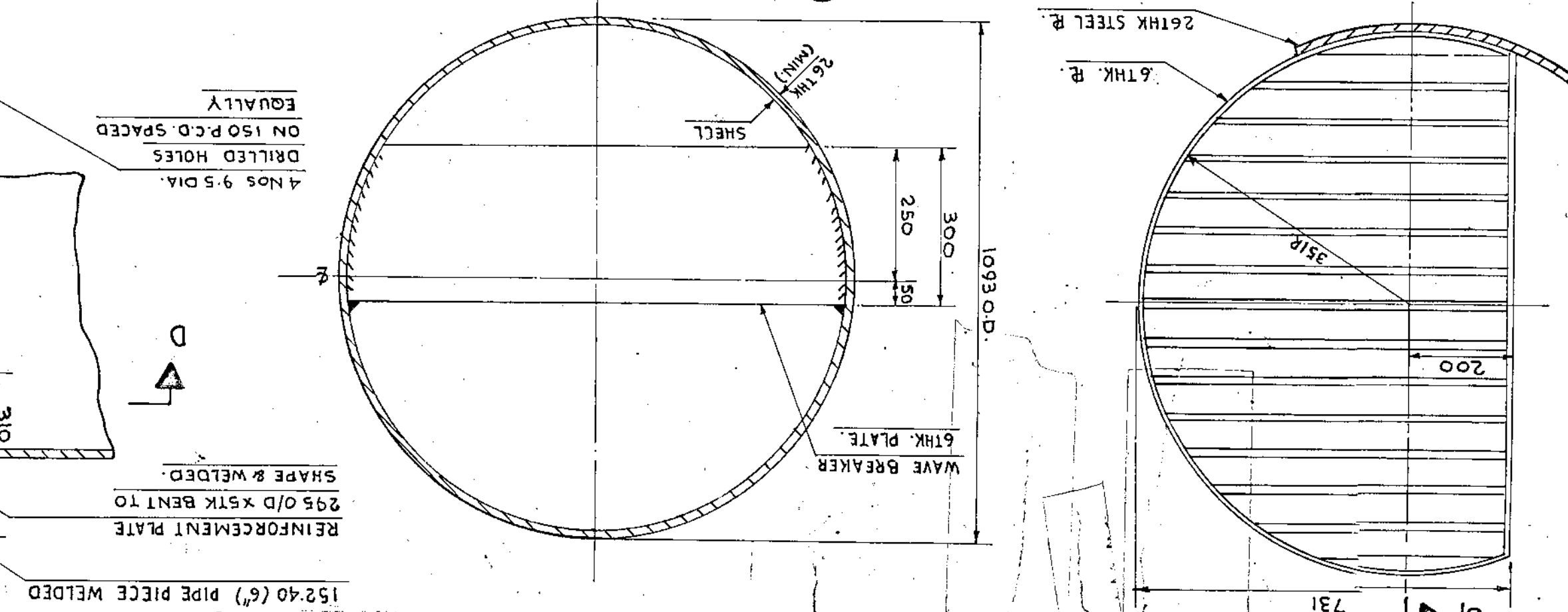
9 DETAIL OF VANE TYPE MIST EXTRACTOR



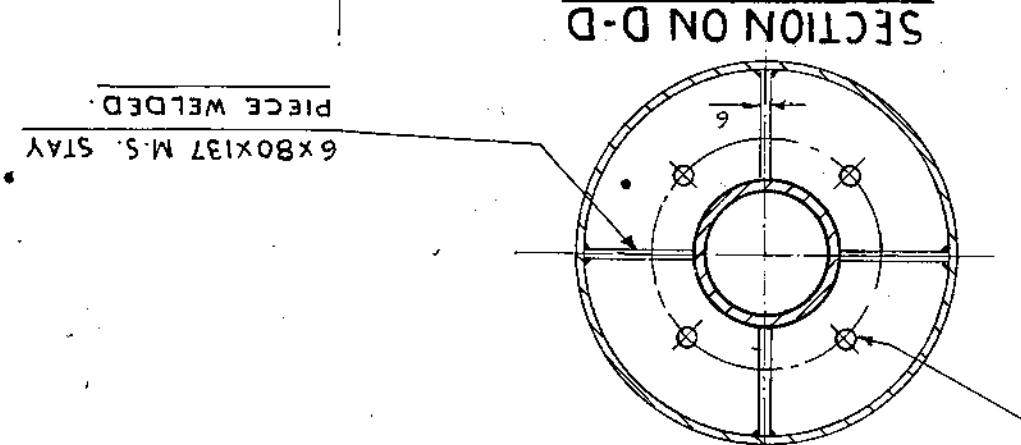
FRONT ELEVATION



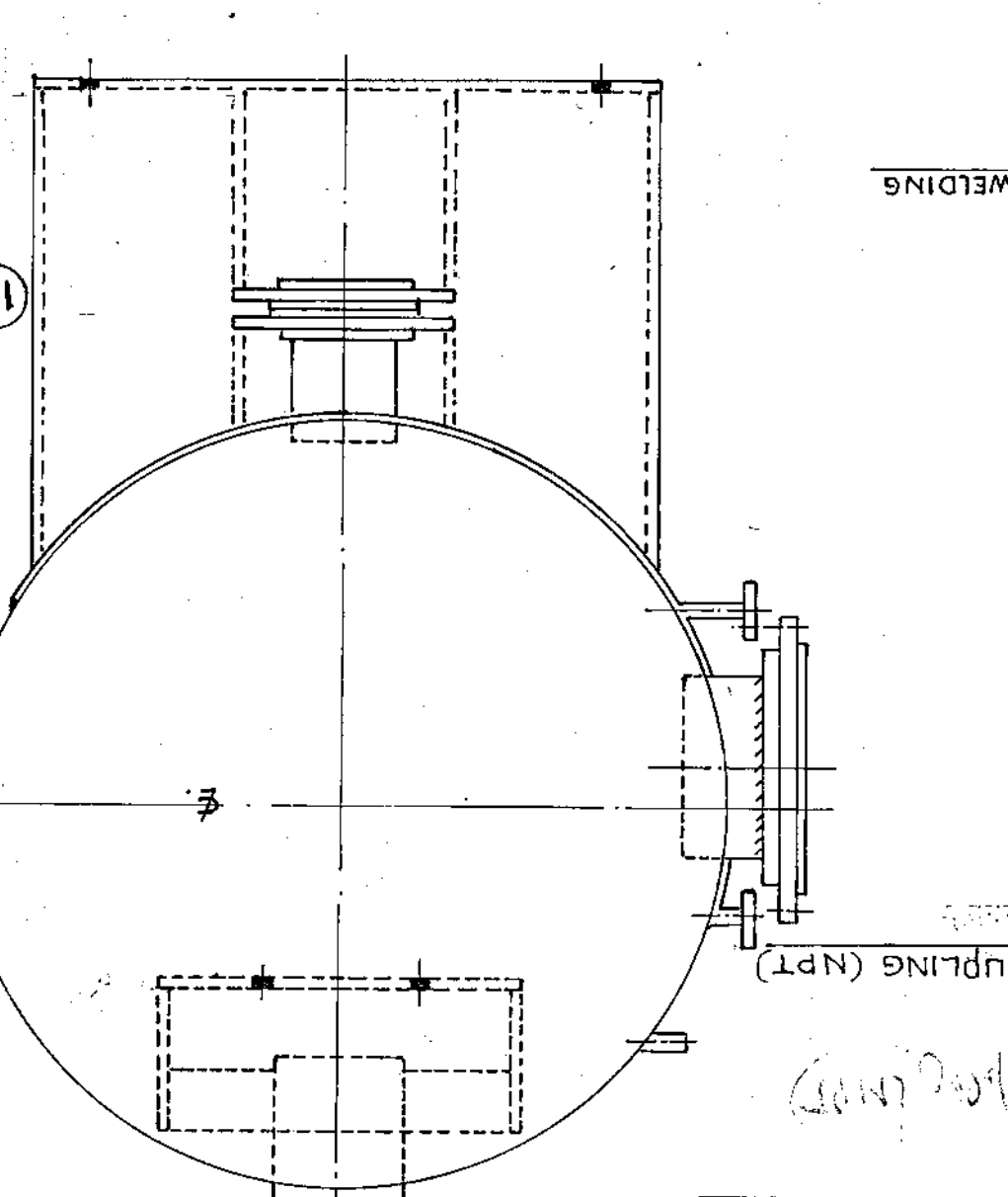
11 DETAIL OF WAVE BREAKER



7 DETAIL OF GAS OUTLET



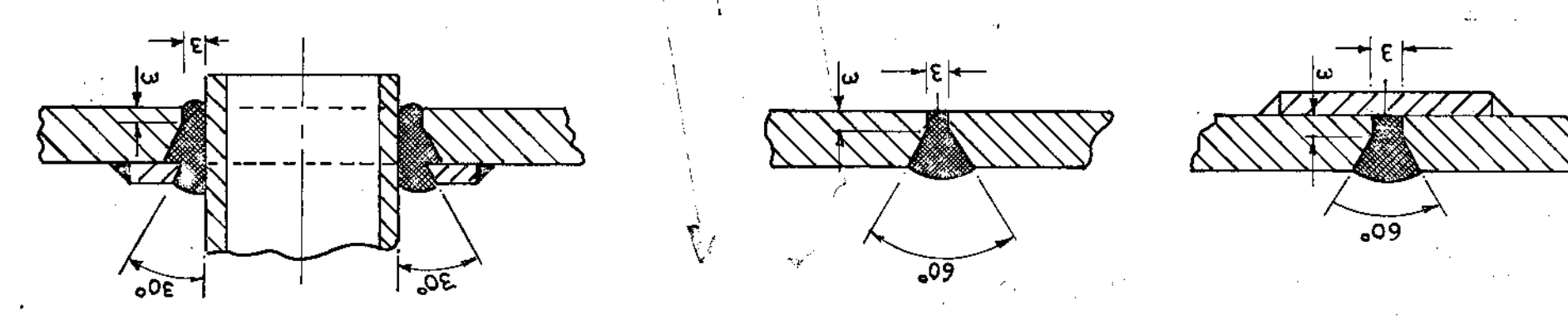
END VIEW LOOKING FROM-Y



OIL INDIA LIMITED	
DRAWING OFFICE	
DULAIJAN	
GAS/OIL SEPARATOR	
TWO PHASE HORIZONTAL	
DRG No	
OIL/7617	

REV	DATE	ZONE	DESCRIPTION
1	20.4.05		MODIFIED AS PER LETTER NO.

WELDING DETAILS



REF. DRGS.

1. FOUNDATION FOR TWO PHASE HORIZONTAL GAS OIL SEPARATOR REF SK. NO. OIL/3161.

2. FOR MATERIAL LIST REF. SK. NO. OIL/3391.

3. CORROSION ALLOWANCE OF 30MM IN VESSEL INCLUDED.

4. LIQUID DEPTH 15-450 FROM THE BOTTOM CENTRE LINE.

5. PRIMARY OBJECT

6. GAS GRAVITY

7. WORKING TEMPERATURE

8. DESIGN PRESSURE (MAX. W.P.)

9. TEST PRESSURE (HYDRO)

10. GAS FLOW RATE

11. OIL CAPACITY

12. DESIGN

13. AS PER ASME VIII

14. SINGLE BUTT FUSION WELD

15. SEAM

16. SINGLE BUTT WELD WITH BACK-UP STRIP

17. FINISH: APPLY ONE COAT OF RED OXIDE PAINT ON OUT SIDE ONLY AFTER CLEANING OUTER

18. SURFACE FINISH: RMA

19. ALL THE NOZZLE NECKS WILL BE PROVIDED RP PADS MADE OF SHELL MATERIAL

20. NEAR TREATMENT: REQUIRED FOR THE WHOLE VESSEL

21. SURFACE FINISH: RMA

22. FINISH: APPLY ONE COAT OF RED OXIDE PAINT ON OUT SIDE ONLY AFTER CLEANING OUTER

23. ALL COUPLING CONNECTIONS TO 3000PSIG WP AND SCREWED "API" LINE PIPE THREAD.

24. FLANGES TO BE DRILLED OFF C/S AS PER ANSI CLASS 300 RATING ANSI B-16.5 STD.

25. 6. SPOT RADIO GRAPHIC TEST TO BE DONE AS PER ASME SEC VIII PART-1.

26. 5. ALL THREADS AS PER "API" STD. UNLESS OTHERWISE STATED.

27. 4. STUDS & NUTS ON PRESSURE PARTS TO ANSI B-16.5

28. BOLTS & NUTS FOR NON PRESSURE PARTS TO B5.916

29. 3. ALL PRESSURE PLATES TO 1512002 GR 2A/SAB16 GR 60/TO/STEEL

30. NON PRESSURE PLATES TO 1512002 GR 2A/SAB16 GR 60/TO/STEEL

31. 2. DESIGN

32. AS PER ASME VIII

33. 1. SHELL

34. SINGLE BUTT FUSION WELD

35. SEAM

36. SINGLE BUTT WELD WITH BACK-UP STRIP

37. FINISH: APPLY ONE COAT OF RED OXIDE PAINT ON OUT SIDE ONLY AFTER CLEANING OUTER

38. SURFACE FINISH: RMA

39. ALL THE NOZZLE NECKS WILL BE PROVIDED RP PADS MADE OF SHELL MATERIAL

40. NEAR TREATMENT: REQUIRED FOR THE WHOLE VESSEL

41. SURFACE FINISH: RMA

42. FINISH: APPLY ONE COAT OF RED OXIDE PAINT ON OUT SIDE ONLY AFTER CLEANING OUTER

43. ALL COUPLING CONNECTIONS TO 3000PSIG WP AND SCREWED "API" LINE PIPE THREAD.

44. FLANGES TO BE DRILLED OFF C/S AS PER ANSI CLASS 300 RATING ANSI B-16.5 STD.

45. 6. SPOT RADIO GRAPHIC TEST TO BE DONE AS PER ASME SEC VIII PART-1.

46. 5. ALL THREADS AS PER "API" STD. UNLESS OTHERWISE STATED.

47. 4. STUDS & NUTS ON PRESSURE PARTS TO ANSI B-16.5

48. BOLTS & NUTS FOR NON PRESSURE PARTS TO B5.916

49. 3. ALL PRESSURE PLATES TO 1512002 GR 2A/SAB16 GR 60/TO/STEEL

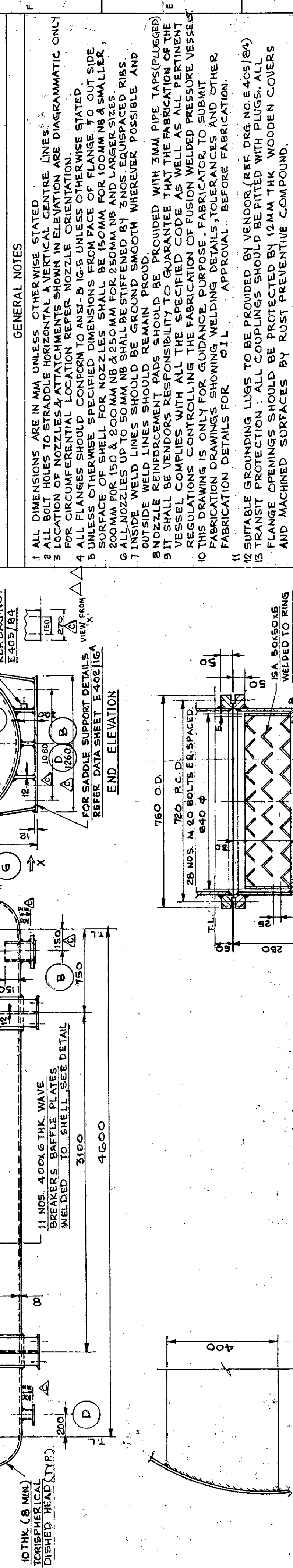
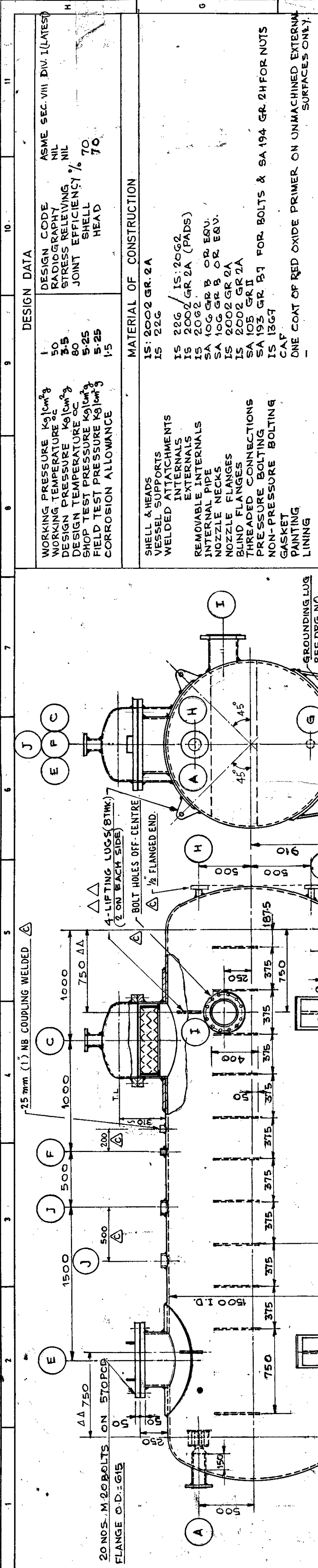
50. NON PRESSURE PLATES TO 1512002 GR 2A/SAB16 GR 60/TO/STEEL

51. 2. DESIGN

52. AS PER ASME VIII

53. 1. SHELL

54. SINGLE BUTT FUSION WELD



DESIGN DATA						
WORKING PRESSURE	1500 kg/cm ²	DESIGN CODE	ASME SEC. VIII DIV. 1 (LATEST)			
WORKING TEMPERATURE	350 °C	RADIATION	NIL			
DESIGN PRESSURE	1500 kg/cm ²	STRESS RELIEVING	NIL			
DESIGN TEMPERATURE	350 °C	JOINT EFFICIENCY	70			
SHOP TEST PRESSURE	1500 kg/cm ²	SHELL	70			
FIELD TEST PRESSURE	1500 kg/cm ²	HEAD	70			
CORROSION ALLOWANCE	1.5					
MATERIAL OF CONSTRUCTION						
SHELL & HEADS	15: 2002 GR. 2A					
VESSEL SUPPORTS	15: 22G					
WELDED ATTACHMENTS	15: 22G / 15: 20G2					
INTERNAL	15: 2002 GR. 2A (PADS)					
EXTERNAL	15: 2002 GR. 2A					
REMOVABLE INTERNALS	SA 106 GR. B OR EGV					
INTERNAL PIPE	SA 106 GR. B OR EGV					
NOZZLE NECKS	15: 2002 GR. 2A					
NOZZLE FLANGES	15: 2002 GR. 2A					
BLIND FLANGES	SA 106 GR. B					
THREADED CONNECTIONS	SA 193 GR. B					
PRESSURE BOLTING	SA 193 GR. B					
NON-PRESSURE BOLTING	SA 193 GR. B					
GASKET	SA 193 GR. B					
PAINTING	ONE COAT OF RED OXIDE PRIMER ON UNMACHINED EXTERNAL SURFACES ONLY					
LINING	-					
GENERAL NOTES						
1 ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED						
2 ALL BOLT HOLES TO STRADDLE HORIZONTAL & VERTICAL CENTRE LINES						
3 LOCATION OF NOZZLES & ATTACHMENTS SHOWN IN ELEVATION ARE DIAGRAMMATIC ONLY FOR CIRCUMFERENTIAL LOCATION. REFER NOZZLE ORIENTATION.						
4 ALL FLANGES SHOULD CONFORM TO ANSI-B-16.5 UNLESS OTHERWISE STATED						
5 SURFACE OF SHELL FOR NOZZLES SHALL BE 150MM FROM FACE OF FLANGE TO OUTSIDE						
6 ALL NOZZLES UP TO 50MM NB SHALL BE STIFFENED BY 3 NOS. EQUISPACED RIBS						
7 INSIDE WELD LINES SHOULD BE GROUND SMOOTH WHEREVER POSSIBLE AND OUTSIDE WELD LINES SHOULD REMAIN PROUD						
8 NOZZLE REINFORCEMENT PADS SHOULD BE PROVIDED WITH 3MM PIPE TAPS (PLUGGED)						
9 IT SHALL BE VENDORS RESPONSIBILITY TO GUARANTEE THAT THE FABRICATION OF THE VESSEL COMPLIES WITH ALL THE SPECIFIED CODES AS WELL AS ALL PERTINENT REGULATIONS CONTROLLING THE FABRICATION OF FUSION WELDED PRESSURE VESSELS						
10 THIS DRAWING IS ONLY FOR GUIDANCE PURPOSE. FABRICATOR TO SUBMIT FABRICATION DRAWINGS SHOWING WELDING DETAILS, TOLERANCES AND OTHER FABRICATION DETAILS FOR OIL APPROVAL BEFORE FABRICATION						
11 12 SUITABLE GROUNDING LUGS TO BE PROVIDED BY VENDOR (REF. DRG. NO. E405/84) TRANSIT PROTECTION: ALL COUPLINGS SHOULD BE FITTED WITH PLUGS. ALL FLANGE OPENINGS SHOULD BE PROTECTED BY 12MM THK WOODEN COVERS AND MACHINED SURFACES BY RUST PREVENTIVE COMPOUND.						
REF. DRAWINGS 1 GROUNDING LUG DETAILS E405/84 2 SADDLE SUPPORT DETAILS E402/11G						
WEIGHT OF VESSEL (KGS) EMPTY: ~2000 FULL OF WATER: ~2000						
NOZZLE DATA						
MARK	NOMINAL RATING#	TYPE	FACE			
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
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NOZZLE DATA						
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F	15	COUPLG	SCREWED			
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NOZZLE DATA						
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I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
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C	150	SO	RF			
B	150	SO	RF			
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NOZZLE DATA						
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I	250	SO	RF			
G&H	15	SO	RF			
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B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
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I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			
I	250	SO	RF			
G&H	15	SO	RF			
F	15	COUPLG	SCREWED			
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MARK	NOMINAL RATING#	TYPE	FACE			
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MARK	NOMINAL RATING#	TYPE	FACE			
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J	80	COUPLG	SCREWED			
I	250	SO	RF			
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E	500	SO	RF			
D	50	SO	RF			
C	150	SO	RF			
B	150	SO	RF			
A	150	SO	RF			
MARK	NOMINAL RATING#	TYPE	FACE			
NOZZLE DATA						
J	80	COUPLG	SCREWED			

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

Sl 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

**(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.