ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

Materials Department
(Rajasthan Field)
02-A, District Shopping Centre,
Saraswati Nagar,Basni
Jodhpur – 342 005
Rajasthan, India.
Phone -0291-2729466
Fax : 0291-2727050

TENDER NO. SJG3885P20 **Date: 19.02.2020**

INVITATION TO e-BID UNDER SINGLE STAGE TWO BID SYSTEM

Dear Sirs,

OIL invites Bids for the supply, installation and commissioning of **Glycol Dehydration Unit** through its e-Procurement site under **International Competitive Bidding (ICB) - Single Stage Two Bid System**. The bidding documents and other terms and conditions are available at Booklet No. MM-RP-GLOBAL-E-01-2005. The prescribed Bid Forms for submission of bids are available in the tender document folder.

The general details of tender can be viewed by opening the RFx [Tender no.] under RFx and Auctions page. The details of items tendered can be found under Item tab and details can be found under Technical RFX.

The tender is invited with firm price for the specified quantity. Further details of tender are given in Rfx Parameters → Technical Attachments as **ANNEXURE IA.**

THE TENDER WILL BE GOVERNED BY:

a) "General Terms & Conditions" for e-Procurement as per Booklet No. MM-RP-GLOBAL-E-01-2005 for E-procurement (ICB Tenders).

b) Technical specifications, Quantity and Notes for **Glycol Dehydration Unit** as per **Annexure – IA**.

c) The prescribed Bid Forms for submission of bids are available in the Technical Attachments. Technical Checklist & Commercial Checklist must be filled-up and submitted along with the technical bid.

d) The items covered by this tender 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. Indigenous bidder shall be eligible for Deemed Export Benefit / Concessional IGST against this purchase. Details of Deemed Export Benefit are furnished vide MM/RP/GLOBAL/E-01/2005 enclosed.

e) 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-CA certificate"*. The same must be submitted along with the bid.

SPECIAL NOTE:

1.0 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 **GM (C&P), Oil India Limited, Rajasthan Fields, 2A, Saraswati Nagar, District Shopping Centre, Basni, Jodhpur-342005, Rajasthan** on or before the Bid Closing Date mentioned in the Tender.

a) Original Bid Security.
b) Detailed Catalogue.
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 triplicate.

2.0 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.

3.0 OIL INDIA LIMITED (OIL) has upgraded its E-tender Portal. As part of the new system, the intending bidder must have Encryption Certificate along with Digital Signature Certificate (DSC) of Class III [Organization]. The date for implementation of new system is 12th April 2017 and the requirement of the new DSC will be applicable for the tenders floated on 12th April 2017 onwards. All our current and prospective esteemed bidders are therefore requested to acquire Class III DSC [Organization] along with Encryption Certificate issued by any of the Licensed Certifying Authorities (CA) operating under Controller of Certifying Authorities (CCA) of India as per Indian IT Act 2000. Guideline for getting Digital Signature and other related information are available on the e-tender website www.oil-india.com. The bid signed using any other digital certificate or digital certificate without organization name of the bidder, will be liable for rejection.

4.0 Encryption certificate is mandatorily required for submission of bid. In case bidder created response using one certificate (using encryption key) and bidder subsequently changes the digital signature certificate then the old certificate (used for encryption) is required in order to decrypt his encrypted response for getting the edit mode of his response. Once decryption is done, the bidder may use his new DSC certificate for uploading and submission of his offer. It is the sole responsibility of the bidder to keep their DSC certificate properly. In case of loss of DSC certificate, Oil India Limited is not responsible.

5.0 **Two Bid System** shall be followed for this tender and only the price-bids of the bidders whose offers are commercially and technically acceptable shall be opened for further evaluation.

6.0 Please ensure that Technical Bid / all technical related documents related to the tender are uploaded in the Technical RFx Response. 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.**

7.0 The "PRICE BID" must be strictly as per the online price format provided under "Notes and Attachments" tab of the e-tender on OIL's e-tender portal.

8.0 Please refer BEC/BRC applicable against this tender in Annexure-IB attached. Please ensure compliance to BEC/BRC and submit requisite documentation, failing which offer may be liable for rejection.

9.0 Bidder are advised to fill up the Technical bid check list and Response sheet as per given format along with the tender documents.

10.0 Please refer "**VENDOR USER MANUAL Rev2**" document available on OIL's e-tender portal for help on system settings and procedure to upload technical and price bids.

11.0 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.

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

13.0 Bidders to take special note of the following conditions:

13.1 Against Bid Security/EMD/Performance Bank Guarantee – Only payments through online mode or Submission of Bank Guarantee/LC will be acceptable. No DD/Cheques/Cashier Cheque or any other mode will be acceptable.

14.0 Attention about GST: Please ignore the details given about the taxes, duties & levies in anywhere in Tender documents which is not applicable now after implementation of GST with effect from 01.07.2017. Others all terms and condition remains same. Referred annexure for GST uploaded under Technical bid.

15.0 Bidders to categorically fill up undertaking as per format provided vide Annexure-X and submit the same along with their bid.

16.0 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 & At4ichment", 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 thee-tender.

17.0 Pre-Bid Conference: A pre-bid conference to explain Company's exact requirements and to reply queries of Bidders, if any, on the tender stipulations will be held on 20.05.2020 at 11:00 hrs (IST) in OIL's Jodhpur Office at 2A, District Shopping Centre, Saraswati Nagar, Basni, Jodhpur -342005, Rajasthan. Maximum of two representatives of each Bidder will be allowed to attend the pre-bid conference on producing authorization letter as per the proforma attached. Bidders interested to attend the Pre-Bid Conference should intimate MANAGER (M&C), Oil India Limited, Jodhpur latest by 18.05.2020 before 5:30 PM (IST).

Owing to the current Covid-19 Pandemic and resultant lockdown throughout the country, the Pre-bid conference shall be held online through Video Conference. Interested bidders are therefore, advised to submit their queries latest by 18.05.2020 up to 17:30 Hrs (IST) and also provide their email id and contact details for the Video Conference. OIL shall provide the necessary Webex link to the interested bidders to join the video conference on the scheduled date and time. However, in case of lifting of lockdown, if any vendor wishes to attend the pre-bid conference at OIL House, Jodhpur, the bidder has to intimate OIL well in advance so as to enable OIL to make arrangements for the same.

18.0 **FURNISHING FRAUDULENT INFORMATION/ DOCUMENT**: If it is found that a Bidder has furnished fraudulent document/information, the Bid Security/Performance Security shall be forfeited and the party will be debarred for a period of 3 (three) years from date of detection of such fraudulent act, besides the legal action. In case of major and serious fraud, period of debarment may be enhanced. In this regard, bidders to categorically fill up undertaking as per format provided vide Annexure-X and submit the same along with their bid.

19.0 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 along with 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.

Yours faithfully,
OIL INDIA LIMITED

Sd/-

(Bhavik Mody)
Manager (C&P)
Rajasthan Field
Jodhpur, Rajasthan

OIL INDIA LIMITED
(A Govt. of India Enterprise)
Rajasthan Project,
02-A,SARASWATI NAGAR,
DISTRICT SHOPPING CENTRE, BASNI
JODHPUR- 342005,
RAJASTHAN, INDIA

Fax-0291 2727050
Ph-0291 2727048
Email: mat_rp@oilindia.in

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Tender Fee	: INR	0.00	OR	USD	0.00
Bid Security Amount	: INR	2,900,000.00	OR	USD	40,120.00

(or equivalent Amount in any currency)

Bidding Type : Two Bid

Bid Closing On : 23.06.2020 at 11:00 hrs. (IST)
Bid Opening On : 23.06.2020 at 15:00 hrs. (IST)

Performance Guarantee : Applicable

OIL INDIA LIMITED invites Global tenders for items detailed below:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000239	Design, fabrication, installation, replacement of existing Glycol Plant, Commissioning of 1.5 MMSCMD of Glycol Dehydration Unit at Dandewala Gas Processing Centre The Technical Specifications and Special Terms and Conditions related to the above are furnished vide attached **Appendix-I.**	1	NO

Standard Notes: BIDDER TO QUOTE THEIR BEST DELIVERY PERIOD.

1) The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidder has to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" bid 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 Work & Technical Specification of the tender and "PRICED BID" as per the Price Bid format attached under "Conditions" tab.

2) In Technical Bid opening, only Technical Rfx will be opened. Therefore, the bidder should ensure that "TECHNO-COMMERCIAL UNPRICED BID" should contain details as mentioned in the technical specifications as well as BEC/ BRC. No price should be given in above Technical bid otherwise the offer will be rejected. Please go through the help documents in details before uploading the document and ensure uploading of technical bid as per the instructions. The "PRICE BID" must contain the price schedule. The prices of the items should be quoted in Price Bid format under "Notes & Attachments" tab.

3) Bid should be valid for **minimum 120 days** from bid closing date, failing which offer shall be rejected.

4) The original bid security (Amount is mentioned above and also in Rfx Parameters of the

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tender in OIL's e-portal) should reach us before bid closing date and time of the technical bid. Bid without original Bid Security will be rejected. The bidders who are exempted from submitting the Bid Bond should attach documentary evidence in the Technical RFx Response as per clause 9.8 of Section A General Terms and conditions for Global Tender (MM/RP/GLOBAL/E-01/2005). The bid security shall be valid up to **23.01.2021**. Only payments through online mode or Submission of Bank Guarantee/LC will be acceptable. No DD/Cheques/Cashier Cheque or any other mode will be acceptable.

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 Bid security to OIL's order/contract issuing office or upload the same on OIL's e-tender portal.

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, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003"

5) Performance Security @10% of order value is applicable against this tender. Please refer clause 10.0 of Section A of General Terms and conditions for Global Tender (MM/RP/GLOBAL/E-01/2005).

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 Performance Bank Guarantee to OIL's order/contract 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, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003"

6) 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".

7) Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro and Small Enterprises(MSE) in the tender is furnished vide General Terms and Conditions for Global Tender (MM/RP/GLOBAL/E-01/2005). Bidders are requested to take note of the same and to submit their offers accordingly.

8) 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

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BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer will be summarily rejected.

9) General terms and conditions of Global tender (document MM/RP/GLOBAL/E-01/2005) is enclosed.

10) The Integrity Pact is applicable against this tender. Therefore, please attach the Integrity Pact document duly signed along with your quotation as per BRC. The name of the OIL's Independent External Monitor at present are as under:
1. Shri Sutanu Behuria, IAS(Retd.);
E-mail: 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: rudhra.gangadharan@gmail.com

11) GST (Goods & Service Tax) will be cost loaded as quoted and in line with provisions of the bidding document. Any claim subsequently by the bidders for additional payment/liability shall not be admitted and has to be borne by the bidders. For GST clause please refer Annexure-GST.

12) Price should be maintained as per the price format under "Notes & Attachments" tab only. The price quoted in the price format under "Notes & Attachments" tab will only be considered.

13) Bidders without having 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/irj/portal.

14) 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.

15) MSEs Units (manufacturers/Service Providers only and not their dealers/distributors) who are already 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 are exempted from payment of Bid Security (EMD) irrespective of monetary limit mentioned in their registration, provided they are registered for the item they intend to quote/participate.

16) For availing benefits under Public Procurement Policy (Purchase preference & EMD exemption), the interested MSE Bidders must ensure that they are the manufacturer of 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 registered item 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.

17) Purchase Preference on Local Content is applicable against this tender. Please refer the Special Notes in this document for the applicable clause.

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Special Notes : Purchase preference policy (linked with Local Content)(PP-LC)

This tender will be governed by the Purchase preference policy (linked with Local Content) (PP-LC) of Ministry of Petroleum & Natural Gas, Government of India. Indian Bidders are advised to refer notification no. O-27011/44/2016-ONG-II/FP dtd. 25.04.2017 and subsequent amendments, if any, and submit the necessary documents, declaration, undertaking etc. as per the policy guidelines along with their bid. As per the PP-LC policy, 50% of the tendered quantity would be awarded to the lowest techno-commercially qualified LC (Local Content) manufacturer /supplier which are within the price band of 10% of the L1, subject to matching the L1 price. Bidders seeking Purchase preference (linked with Local Content) (PP-LC) shall be required to meet / exceed the target of Local Content (LC) as per values furnished vide original notification of the policy and subsequent amendments applicable as on the bid closing date. The remaining quantity will be awarded to L1 (i.e. Non-Local Content (NLC) manufacturer / supplier not meeting prescribed LC criteria). In case a bidder is eligible to seek benefits under PP-LC policy as well as Public Procurement Policy for MSEs-Order 2012, then the bidders should categorically seek benefits against only one of the two policies i.e. either PP-LC or MSE policy. If a bidder seeks EMD exemption under the MSE policy, then it shall be considered that the bidder has sought benefit against the MSE policy and this option once exercised cannot be modified subsequently. Evaluation of bids with reference to PP-LC policy shall be done by OIL based on the documents submitted by the bidder. OIL shall not be responsible for any incorrect/incomplete submission of documents by bidder leading to non-compliance to PP-LC policy and denial of benefits under the policy.

BG CONFIRMATION

Please 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 to OIL's order/contract 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, Jodhpur Branch, IFS Code - UTIB0000057; Swift Code: AXISINBB057. Branch Address - AXIS Bank Ltd, Prince Tower, Near Jaljog Circle, Residency Road, Jodhpur - 342003.

APPENDIX - I

SCOPE OF SUPPLY/TECHNICAL SPECIFICATIONS/TERMS OF REFERENCE

TERMS OF REFERENCE / SCOPE OF WORK / TECHNICAL SPECIFICATIONS

1.0 DESCRIPTION OF PROJECT:

OIL INDIA LIMITED discovered commercially viable gas fields at Tanot, Dandewala and Bagitibba in Jaisalmer district of Rajasthan. These fields are located at a distance of approx. 120 kms. North-West of Jaisalmer Township. To operate the fields, OIL has two production installations viz., Gas Processing Centre (GPC) at Dandewala and a Gas Gathering Station (GGS) at Tanot besides a permanent base camp (Tanot Village Complex, TVC) near Tanot BSF camp. Dandewala field and GPC are at a distance of about 35 kms and Tanot GGS is situated at a distance of 22 kms from Tanot Village Complex. These are connected with oil field road.

Dandewala field is located in the Jaisalmer district of Rajasthan state, having distance of 122 km from Jaisalmer city. Oil India Limited is operating in Jaisalmer Petroleum Mining Lease (PML) block comprising of three fields Viz. Tanot, Dandewala and Bagitibba fields right from discovery of Natural Gas in 14.08.1988 in Tanot field from TOT#1 well. 12 wells were drilled in Tanot field out of which 4 wells are having pressure, which needs workover operation for revival.

Subsequently Dandewala field came in existence with the discovery of NG from DND field on 26.08.1990, from DND#1 well. Later on more wells came in this field for developing the field for commercial production.

This resulted in setting up of a centralised Natural Gas Processing facilities named DND GPC (Dandewala Gas Processing Complex) with the capacity of handling 1 MMSCM of Natural Gas per Day, which was established in 1996 with the help of Punj Lloyd Ltd. The gas produced from these fields is essentially used for power generation by Rajasthan State Electricity Board (RSEB).

2.0 OPERATING AREA GEOGRAPHIC LOCATION

Dandewala, the area of operation, is located at the western part of the country India and in the states of Rajasthan. Rajasthan encompasses most of the area of great Indian desert (Thar desert), which has an edge paralleling the Sutlej-Indus river valley along its border with Pakistan. The region borders Pakistan to the west, Gujarat to the southwest, Madhya Pradesh to the southeast, Uttar Pradesh and Haryana to the northeast and Punjab to the north. The nearest airport to the operating area is Jaisalmer airport and is located at a distance of around 130 km. Map attached as Annexure-I.

3.0 CLIMATIC CONDITION

The climatic conditions of these areas are generally hot and dry. It is characterized by extreme temperature and scarce rainfall. The hot weather is very prolonged and starts from the month

of April to end of August. The maximum and minimum recorded ambient temperature at the site is 60^0 C and minus 5^0 C respectively. The rainfall in these areas is scanty and scarce. The average normal rainfall is only 1" (25 mm). The maximum humidity recorded in this region is 40%.

Components	**International System (SI)**
Ambient Temperature (Max. / Min.)	60 / -1 Deg C
Humidity (Max.)	69%
Average Rainfall	125 mm/year
Wind velocity(Max.)	128 KM/Hr
Frequency of Sand storm	March to September and occasional during the remaining period
Seismic	Zone III, Moderate
Topography of Site	Part of Thar Desert
Weather	Two distinct seasons - Summer and Winter
Bearing Capacity of Soil kPa	27.50 ton/m2
Average Relative Humidity in the hottest month (July, Aug.) %	69
Average Relative Humidity in the coldest month (Dec., Jan.) %	54
Basic seismic intensity design; Degree	6.3
Peak Acceleration of Ground Motion; g	0.300-0.600

4.0 Process Description:

Gas produced from the wells at Dandewala, Bagitibba and Tanot Fields are collected at the central location DND-GPC. The facility consists of manifolds, processing and well testing.

The produced gas from the above three fields are brought to the common location for processing at Dandewala Gas Processing Complex (DND-GPC). The processed gas is then metered using the custody transfer meter and then dispatched to GAIL for further distribution to the consumer i.e. RRVUNL's Ramgarh Power Plant. The well fluid collection and testing facilities for Tanot field is located at Tanot GGS and similar facilities for well fluid produced from Dandewala and Bagitibba fields are available at DND-GPC.

TANOT – GGS

The produced gas from the wells in Tanot Field is collected at Tanot-GGS manifold, which consists of production header and the test header. Well fluid from any well can be diverted to the Tanot test separator which is a two phase separator with metering facilities on the gas and liquid outlet lines. The test separator is operated at a pressure slightly higher, than the pressure in the production header, so that, the gas and liquid coming out from the test separator can be combined and put back into the production header. The test separator can also be operated at lower pressure (in case a particular well needs to be tested at low pressure). In such a situation the gas will be vented and liquid will be disposed of in an evaporation pit during the time of testing. The Tanot GGS is normally an unmanned station and personnel are required to be sent to the GGS

as and when well testing has to be undertaken. The Tanot GGS gas is sent for processing at Dandewala GPC through an 8"dia, about13 km long pipeline. Pigging facilities are available for this pipeline. The pig launcher is located at Tanot GGS and pig receiver is at Dandewala GPC. The natural gas is used as instrument gas at Tanot GGS after suitable pressure reduction and filtering. An instrument gas receiver provides for 10 minutes' buildup of instrument gas for a safe shut down in case of instrument gas supply failure. Power supply for normal operation at Tanot GGS is provided through solar power with battery bank as back up. A diesel generator set is provided for use during manned operation. At present Tanot GGS is closed as the wells are not in production.

Dandewala Gas Processing Complex (DND-GPC):

Dandewala Gas Processing Complex consists of gathering and testing facilities for wells in Dandewala and Bagitibba fields as well as facilities for processing and handling the well fluid from Tanot Fields.

Gas/Condensate Processing Facilities:

The processing facilities at DND-GPC consist of separate production separators for Dandewala-Bagitibba combined production and for Tanot Field, gas dehydration units and the common condensate stabilizer and storage facility. Gas from Tanot Field is received in the Tanot production separator through 8" pipeline from Tanot GGS. The Dandewala-Bagitibba gas from the Dandewala production header goes to 2 phase horizontal separator to drain liquid and then to the Dandewala production separator. The gas production from these fields is regulated as per requirement of the customer. However, the combined design handling capacities of DND-GPC is 1 MMSCUMD and that of TOT-GGS is 0.4 MMSCUMD. The gas from the two production separators is combined and then sent to the coalscer separator.

All processed drainage is provided to the underground sump (gravity separator) where water and condensate get separated. The condensate is then pumped to the condensate storage tanks with the help of sump pump. The separated water is pumped with the help of a sump pump to the evaporation pit. A ground flare system of 1.0 MMSCUMD capacity is provided for normal/ emergency flaring of gas.

Process Description of Glycol Dehydration Unit:

Glycol dehydration unit design is based on processing 1.0 MMSCUMD of natural gas feed stream. The operation of the unit is continuous with a turndown ratio of 30%. The CO2 gas content of the stream could be as high as 24-26% CO2. The feed stream pressures can vary between 25 and 35 Kg/cm^2 (A). The feed temperature will vary between 15 and 30^0 C. The dehydrated gas is defined as bone dry and the permissible maximum water content of the dehydrated gas stream shall not exceed 7 lbs/MMSCF and acceptable dew point shall be (-) 20^0 C maximum.

The gas stream @ 30^0 C containing free water enters the Inlet Coalescer Filter Separator where free water is separated from the gas. The free water level controlled to the automated drain header for disposal off-skid.

The gas stream is then metered through a conventional simplex orifice meter run before being directed to the bottom of the Glycol Contactor Tower (V-202). In this vessel, gas flows up through bubble cap trays counter current to the flow of lean Tri-ethylene Glycol.

During the process, TEG absorbs water from the wet gas. The dry gases at exits the top of the contactor and are then directed to the inlet of the Gas/Glycol Heat Exchanger (E-201) where they are heated to about 35 ^{0} C by the entering hot lean glycol before entering the Glycol Scrubber (V-203). In this vessel, any glycol carried over with the gas is separated, level controlled and re-injected back into the glycol stream just downstream of LCV-1631.

Water enriched Glycol is level controlled from the Contactor, through the reflux coil located in the top of the still column (c-201) and then enters the two phase Glycol Flash Drum (V-205). In this vessel, gases, which are flashed-off, are directed to the flare header. The wet Glycol is then level controlled through diaphragm liquid control valve located just downstream of the lean/rich Glycol Heat Exchanger (E-202). Before traveling through this valve, the glycol must first flow through the Glycol Filter (F-201 A&B) where solid impurities in the glycol are removed and then through the Charcoal Filter (F-202) where any hydrocarbons caught up in the Glycol can be adsorbed.

The wet Glycol then passes through the Plate Type Heat Exchanger (E-202), exchanging with the hot dry Glycol from the Reboiler. It then enters the still column and the Glycol Regenerator (H-201). Water vapour plus some Glycol vapour are driven from the Reboiler up the still column. The Glycol vapour is condensed by the cooler entering wet Glycol. Any glycol vapour above the feed point is retained by condensing a small amount of water reflux in the top of the column. Vent gases from the Glycol still column are then vented off skid to the atmosphere.
The liquid from the two production separator goes to the MP condensate flush drum. MP condensate flush drum is a three phase Separator where water is separated and sent to evaporation pit for disposal. The Condensate after separation goes to the LP condensate flush drum. The stabilized condensate then goes to condensate Storage Tank. The condensate collected in the condensate storage tank is dispatched periodically by road tankers. The condensate loading pump is provided for loading the condensate to the tankers.

The dehydrated natural gas (small quantity) is used as fuel gas and instrument gas in DND-GPC after suitable pressure reduction and filtration. An instrument gas receiver is provided at DND-GPC for safe shutdown facilities in case of instrument gas supply failure. The instrument gas receiver is provided with a 10 minute hold up of instrument gas requirement. Dry natural gas supplied to RRVUNL through GAIL after measuring at Custody Transfer meter. OIL also will have CTM for supply of gas to other vendors in future.

Power Supply Systems:

(a) **At DND-GPC:** DND-GPC is connected with 33 KV JVVNL distribution line with a step-down transformer of 33 KV/415 V. We have 2 Nos. 75 KVA diesel Generator sets as standby and an underground diesel storage vessel is provided with a

capacity to meet 15 days requirement for the complex. A diesel pump is provided for transferring diesel from the underground storage tank to the DG Sets.

Fire Fighting System:

The firefighting facilities at DND-GPC includes portable fire extinguishers, fire water reservoir (Capacity 220 KL), 2 Nos. of diesel engine driven fire water pump along with fire water ring main with hydrant, hoses, monitors, drenching and foam system to cover the processing equipment. Apart from above a Fire Tender shall be in standby at DND GPC to meet any emergency in the fields.

INSTRUMENTATION SCADA AND TELECOMMUNICATION SYSTEM:

Instrumentation, SCADA and communication system is designed and implemented for complete automation of the plant and centralized control from DND-GPC and monitoring at TVC control room.

Instrumentation:

DND-GPC and TOT-GGS are equipped with latest electronic and pneumatic instruments for smooth operation of the plant. This includes analog transmitters, alarm switches, gauges and control valves etc. Two turbine flow meter (one standby) in conjunction with flow computers are used as Custody Transfer Meter (CTM) for measuring gas flow to customer.

SCADA:

A latest and state-of-art SCADA system (Make: Yukogawa) was commissioned in Dec, 2009 for data acquisition from the field instruments and centralized control from DND-GPC control room. A control room is also provided at TVC for monitoring of DND-GPC and TOT-GGS with standby server. Two 10KVA UPS (Emerson) with SMF batteries for SCADA system is also provided at DND-GPC.

Telecommunication:

i. VHF communication is provided at DND-GPC, TOT-GGS and TVC for voice communication between these sites. Hand held walkie-talkie is also provided for communication within the plant and with nearby gas wells.

ii. Due to remoteness of the sites, VSAT communication with internet facility is also provided at TVC and DND to communicate with base at Jodhpur.

iii. For SCADA communication, TVC, DND-GPC and TOT-GGS are connected with Optical Fiber Cable (OFC) of about 35 Kms length.

5. SCOPE OF WORK

At present DND field has a potential of producing more than 1 MMSCM of Natural gas per day. Currently, OIL has a Gas Supply Agreement (GSA) of 0.7 MMSCM of Natural Gas per

day, and apart from this, possibilities are also being explored for additional gas supply to another agencies (customers), the proposal has already been made and it is with MoPNG (Ministry of Petroleum and Natural Gas). Keeping in mind the aforesaid plan, OIL needs capacity enhancement of the present installation (Gas Processing Plant), moreover planning is being done to start production from TOT (Tanot) field also. Apart from the new wells that are planned to be drilled in DND field in near future, some will be replacement wells against abandoned wells which were drilled in the production campaign carried out in 1990's.

Considering the aforementioned facts, planning is being done to enhance the capacity of the existing gas processing set up. However, the existing set up is quite old and the gas produced from this field has a very high percentage of saline water and CO_2, which is highly corrosive in nature. Apart from this, environment is also very tough in terms of frequent Sand Storms occurrence and high temperature variations (-1 deg C to 60 deg C).

A brief major requirements of the facilities under the capacity enhancement project of DND GPC are as follows which needs to be procured under the scope of this tender:

a. Glycol Dehydration Unit of capacity 1.5 MMSCMD for gas at operating pressure is 35-45 kg/cm2;
b. Piping Network of SS material only connecting the new unit to the existing set up.

6. Scope of Supply

Bidder shall be responsible for, but not limited to, the following scope of work:

- Process Design of the complete Gas Dehydration System.
- Mechanical design, sizing, engineering, material procurement, coordination, fabrication, surface treatment, quality control, inspection & testing, certification, insulation, painting, packaging and supply of Glycol Contactor with integrated Scrubber in accordance with the datasheet and specifications enclosed with RFQ.
- Mechanical design, Electrical design, sizing, engineering, material procurement, coordination, fabrication, surface treatment, skid assembly, quality control, inspection & testing, certification, insulation, painting, packaging and supply of the Glycol Regeneration Package, complete in all respect, in accordance with the specifications / requirements enclosed.
- Design of vessels, fabrication drawings and hook-up drawings, isometrics drawings, all piping, electrical, control system local and remote, interconnecting piping system including Valves & fittings and accessories, instrumentation and control systems.
- Design of piping, electrical, instrumentation & control system and structural within the Glycol Regeneration skid battery limit.
- Unit Control Panel and Local Control Panels for the complete Gas Dehydration System.
- Assistance during commissioning, start-up and Performance Guarantee Test as an optional scope of work.
- Process performance guarantees and equipment/materials guarantees.

- Third Party Inspections and Certification/Classification work as per Inspection Category A.
- Design and engineering of interconnecting piping system, Instrumentation, controls, safety and shut down system between Glycol Contactor and the Glycol Regeneration package, including the GA and ISO drawings, based on the plot plan provided in the RFQ. The Plot Plan indicates the locations of the Contactor and the Glycol Regeneration Package.
- Design, engineering, procurement and supply of Instruments for the interconnecting piping between the Glycol Contactor and the Glycol Regeneration Package, its installation.
- RCC Foundation, Civil work
- Complete installation & commissioning

Bidder shall perform all necessary process simulations, design calculations and consider adequate design margins while specifying equipment's/ instrumentations based on OIL's requirement and specification. Bidder's responsibility also includes carrying out safety studies, review operability aspect of the facilities and incorporate findings of the same while designing the facilities. Any deviation shall require Company's approval. Bidder shall develop detailed process design basis, process flow diagrams; material & energy balance data for different cases indicated in the datasheet and design the process and associated systems accordingly.

Further Bidder shall develop detailed Piping and Instrumentation Diagrams, Causes & Effect diagrams, SAFE charts, incorporating all suppliers' information. Contractor shall prepare data sheets / specifications for all the tagged items (equipment's / instruments, etc.). Bidder shall ensure that design of Gas Dehydration System shall meet the relevant codes requirements. A typical list of applicable codes is included in the RFQ document. This, however, cannot be taken as an exhaustive list and various codes as mentioned in various other specifications and standards as well as those applicable as per good engineering practice shall also form the basis and have to be followed by the Bidder in consultation with Purchaser/ Company. Bidder shall submit calculations reports / documents / drawings as per list given below for company's review and approval.

S. NO.	**ITEM**	**QUANTITY**	**REMARKS**
1	Glycol Contactor	1	
2	Glycol Regeneration Package	1	
3	Unit Control Panel and Local Control Panels for the complete Gas Dehydration System	1 Lot	
4	All Instruments required to be installed on the interconnecting piping between the Glycol Contactor and Regeneration Package (To be supplied loose)	1 Lot	

5	Local Control station with supports, Package Lighting Fixtures, Cable Trays / Ladders/Supports within the Package. Cable Gland along with Junction Boxes.	1 Lot	
6	Allied Piping connections, valves, piping support etc	1 Lot	
7	Documentation	1 Lot	
8	Recommended Commissioning, Start-up, and Mandatory Spares with itemized price list	1 Lot	
9	Recommended Spares for one year operation with itemized price list	1 Lot	
10	Special Tools and Tackles for operation and maintenance with itemized price list	1 Lot	
11	RCC Foundation, Civil work etc	1 Lot	
11	Necessary oil and lubricants and consumables during commissioning and also for the 1st fill(quantity also to be indicated)	1 Lot	

7. PROCESS PERFORMANCE REQUIREMENTS

The Gas Dehydration System (including the Glycol Contactor and the Glycol Regeneration Package) will be subjected to performance testing. The basic design shall meet the performance requirements. The Bidder shall guarantee the process performance of all the equipment's in the gas dehydration system. The guarantee shall extend to the design parameters specified in the attached datasheet/functional specifications.

8. Standards and Specifications

The requirements of this section represent the minimum acceptable requirements. The findings of the safety studies/risk assessments may mandate additional requirements (above those stated in this document) for the safety/firefighting, etc. systems.

8.1 Standards

The work shall be designed in accordance with the standards and specifications listed below, except where varied by agreement.

	CODE	DESCRIPTIONS
API		American Petroleum Institute
	ANSI/API Std.610,Tenth Edition, October 2004 (ISO13709:2003)	Centrifugal Pumps for Petroleum, Petrochemical and Natural Gas Industries Tenth Edition, October 2004 (Main governing Code)
	API Std. 614	Lubrication, Shaft Sealing and Control Oil Systems for Special Purpose Applications
	API Std. 660	Heat Exchanger for General Refinery Services
	API Std. 670	Non Contacting Vibration and Axial Position Monitoring System
	API 671	Special purpose coupling for refinery purpose
	API Std. 682	Pumps-Shaft Sealing Systems for Centrifugal and Rotary Pumps
	RP14C	Recommended Practice for Analysis, Design, Installation and Testing of Basic Surface Safety Systems for Offshore Production Platforms
	API RP500	Recommended Practice for Classification of Locations for Electrical Installations at Petroleum Facilities
	RP14F/14FZ	Recommended Practice for Design and Installation of Electrical Systems for Fixed and Floating Offshore Petroleum Facilities for Unclassified and Class 1, Division 1 and Division 2 Locations
	RP14G	Recommended Practice for Fire Prevention and Control on Open Type Offshore Production Platforms
NACE		National Association of Corrosion Engineers
	MR-01-75	Sulfide Stress Cracking Resistant Metallic Materials for Oil Field Equipment
IEC		International Elecrotechnical Commission
ISO		International Standardization Organization
	9001	Quality Management System-Requirements

	9002	Quality Systems- Model For Quality Assurance in Production, Installation and Servicing
	14001	Environmental Management Systems- Specification with Guidance for Use
	1940	Balance quality of Rotating Rigid Bodies
	5198	Centrifugal, mixed flow and axial pumps – Code for hydraulic performance tests
ASME	LATEST EDITION 2010	American Society of Mechanical Engineers
	ASME BPV	Section V, Non Destructive Testing of Materials
	ASME BPV	Section VIII, Unfired Pressure Vessels, Division 1
	ASME BPV	Section IX, Welding and Brazing Qualifications
	ASME BPV	Section II, PART A Ferrous Material specification
	ASME BPV	Section II, PART B Non- Ferrous Material specification
	ASME BPV	Section II, PART C specification for Welding Rods, Electrodes and Filler Metals.
	ASME BPV	Section II, PART D properties of materials.
	B16.5	Steel Pipe Flanges and Flanged Fittings
	B16.47	Large Diameter Steel Flanges – NPS 26” to 60”.
	B16.20	Metallic Gaskets for Pipe Flanges- Ring-Joint, Spiral-Wound and Jacketed.
	B16.21	Non Metallic Gaskets
	B16.25	Butt Welding Ends
	B31.3	Process Piping
SOLAS		International Convention on Safety of Life at Sea
		SOLAS Rules

NORSOK		NorskSokkelsKonkuranseposisjon
	M-001	Materials Selection
	P-001	Process Selection
IS		Indian Standards
	IS 1893	Criteria for Earthquake Resistant Design of Structures
	IS 875	Wind Loads
	IS 2062	Steel for General Structural Purpose
	IS 3502	Specification for Chequered Plate
OISD		Offshore Safety Rules{Petroleum and Natural Gas(Safety in Offshore Operations)Rules, 2008}
HIS		Hydraulic Institute Standard

9. SPECIFICATION:

DESIGN, FABIRICATION AND SUPPLY OF GLYCOL DEHYDATION PLANT WITH ALL ACCESSORIES AND CONTROL GEARS AS UNDER.

PARAMETERS	**GLYCOL DEHYDATION PLANT for "DND-GPC"**
Quantity	1 No.
Gas handling Capacity	1.5 MMSCMD
Water handling Capacity	Considering Saturated Gas
Gas Composition (% by volume):	Attached as Annexure-II
Specific Gravity of gas	0.92
Water Characteristics:	Attached as Annexure-III
Plant Layout	Annexure-IV
Present Equipment Detail List	Annexure-V
Process Flow Diagram	Annexure-VI

NOTE: 1. The incoming fluid to GDU will be mixture of Natural Gas, Saturated Water of high salinity.

2. There shall be traces of gas condensate (liquid hydrocarbon, specific gravity = 0.67) in the incoming fluid to GDU.
3. The inlet gas composition is given as Annexure-I

4. Water Storage System – T-01 and T-02 are two tanks that are in operation to store the produced water.

5. Condensate Handling / Storage System –

Condensate produced is sent to Formation water tanks – T-01 and T-02 as LP Flash and MP Flash drums are not adequately sized to handle the current and expected future flow of water.

6. Utilities Availability–

1. Electricity is available at the site along with the backup DG set.
2. Fuel gas is available at the site
3. Low Pressure flare is available at the site

10. TECHNICAL DETAILS FOR GLYCOL DEHYDATION PLANT

A. WORKING CONDITIONS FOR INLET GAS FILTER/COALESCER

Sl No	Item	Description
1	Operating Pressure	30-35 Kg/Cm^2
2	Design Pressure	53 Kg/Cm^2 and Full Vacuum at -29 ^0C and 120 ^0C
3	Operating Temperature	25 to 60 ^0C
4	Ambient condition	2 to 65 ^0C
5	Operating Conditions	The INLET GAS FILTER/COALESCER shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Capacity	1.5 MMSCMD
7	Removal Efficiency	0.3 Microns and larger liquid droplets with 99% removal efficiency
8	MOC	Material of Construction will be Stainless Steel

B. WORKING CONDITIONS FOR GAS GLYCOL CONTACTOR TOWER

Sl No	Item	Description
1	Operating Pressure	30-35 Kg/Cm^2
2	Design Pressure	53 Kg/Cm^2 and Full Vacuum at -29 ^0C and 120 ^0C
3	Operating Temperature	25 to 60 ^0C
4	Ambient condition	2 to 65 ^0C

5	Operating Conditions	The INLET GASFILTER/COALESCER shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Size (ID)	Minimum 60 inch ID
7	Internals Required	High Efficiency Packing & Mesh Pad
8	Water outlet Spec	5 deg C at flowing pressure (Approx 27 – 30 deg C)
9	MOC	Material of Construction for tower is Carbon Steel & that of internals (mesh pad & packing) will be Stainless Steel

C. AFTER GAS SCRUBBER

Sl No	Item	Description
1	Operating Pressure	27-32 Kg/Cm^2
2	Design Pressure	53 Kg/Cm^2 and Full Vacuum at -29 ^0C and 120 ^0C
3	Operating Temperature	25 to 60 ^0C
4	Ambient condition	2 to 65 ^0C
5	Operating Conditions	The after gas Scrubber shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Size (ID)	Minimum 48 inch ID
7	Internals Required	Mesh Pad
8	MOC	Material of Construction for Scrubber is Carbon Steel & that of internals (mesh pad) will be Stainless Steel

D. GAS GLYCOL EXCHANGER

Sl No	Item	Description
1	Design Pressure (Shell)	53 Kg/Cm^2 at -29 ^0C and 120 ^0C
2	Design Pressure (Tube)	53 Kg/Cm^2 at -29 ^0C and 120 ^0C
3	Operating Temperature	Bidder to advice
4	Ambient condition	2 ^0C to 65 ^0C
5	Type	Double Pipe Heat Exchanger
6	Operating Conditions	The Gas Glycol Exchanger shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
7	MOC	Material of Construction is Carbon Steel

E. TEG FLASH DRUM:

Sl No	Item	Description

1	Operating Pressure	3-6 Kg/Cm^2
2	Design Pressure	10.5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 175 ^{0}C
3	Operating Temperature	100-140 ^{0}C
4	Ambient condition	2 to 65 ^{0}C
5	Operating Conditions	The Flash Drum shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Size (ID)	Minimum 36 inch ID
7	Internals Required	Mesh Pad
8	MOC	Material of Construction for Flash Drum is Carbon Steel & that of internals (mesh pad) will be Stainless Steel

F. LEAN- RICH GLYCOL EXCHANGER:

Sl No	Item	Description
1	Operating Pressure	3-6 Kg/Cm^2
2	Design Pressure	10.5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
3	Operating Temperature	100-140 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The Lean- Rich Glycol Exchanger shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Type	Plate and Frame
7	MOC	Material of Construction for Lean- Rich Glycol Exchanger is Aluminium.

G. TEG OVERHEAD CONDENSER:

Sl No	Item	Description
1	Operating Pressure	1-2 Kg/Cm^2
2	Design Pressure	5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
3	Operating Temperature	205-210 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The TEG Overhead Condenser shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D". It will be installed on the TEG reboiler as a part of TEG still column.
6	Type	Coiled
7	MOC	Material of Construction for TEG overhead condenser is Carbon Steel & that of internals (coil) will be Carbon Steel

H. TEG REBOILER WITH SURGE TANK:

Sl No	Item	Description
1	Operating Pressure (Process)	1-2 Kg/Cm^2
2	Design Pressure (Process)	5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
3	Operating Temperature (Process)	205-210 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Pressure (Heating)	7-13 Kg/Cm^2
6	Design Pressure (Heating)	5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
7	Operating Temperature (Heating)	400-450 ^{0}C
8	Operating Conditions	The TEG reboiler with a surge tank shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D". TEG reboiler will be equipped with a surge tank and a Still column as mentioned in item I.
9	Type	Natural Gas Fired Type
10	MOC	Material of Construction for reboiler and surge tank are Carbon Steel & that of internals (coil) will be Carbon Steel

I. STILL COLUMN

Sl No	Item	Description
1	Operating Pressure	1-2 Kg/Cm^2
2	Design Pressure	5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
3	Operating Temperature	205-210 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The Still Column shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D". Still column will be connected with TEG Reboiler as mentioned in item H. It will be equipped with coil (TEG Condenser) as mentioned in Item G. Packing needs to be provided to ensure proper separation of Glycol and Water.
6	Type	Vessel type

7	MOC	Material of Construction still column is Carbon steel and for internals (packing) will be Stainless Steel

J. STAHL COLUMN

Sl No	Item	Description
1	Operating Pressure	1-2 Kg/Cm^2
2	Design Pressure	5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 232 ^{0}C on both sides
3	Operating Temperature	205-210 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The Stahl Column shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D". Stahl column will be fed from TEG reboiler surge drum which will be installed to provide glycol purity of 99.9%. Packing needs to be provided to ensure proper separation of Glycol and Water.
6	Type	Vessel type
7	MOC	Material of Construction stahl column is Carbon steel and for internals (packing) will be Stainless Steel

K. CARBON FILTER:

Sl No	Item	Description
1	Operating Pressure	3-6 Kg/Cm^2
2	Design Pressure	10.5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 175 ^{0}C
3	Operating Temperature	100-140 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The carbon filter shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Capacity	10 GPM
7	Quantity	1 nos. (No spare)
8	Internals Required	Filter element
9	MOC	Material of Construction for carbon filter is Carbon Steel & that of internals (filter element) will be as per standard

L. GLYCOL FILTER:

Sl No	Item	Description
1	Operating Pressure	3-6 Kg/Cm^2
2	Design Pressure	10.5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 175 ^{0}C
3	Operating Temperature	100-140 ^{0}C

4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The glycol filter shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Capacity	25 GPM
7	Quantity	2 nos. (1 operating & 1 spare)
8	Internals Required	Filter element
9	MOC	Material of Construction for glycol filter will be Carbon Steel & that of internals (filter element) will be as per standard

M. SILICA FILTER:

Sl No	Item	Description
1	Operating Pressure	3-6 Kg/Cm^2
2	Design Pressure	10.5 Kg/Cm^2 and Full Vacuum at -29 ^{0}C and 175 ^{0}C
3	Operating Temperature	100-140 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Operating Conditions	The silica filter shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
6	Capacity	25 GPM
7	Quantity	2 nos. (1 operating & 1 spare)
8	Internals Required	Filter element
9	MOC	Material of Construction will be Carbon Steel & that of internals (filter element) will be as per standard

N. GLYCOL PUMP:

Sl No	Item	Description
1	Operating Pressure (suction)	0.5- 1 Kg/Cm^2
2	Rated discharge Pressure	38 Kg/Cm^2
3	Operating Temperature	205-210 ^{0}C
4	Ambient condition	2 to 60 ^{0}C
5	Quantity	2 nos. (1 operating & 1 spare)
6	Operating Conditions	The glycol pumps shall be installed and operated in outdoor locations in hazardous area as per Zone-1, Div.2 and Group "C" and "D".
7	Type	Positive Displacement gear type
8	MOC	Material of Construction will be Carbon steel.

1. Operating Spares: All operating spares list has to be provided by the bidder along with its price which should be valid for two years. Any spares required for operations but not in the provided list shall have to be made available by Supplier at their own cost.

2. Maintenance Spares: All maintenance spares list has to be provided by the bidder along with its price which should be valid for two years. Any spares required for operations but not in the provided list shall have to be made available by Supplier at their own cost.
3. Prices of spares will also be considered for evaluation of the offer. However, payment shall be made based on actual procurement of spares by OIL during the O&M period.

11. DOCUMENTS TO BE SUBMITTED (after execution of Project):

- 3D model in Navis format for viewing purpose.
- PFD
- P&ID
- Foundation and Structural analysis reports
- Pre-Commissioning & Commissioning Check list
- Operation and Maintenance manual
- Piping isometric drawings
- Structural Fabrication drawings
- Control valve datasheet and vendor details
- Equipment datasheet
- Pipe Stress Analysis wherever required
- TPI Report
- P&ID of Installation (DND GPC)
- AS Built Diagram of installation
- Raw Material Data Sheet
- Radiography reports
- SOP for plant

12. Technical Requirements:

(a) Successful Bidder has to design, fabricate, supply and install & commission successfully the Glycol Dehydration Unit (GDU) completed with all units as mentioned above along with all instruments and accessories as detailed.

The Glycol Dehydration Unit (GDU) is required for installation in existing set up as a measure of upgradation of the system for improving the quality of gas and supplying bone dry gas to customers. As such, the supplied units and its pipings and accessories must be compatible with the existing system. Therefore, the bidders must follow the guidelines as under while designing the unit.

(i) Glycol Dehydration Unit (GDU) for DND-GPC (Item No. 1) and its pipings must be of SS-304L or better metallurgy. Pipe shall be of Schedule-80 Seamless, Flanged connections shall be ANSI-600 class, RTJ type. All valves and fittings shall be of ANSI-600 class rating and of suitable metallurgy compatible with the Glycol Dehydration Unit (GDU).

(ii) Bidders have to visit OIL's field installation at DND with prior intimation to OIL, before submitting their bids to have first-hand knowledge of the

existing set-up and finalising the design. However, all expenditure for such field visit by the bidder's representatives shall be borne by the bidder. Bidder has to submit the design within 30 days from the kick of meeting. The design has to be approved by third party as stated below and OIL before fabrication.

(b) The Glycol Dehydration Unit (GDU) shall be equipped with:

(i) Safety relief valve, PIs, Tis, level gauges with easy views and LLI mounted on the body.

(ii) Glycol Dehydration Unit (GDU) to be equipped with P/I converter (to integrate with existing SCADA system) for all data like gas inlet & outlet parameters.

(iii) Gas outlet line connected with pneumatic PIC and PVC alongwith P/I converter (to integrate with existing SCADA system) having isolation valves at both ends of the control valve and a bypass arrangement.

(c) All process fluid inlet, outlet and drain port should be in multiple of 2" dia. However, the minimum nozzle size shall be of 4" dia. Sizes of other nozzles like nozzles for PI and PSV etc. shall be as per requirement of instrument supplied. Nozzle size less than 2" (50 mm) NB may be connected with socket (having NPT female thread) of pressure rating 3000 psig.

(d) All controls should operate in fail safe mode.

(e) Due consideration shall be given to thickness of materials towards corrosion allowance as per relevant code and the bidder should specify the same in their Technical Bids.

(f) Maximum length, height and width of the package shall be guided by relevant Road Transport Regulation prevailing in India.

(g) The Glycol Dehydration Unit (GDU) shall be complete with all process piping and accessories connected to the vessels. All pipes should be seamless pipes of materials same as the materials of construction for the Glycol Dehydration Unit (GDU). Bidders to identify the metallurgy as per process fluid characteristic, relevant quality control and manufacturing codes and specify the same in the Technical Bid. However, these parameters must be in compliance with requirements mentioned under para (d) above.

(h) While designing the Glycol Dehydration Unit (GDU) assemblies, due consideration should be given to human engineering aspects. All mountings and operating gears (valves, controllers etc.) should be easily accessible/operable.

(i) All flanges shall be as per ASME-B16.5 and rating shall be of ANSI-600 Class, RTJ type.

(j) All isolation and bypass valves shall be either Gate Valves of API-600 standard or Ball Valves of API-6D standard. All valves must be of full bore size. Bidders must submit specifications of valves offered by them.

(k) For all Control Valves i.e. LLC and PVC bidders must specify the Cv value in their technical bids.

(l) Technical data sheet for all type of valves and accessories must be submitted.

(m) Metallurgy, Pressure rating and sizes for all valves and fittings with their sources must be indicated in the Technical Bid.

(n) OIL will provide the T points where the Glycol Dehydration Unit (GDU) will be connected. Bidder has to do all necessary connections to these points providing necessary valves & pipes and accessories in the connection lines.

(o) A detailed HAZOP study has to be carried out and details of the same needs to be furnished.

(p) A detailed PID for the Glycol Dehydration Unit (GDU) needs to be submitted and AS Built diagram for the whole installation needs to be made after installation of the new vessels and the same has to be displayed in the installation.

(q) Structural analysis has to be performed for the skid with the following cases to be evaluated and the report to be submitted with the design:

i. In place analysis
ii. Lifting analysis
iii. Transport analysis

aa) Civil foundation and footings has to be designed based on soil details

ab) Stress analysis has to be performed on all lines for 3 inch and above. Report has to be submitted to OIL for the same.

ac) Piping 3 D model has to be developed and shared with OIL for analysis of the same.

13. <u>Codes, Inspection, Testing and Quality Control:</u>

(a) The design and fabrication should be as per codes and standards mentioned in Point no.

(b) Third Party Inspection: Third party inspection shall be carried out during manufacturing stages and for finished products as per relevant codes as mentioned above by any of the OIL's approved inspection agencies viz. Lloyds/Rites/DNV/Bureau Veritas. The third party inspection agency so engaged shall also witness, authenticate and verify the tests and certificates required as under:

i. Mill certificates/Lab test certificates for composition of metals for major raw materials like steel plates and pipes used for fabrication of the Glycol Dehydration Unit (GDU). The composition of metals must be tested in any Government approved laboratory and the same must be witnessed/authenticated by the Third Party Inspection Agency. The test certificates include Chemical and Physical test reports related to the materials. The third party inspection agency shall verify and authenticate these reports/certificates.

ii. The Glycol Dehydration Unit (GDU) basically all vessels shall be subjected to hydrotest as per code requirement and to be witnessed by the third party inspection agency.

iii. The vessel shall be subjected to 100% radiography and stress relieving as per code requirement. Documentary evidence in support of radiographic inspection to be furnished to OIL, duly witness and authenticated by the third party inspection agency.

iv. All quality control assurance and quality control procedures as required under the codes shall be adhered to. A quality control plan shall be prepared and approved by the third party inspection agency.

v. All raw materials used shall be brand new, un-used and procured from manufacturers or their authorized dealers only. Documentary proof for the same will be required to be authenticated by the third party inspection agency and to be submitted to OIL.

NOTE: 1. Notwithstanding above, OIL may also depute its own inspection team to the supplier's works to carry out stage inspection and pre-despatch inspection.

2. Following documents must be furnished to OIL by the Supplier alongwith the Glycol Dehydration Unit (GDU).

i) All test certificates, 3rd party inspection reports, hydrotest records, X-ray reports and radiography films.

ii) All documents related to purchases and quality control of valves, control valves, flanges and other accessories.

iii) Performance guarantee certificate for 18 months from the date of dispatch or 12 months from the date of commissioning whichever is earlier for trouble free performance of the Glycol Dehydration Unit (GDU) and other accessories. Any defects found during this warranted period shall be attended and rectified/replaced by the Supplier at their cost.
iv) HAZOP Study report
v) PID Diagram & AS built diagram
vi) Stress Analysis Report
vii) Structural Analysis Report
viii) Civil Foundation Design
ix) Chemical analysis and Physical properties of Raw Material
x) Mechanical

14. <u>Miscellaneous Requirements:</u>

(a) **Painting**: All non SS parts and accessories including the skid should be blast cleaned to SSPC SP-10 followed by one coat of Zinc-rich primer and one coat of marine resistant paint. Thickness of paint system shall be 100 microns. Instruments and valves shall be supplied painted in manufacturers' standard recommended for on-shore environment.

(b) **Name Plates**: Name plates to be provided as per API 12J.

(c) **Packing**: Each vessel and parts of the Glycol Dehydration Unit (GDU) along with its accessories and skid shall be supplied as a single unit in ready to be installed condition. Any loose items/accessories may be dispatched in separate crates/boxes. However, if any major component is despatched loose, then it will be supplier's responsibility to fix/unitise the same at site.

(d) **Delivery**: Delivery is of the essence of this purchase. The bidders must quote their best possible delivery schedule.

(e) **Installation and Commissioning**: Installations and Commissioning of the Glycol Dehydration Unit (GDU) at site with necessary extension of piping connections shall be done by bidder.

(f) Bidders must clearly indicate the following in their **Technical Bids** in order to assess suitability of offers.

i. Metallurgy for all components of vessels, tower, reboiler unit, heat exchanger, piping, valves & accessories.
ii. Dimensional details for vessels tower, reboiler unit, pipes and fittings. Also the physical dimensions of the units offered.
iii. Thickness of different sections of the tower, reboiler unit of GDU
iv. Maximum and Minimum operating level of liquid
v. Welding procedure
vi. Details of design calculation and drawing

vii. Schematic (as built) Drawing for the Glycol Dehydration Unit (GDU) packages
viii. Accessories: To submit list of accessories with specification
ix. A quality plan shall be prepared and submitted for OIL/Third party inspection agency's approval/reference.
x. Declaration/confirmation that the Glycol Dehydration Unit (GDU) shall be manufactured as per relevant codes and the bidder is authorized to carry out such jobs. Documentary evidence in support of above may also be furnished.
xi. Documentary evidence of bidder's experience in manufacturing Glycol Dehydration Unit (GDU).

g) All allied piping connections for the Glycol Dehydration Unit (GDU) should be done by the bidder. All connections are to be made as per drawing and OIL's approved drawing.
h) Bidder has to plan the job in a meticulous way so that shutdown can be minimised. All the lines, vessels, tower, reboiler unit, piping connection, instrument lines need to be assembled and the same has to be installed within bare minimum time. OIL will give a window of 15 days i.e will take a shutdown of 15 days for the plant for the job to be executed. It may be noted that shutdown of the plant will result in huge loss to the company and the country in terms of energy generation at a time when India is trying to enhance it production potential. Any delay in part of the contractor in terms of execution of the job in the stipulated period will result in LD as per payment terms.

15. **SAFETY MEASURES:**

i. The jobs will have to be carried out in an operating installation and as such the following safety guide lines/ measures will be strictly followed by the contractor.

ii. "Hot Work Permit" shall be obtained from the concerned Installation Manager of the installation before starting of the work and will be renewed from time to time as required. Further competent representative of the contractor with the approval of M/S OIL will have to be present at the work site throughout the working time to ensure compliance of safety measures while executing the job at site.

iii. On site welding/ cutting/ grinding operations of the interconnection pipelines shall be avoided as far as possible taking into consideration of minimum safety distance for such an operation. If necessary and if advised by the company engineer, it will be done at a safe distance within the installation and will be transported to the site for boxing up.

iv. Tools and Tackles used will be of non-sparking type.

v. Any other safety measures that might require to be adopted during the work will be intimated and shall be strictly followed by the contractor. The installation has to devoid of gas during those 15 days and LEL monitoring done from time to time.

vi. Stand by firefighting equipment will be deployed at the work site by OIL. However, at least two of the contractor's personnel deployed for the work must be capable of handling the firefighting equipment at the time of emergency and the persons will have to be present at the work site throughout the working time. If required, the contractor's nominated persons will be imparted training on handling such equipment by OIL's Fire Service department.

vii. It will be solely the Contractor's responsibility to fulfill all the legal formalities with respect to the Health, Safety and Environmental aspects of the entire job (namely; the person employed by him, the equipment, the environment, etc.) under the jurisdiction of the district of that state where it is operating. Ensure that all sub-contractors hired by him comply with the same requirement as the contractor himself and shall be liable for ensuring compliance all HSE laws by the sub or sub-sub-contractors.

viii. Every person deployed by the contractor in a mine must wear safety gadgets to be provided by the contractor. The Contractor shall provide proper Personnel Protective Equipment as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule. Safety appliances like protective footwear, Safety Helmet and Full Body harness has to be DGMS approved. Necessary supportive document shall have to be submitted as proof. If the Contractor fails to provide the safety items as mentioned above to the working personnel, the Contractor may apply to the Company (OIL) for providing the same. OIL will provide the safety items, if available. But in turn, OIL will recover the actual cost of the items by deducting from Contractor's Bill. However, it will be the Contractor's sole responsibility to ensure that the persons engaged by him in the mines use the proper PPE while at work.

ix. All the safety gears mentioned above are to be provided to the working personnel before commencement of the work.

x. The Contractor shall prepare written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with it/ them. The SOP should clearly state the risk arising to men, machineries & material from the mining operation/ operations to be done by the contractor and how it is to be managed.

xi. The contractor shall provide a copy of the SOP to the person designated by the mine owner who shall be supervising the contractor's work.

xii. Keep an up to date SOP and provide a copy of changes to a person designated by the Mine Owner/ Agent/ Manager.

xiii. Contractor has to ensure that all work is carried out in accordance with the Statute and SOP and for the purpose he may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a safe manner. For work of a specified scope/ nature, he should develop and provide to the mine owner a site specific code of practice in line.

xiv. All persons deployed by the contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards stating the name of the contractor and the work and its validity period, indicating status of MVT, IME & PME.

xv. The contractor shall submit to DGMS returns indicating - Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many

work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons

xvi. The return shall be submitted quarterly (by 10th of April, July, October & January) for contracts of more than one year. However, for contracts of less than one year, returns shall be submitted monthly.

xvii. It will be entirely the responsibility of the Contractor/ his Supervisor/ representative to ensure strict adherence to all HSE measures and statutory rules during operation in OIL's installations and safety of workers engaged by him. The crew members will not refuse to follow any instruction given by company's Installation Manager/ Safety Officer/ Engineer/ Official/ Supervisor/ Junior Engineer for safe operation.

xviii. Any compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be paid by the contractor only.

xix. Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor.

xx. The contractor shall have to report all incidents including near miss to Installation Manager/ departmental representative of the concerned department of OIL.

xxi. The contractor has to keep a register of the persons employed by him/ her. The contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.

xxii. If the company arranges any safety class/ training for the working personnel at site (company employee, contractor worker, etc.) the contractor will not have any objection to any such training.

xxiii. The health check-up of contractor's personnel is to be done by the contractor in authorized Health Centres as per OIL's requirement & proof of such test(s) is to be submitted to OIL. The frequency of periodic medical examinations should be every five years for the employees below 45 years of age and every three years for employees of 45 years of age and above.

xxiv. To arrange daily tool box meeting and regular site safety meetings and maintain records.

xxv. Records of daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the contractor.

xxvi. A contractor employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.

xxvii. A contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.

xxviii. Contractor's arrangements for health and safety management shall be consistent with those for the mine owner.

xxix. In case Contractor is found non-compliant of HSE laws as required company will have the right for directing the contractor to take action to comply with the requirements, and for further non-compliance, the contractor will be penalized prevailing relevant Acts/ Rules/ Regulations.

xxx. When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE Measures Company will have the right to direct the contractor to cease work until the non-compliance is corrected.

xxxi. The contractor should prevent the frequent change of his contractual employees as far as practicable.

xxxii. The contractor should frame a mutually agreed bridging document between OIL & the contractor with roles and responsibilities clearly defined.

xxxiii. For any HSE matters not specified in the contract document, the contractor will abide the relevant and prevailing Acts/ rules/ regulations/ pertaining to Health, Safety and Environment.

16. List of recommended VENDORS for accessories and instruments to be used:

a) <u>SS Pipes (ERW/Seamless) and Steel Plates</u>:

M/s. Maharashtra Seamless Ltd.
M/s. Jindal Saw Pipes Ltd.
M/s. Indian Tube Co. Ltd.
M/s. Mukat Pipes Ltd.
M/s. Surindra Engineering Co. Pvt. Ltd.
M/s. P.K. Forge & Fitting Industries
M/s. Steel Authority of India Limited
M/s. The Indian Seamless Metal Tubes Ltd.
M/s. Prakash Steelage Ltd.
M/s. Mardale Pipes Ltd.
M/s. Tata Iron & Steel Co.

b) <u>Valves (Gate/Check/Ball/Globe/Needle):</u>

M/s. Audco India Limited
M/s. BDK Engineering Industries Ltd.
M/s. Dewrance Macneill & Co. Ltd.
M/s. Larsen & Toubro Ltd.
M/s. Lacier Industries

c) <u>Forged Flanges</u>:

M/s. Anandmayee Forging Pvt. Ltd.
M/s. Parveen Industries
M/s. JVS Engineers
M/s. Lacier Industries

d) Pressure Gauges:

M/s. A.N. Instruments Pvt. Ltd.
M/s. Bells Controls Ltd.
M/s. General Instruments Consortium
M/s. ODIN Process Controls
M/s. Precision Industries
M/s. Manometer India Pvt. Ltd.
M/s Wika Pvt Ltd
M/s General Instruments Consortium

e) Pressure Switches

M/s. INDFOS Industries Ltd.
M/s. Switzer Instruments Ltd.
M/s. Verma Trafag Instruments Pvt. Ltd. (VASUTECH Ltd.)
M/s. Donfoss Instruments

f) Temperature Gauges:

M/s. INDFOS Industries Ltd.
M/s. Switzer Instruments Ltd.
M/s. M/s Pyroelectric Instruments Goa Pvt. Ltd.
M/s. General Instruments Consortium
M/s. Krohne Marshall (Forbes)
M/s Wika Pvt Ltd
M/s General Instruments Consortium

g) RTD Thermocouple / TW Assembly:

M/s. ALTOP Industries
M/s. General Instruments Consortium
M/s. Nagman Sensors Pvt. Ltd.
M/s. Pyrotech Control (India) Ltd.
M/s. Tempsen Instruments Pvt. Ltd.
M/s. Emerson Process Management (I) Pvt. Ltd.

h) Level Gauges (Reflex/Trans) (Magnetic type Level Indicators):

M/s. Bliss Anand Pvt. Ltd.
M/s. Chemtrols Engineering Pvt. Ltd.
M/s. Krohne Marshall (Forbes)
M/s. Levcon Sinstruments Pvt. Ltd.

M/s Pune Techtrol Pvt. Ltd.
M/s. Emerson Process Management (I) Pvt. Ltd.
M/s Wika Pvt Ltd
M/s General Instruments Consortium
M/s. UNI Klinger Ltd.
M/s. Magnitrol

i) Level Switches (float Type):

M/s. Bliss Anand Pvt. Ltd.
M/s. Chemtrols Engineering Pvt. Ltd.
M/s. Levcon Instruments Pvt. Ltd.
M/s. Pune Techtrol Pvt. Ltd.
M/s. Magnitrol
M/s. S.B. Electro Mechanicals
M/s. Switzer Instruments Ltd.
M/s. Emerson Process Management (I) Pvt. Ltd.

j) Valves Control (Critical/Non-critical) :

M/s. ABB Control Valves Introl India Ltd.
M/s. Continental Valves Ltd.
M/s. Fisher Xomox (I) Ltd.
M/s. Fouress Engineering
M/s. Instrumentation Limited
M/s. MIL Controls Ltd.
M/s. R.K. Control Instruments Pvt. Ltd.
M/s. Valtek India Ltd.

k) Fasteners (Stud/Nuts/Washers/Bolts etc.) :

M/s. Perfect Marketings (P) Ltd.
M/s. Fix Fit Fasteners Mfg. Pvt. Ltd.
M/s. Nireka Engineering Co. Pvt. Ltd.
M/s. Pacific Forging & Fasteners Pvt. Ltd.
M/s. Pioneer Nuts & Bolts Pvt. Ltd.
M/s. Precison Auto Engineers
M/s. Precison Engineering Industries
M/s. PTD Fasteners Pvt. Ltd.
M/s. Sundaram Fasteners Limited

l) Internals for Glycol Dehydration Unit (GDU) (Vortex Breaker/Demister Pad etc.) :

M/s. Kvaerner Process System
M/s. Koch Glitsh
M/s. Natco
M/s. CDS Engineering

m) DPT/PT/LT/TT:

M/s. Asia Brown Brovery Limited
M/s. Honeywell Automation India Limited
M/s. Emerson Process Management (I) Pvt. Ltd.
M/s Yokogowa Limited

(n) Rotameter:

M/s. Instrumentation Engineers Pvt. Ltd.
M/s Krohne Marshall (Forbes) Ltd.
M/s. Rota Instruments

(o) IP/PI:

M/s. Emerson Process Management (I) Pvt. Ltd.
M/s. Yokogowa Limited
M/s Moore Controls
M/s Honeywell Automation India Limited

Note: **Bidders must categorically confirm compliance of above**

LIST OF ATTACHMENTS:

Sl No	Annexure	Details
1	Annexure-I	Location & climate
2	Annexure-II	Gas Composition
3	Annexure-III	Formation Water
4	Annexure-IV	Plant Layout
5	Annexure-V	Process Flow Diagram
6	Annexure-VI	Details of Equipment at DND GPC

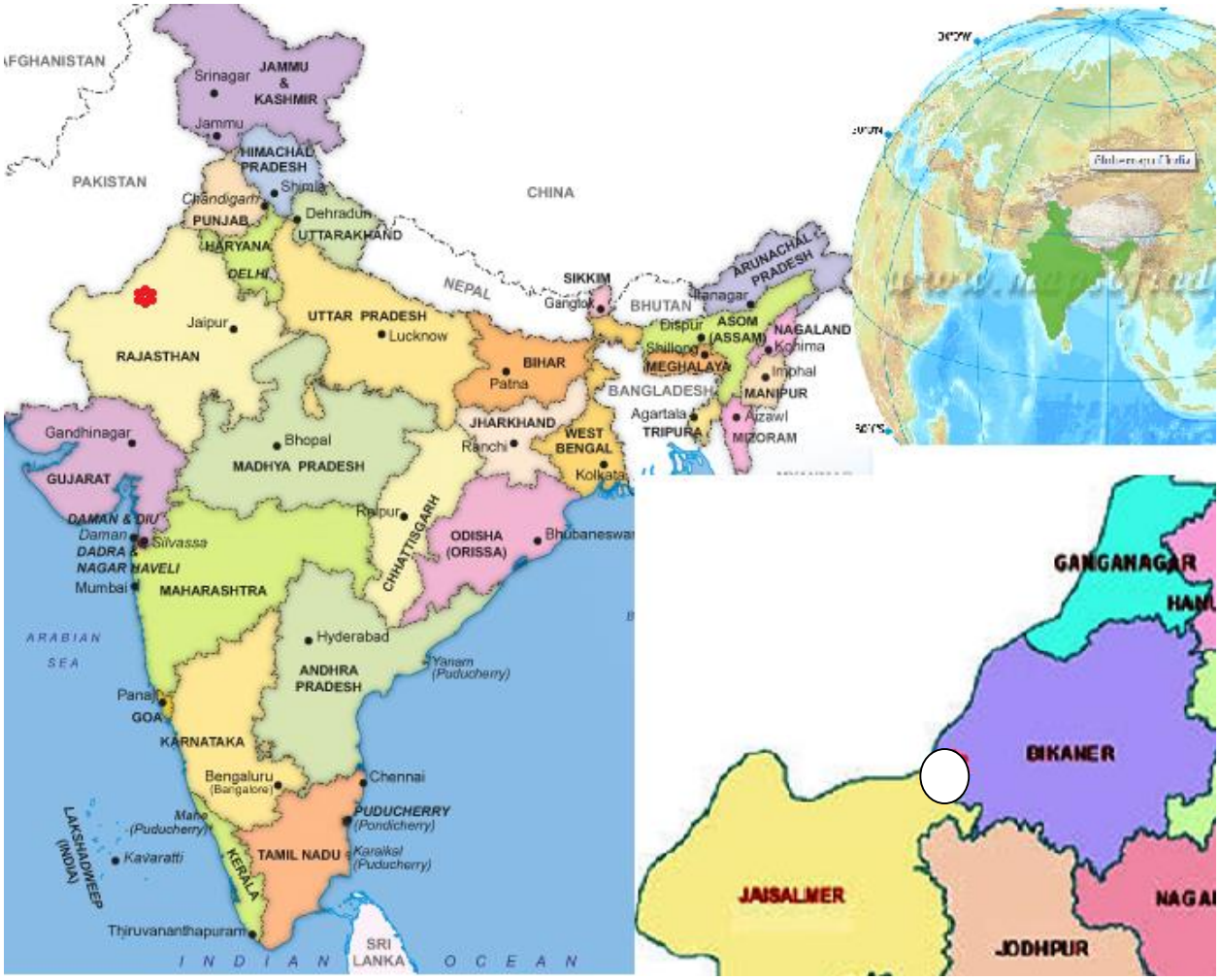
ANNEXURE - I

OPERATING AREA

GEOGRAPHIC LOCATION

DANDEWALA, THE AREA OF OPERATION, IS LOCATED AT THE WESTERN PART OF THE COUNTRY INDIA AND IN THE STATES OF RAJASTHAN. RAJASTHAN ENCOMPASSES MOST OF THE AREA OF GREAT INDIAN DESERT (THAR DESERT), WHICH HAS AN EDGE PARALLELING THE SUTLEJ-INDUS RIVER VALLEY ALONG ITS BORDER WITH PAKISTAN. THE REGION BORDERS PAKISTAN TO THE WEST, GUJARAT TO THE SOUTHWEST, MADHYA PRADESH TO THE SOUTHEAST, UTTAR PRADESH AND HARYANA TO THE NORTHEAST AND PUNJAB TO THE NORTH.

The nearest airport to the operating area is Jodhpur Airport and is located at a distance of around 350 km.



OIL discovered commercially viable gas fields at Tanot, Dandewala and Bagitibba in Jaisalmer district of Rajasthan. These fields are located at a distance of approx. 120 kms. North-West of Jaisalmer Township and about 60 kms from Ramgarh Power Plant.

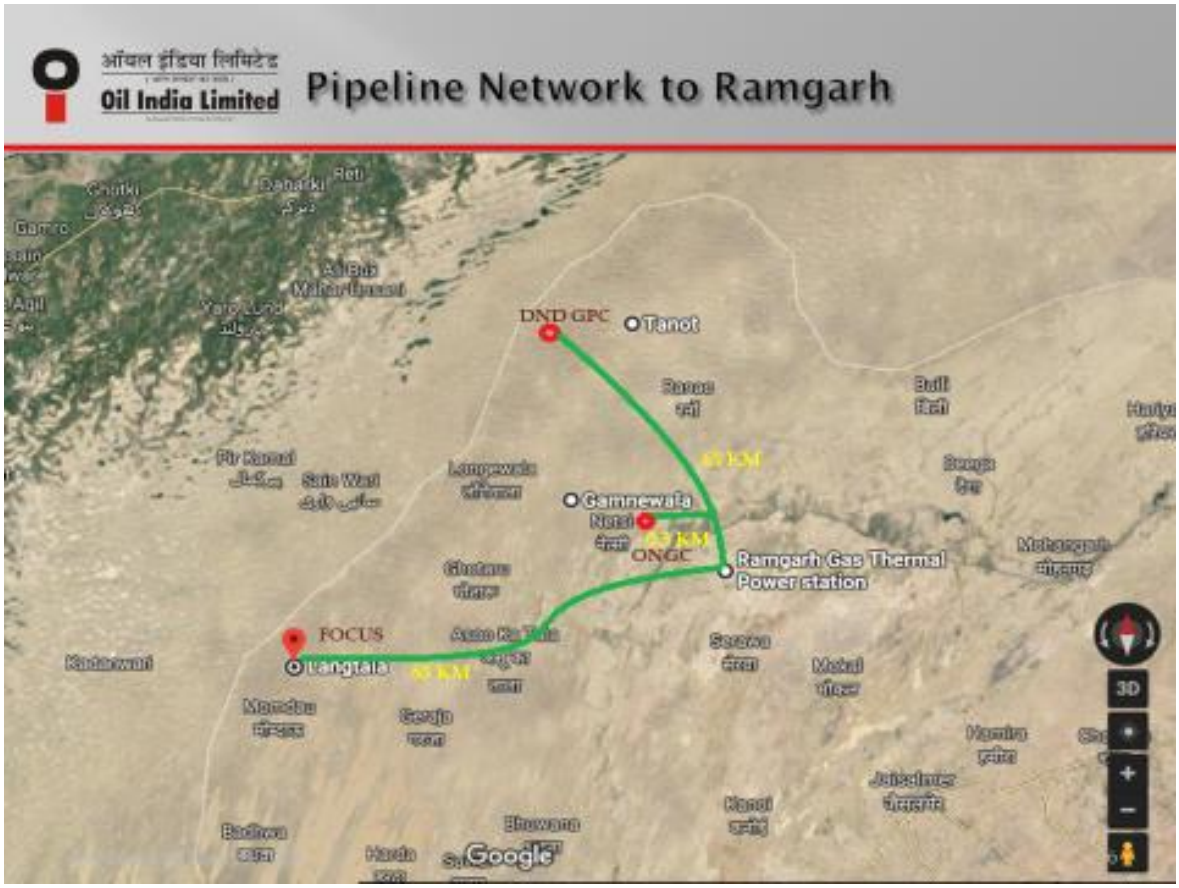
To operate the fields, OIL has two production installations viz., Gas Processing centre (GPC) at Dandewala and a Gas Gathering Station (GGS) at Tanot besides a permanent base camp (Tanot Village Complex, TVC) near Tanot BSF camp. Dandewala field and GPC are at a distance of about 35 kms and Tanot GGS is situated at a distance of 22 kms from Tanot Village Complex. These are connected with oil field road.

The climatic conditions of these areas are generally hot and dry. It is characterized by extreme temperature and scarce rainfall. The hot weather is very prolonged and starts from the month of April to end of August. The maximum and minimum recorded ambient temperature at the site is 60^0 C and minus 5^0 C respectively.

The rainfall in these areas is scanty and scarce. The average normal rainfall is only 1" (25 mm).

The maximum humidity recorded in this region is 40%.

The gas produced from these fields is essentially used for power generation by Rajasthan State Electricity Board (RSEB).



ENVIRONMRNTAL CONDITIONS

Components	International System (SI)
Ambient Temperature (Max. / Min.)	**55 / -1 Deg C**
Humidity (Max.)	**40%**
Average Rainfall	**25 mm/year**
Wind velocity(Max.)	**128 KM/Hr**
Frequecy of Sand strom	**March to September and occasional during the remaining period.**

Seismic	**Zone III, Moderate**
Weather	**Four distinct seasons - Pre monsoon, monsoon, post-monsoon and Winter**
Topography of Site	**Part of Thar Desert**

Annexure-II

GC Report of Natural Gas of DND field

Date: 27.11.2019

Sr No.	Natural Gas Components	Mol %
1	C 6+	0.07398
2	PROPANE	0.1963
3	i - BUTANE	0.03259
4	n - Butane	0.05012
5	I - Pentane	0.02239
6	N - Pentane	0.01817
7	NITROGEN	31.1955
8	METHANE	44.2982
9	CARBON DI OXIDE	23.2026
10	ETHANE	0.91023
11	INFERIOR CV (Kcal/Sm3)	3839
12	SUPERIOR CV (Kcal/Sm3)	4258.77
13	REL. DENSITY (gas)	0.91865

Annexure - III

Formation Water Test Report Dandewala Field

Sl No.	Particulars	Results
1	Date of Collection	11.02.2019
2	Location	DND GPC
3	Appearance	Turbid
4	pH	6.6
5	Salinity as NaCl (ppm)	152100
6	Carbonate (ppm)	NIL
7	Bi-Carbonate (ppm)	366
8	Hardness as Ca2+	280
9	Hardness as Mg2+	437

* Significant amount of sand production is also observed.

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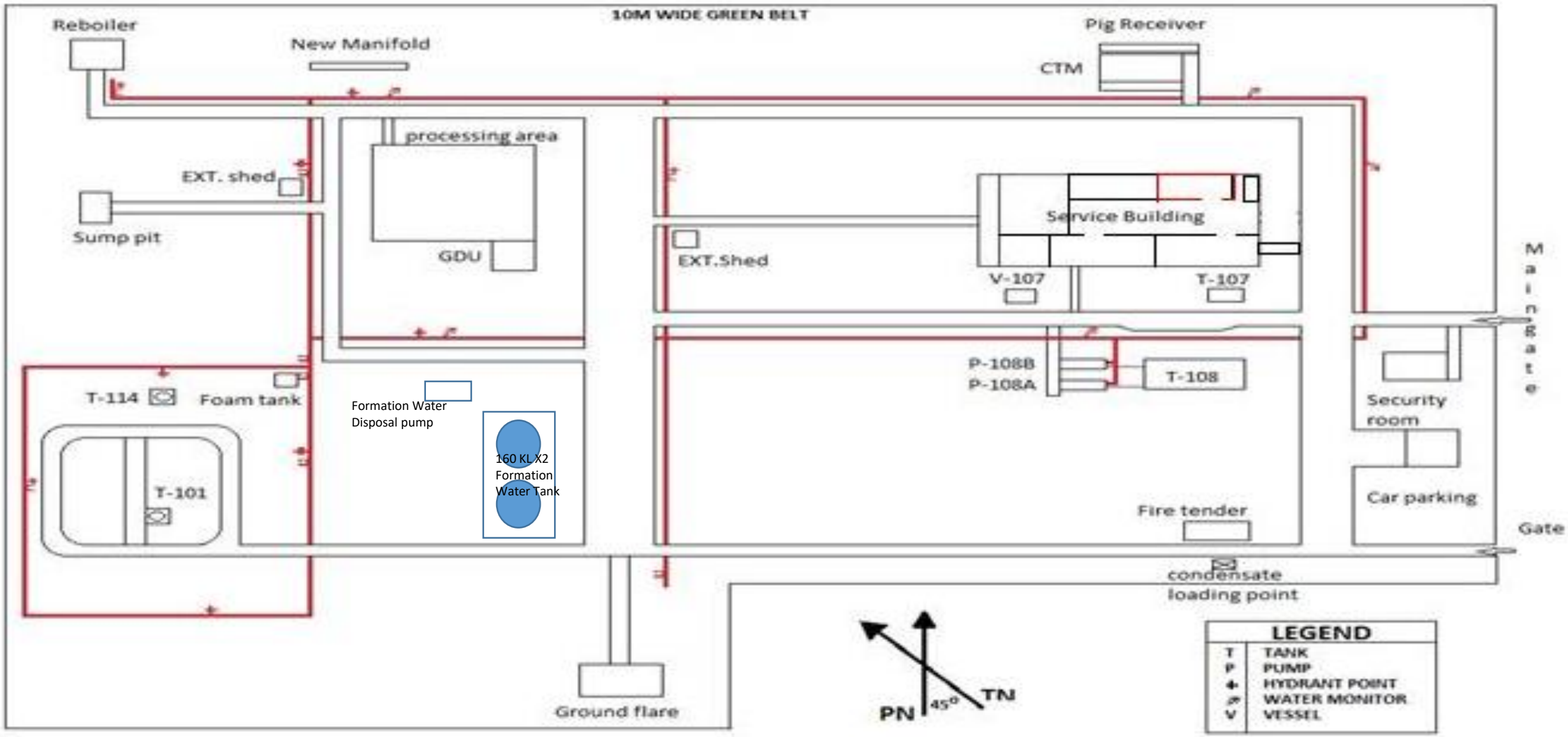
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)

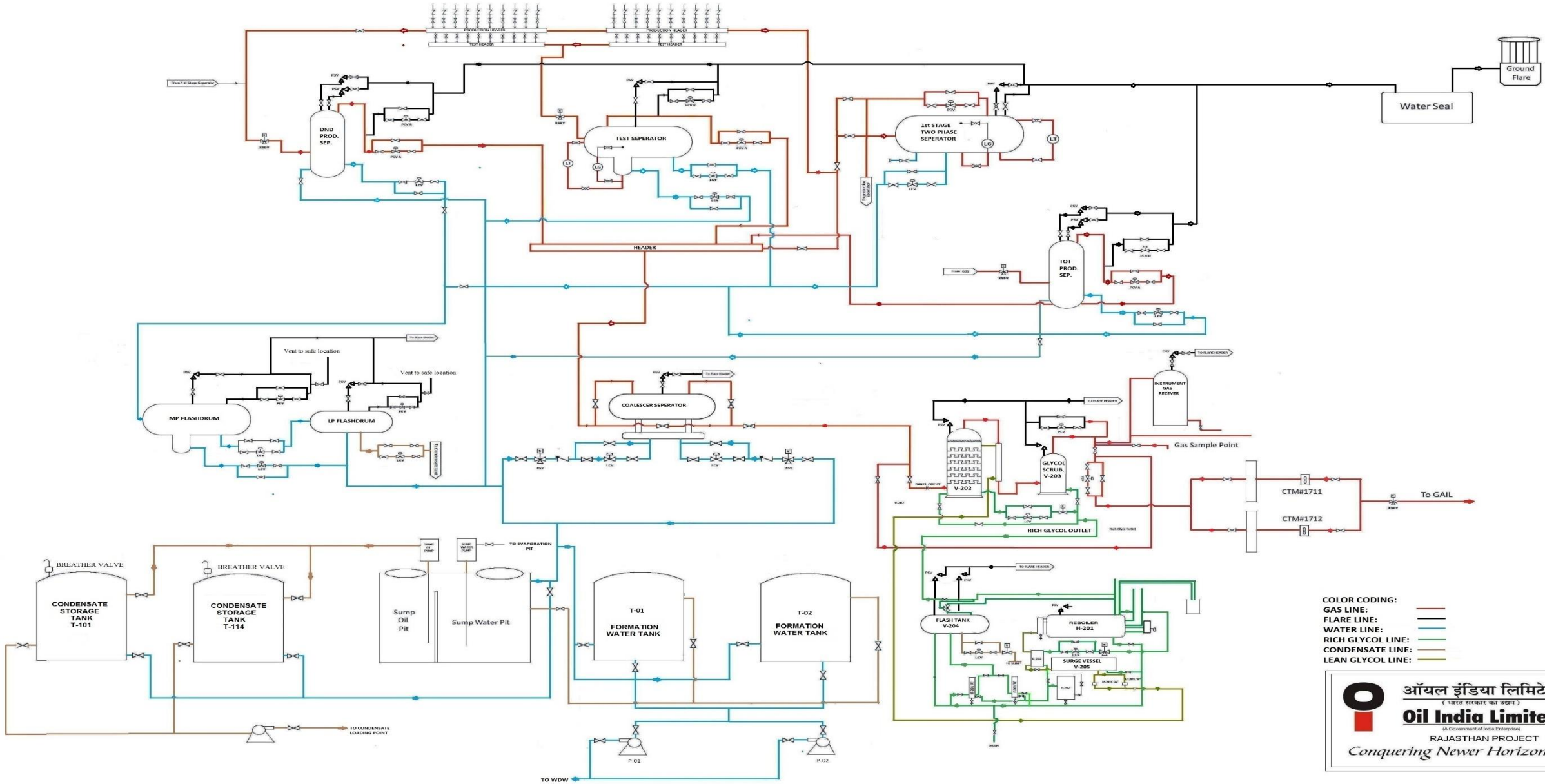
ANNEXURE-IV

PLANT LAYOUT DND - GPC



ANNEXURE - V

PROCESS FLOW DIAGRAM DND-GPC



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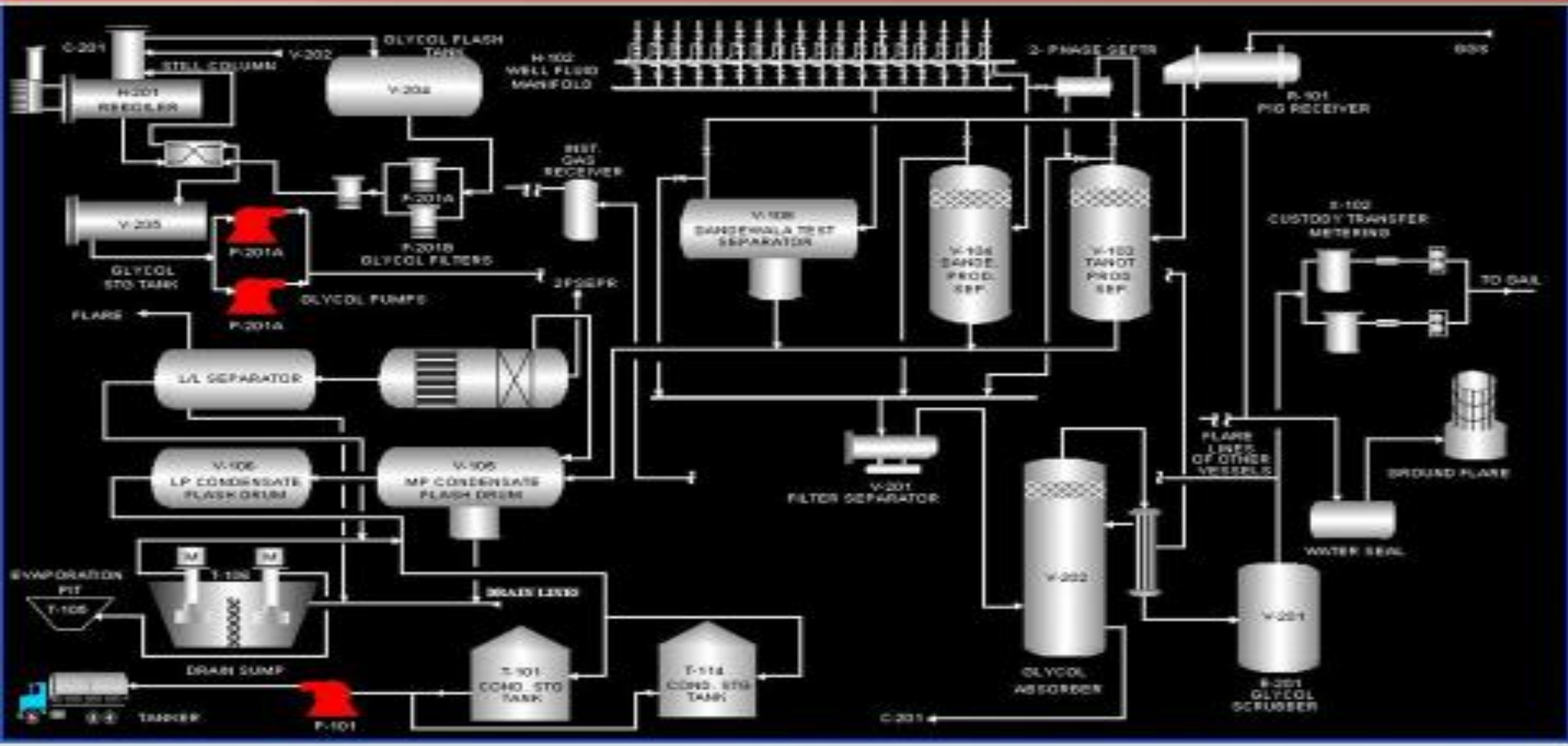
(भारत सरकार का उद्यम)
Oil India Limited
(A Government of India Enterprise)
RAJASTHAN PROJECT
Conquering Newer Horizons

DND GPC Process Diagram



ANNEXURE-VI

Details of Equipment at DND GPC

1	V-105	MP FLASH DRUM		
	S. V. TANK & VESSEL Ltd.			
	DESIGN BY:	TRUINE PROJECTS Pvt. Ltd.		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-105		
	MANUFACTURER Sr. No.:	P - 1293		
	YEAR OF FABRICATION:	1996		
	CODES:	Sec. VIII Div. 1 1995		
	INSPECTED BY:	QUEST	CERTIFICATE No. :	960601
	DESIGN Pr.:	14 Kg/cm2	HYDROTEST Pr.	21 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	04.06.1996
	CAPACITY:	0.85 M3	CORROSION ALLO.:	3
	OPERATING FLUID:	HC	RADIOGRAPHY:	SPOT / FULL
	TOTAL Wt. EMPTY:	1250 Kgs	HEAT TREATMENT:	FORD / END

2	V-106	LP FLASH DRUM		
	S. V. TANK & VESSEL Ltd.			
	DESIGN BY:	TRUINE PROJECTS Pvt. Ltd.		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-106		
	MANUFACTURER Sr. No.:	P - 1294		
	YEAR OF FABRICATION:	1996		
	CODES:	Sec. VIII Div. 1 1995		
	INSPECTED BY:	QUEST	CERTIFICATE No. :	
	DESIGN Pr.:	1.5 Kg/cm2	HYDROTEST Pr.	5.25 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:	0.27 M3	CORROSION ALLO.:	3
	OPERATING FLUID:	HC	RADIOGRAPHY:	SPOT / FULL
	TOTAL Wt. EMPTY:	530 Kgs	HEAT TREATMENT:	FORD / END

3	V-202	GLYCOL CONTACTOR		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	V-202		
	CR. No.:	N - 0852 . 2	Sr. No.:	1296
	MAWP :	650 Psig	At 150 F	
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	60 in	LENGTH:	25 S / S
	CAPACITY:	485.3 ft3	Weight:	28155 Lbs
	MATERIAL:	SA - 516 - 70N		
	THICKNESS:	1.25 in	HEAD THICK. :	1.345 in

NAME-PLATE

4	V-203	GLYCOL SCRUBBER		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	V-202		
	CR. No.:	N - 0853 . 2	Sr. No.:	1297
	MAWP :	640 Psig At 150 F	MDMT:	-20 F at 640 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	40 in OD	LENGTH:	7.0 S / S
	CAPACITY:	78.4 ft3	Weight:	7446 Lbs
	SHELL MATERIAL:	SA - 516 - 70N	DRW. No. 9044-0.350-010A / B	
	SHELL THICKNESS:	1.0 in	HEAD THICK. :	0.967 in

5	E - 201	GLYCOL HEAT EXCHANGER		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	E - 201	DRW. No. 9044-0.350-009	
	CR. No.:	N - 0855 . 2	Sr. No.:	1301
	MAWP :	640 Psig At 150 F	MDMT:	-20 F at 640 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	16 in OD	LENGTH:	10.0 S / S
	CAPACITY:	11.47 ft3	Weight:	2780 Lbs
	SHELL MATERIAL:	SA -506 -B / SA-105N	Tube Sheet:	SA-516-70N
	SHELL THICKNESS:	0.656 in	HEAD :	300RFWN
	TUBE THICK :	1.750 in	COIL THICK:	14 BWG

6	H-201 / V-205	GLYCOL REGENERATOR		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	H-201 / V-205	DRW. No. 9044-0.350-014A / B	
	CR. No.:		Sr. No.:	1300
	MAWP :	14.5 Psig At 425 F	MDMT:	-20 F at 14.5 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	30 in OD	LENGTH:	15 S / S
	CAPACITY:	128 ft3	Weight:	6625 Lbs
	SHELL MATERIAL:	SA - 516 - 70N	HEAD MATRL:	SA - 516 - 70N
	SHELL THICKNESS:	0.375 in	HEAD THICK. :	0.375 in

7	F-201 A / B	GLYCOL FILTER		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	H-201 / V-205	DRW. No. 9044-0.350-012	
	CR. No.:	N-0851 . 2	Sr. No.:	1295 A/B
	MAWP :	150 Psig At 150 F	MDMT:	-20 F at 150 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	6.125 in OD	LENGTH:	4 S / S
	CAPACITY:	0.8 ft3	Weight:	215 Lbs
	SHELL MATERIAL:	SA - 106 B	HEAD MATRL:	SA - 105

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	SHELL THICKNESS:	0.280 in	HEAD THICK. :	0.245 in

8	V -204	GLYCOL FLASH TANK		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	V-204	DRW. No. 9044-0.350-011	
	CR. No.:	N-0854 . 2	Sr. No.:	1298
	MAWP :	150 Psig At 150 F	MDMT:	-20 F at 150 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	30 in OD	LENGTH:	7.0 S / S
	CAPACITY:	36 ft3	Weight:	2255 Lbs
	SHELL MATERIAL:	SA - 516-70	HEAD MATRL:	SA - 516-70
	SHELL THICKNESS:	0.375 in	HEAD THICK. :	0.345 in

9	2 Phase Sep	NEW SEPARATOR (Horizontal)		
	BGR ENERGY SYSTEM Ltd. CHENNAI			
	DESIGN BY:	BGR Energy System Ltd. Chennai		
	MANUFACTURED FOR:	OIL INDIA, JODHPUR..		
	COLLABORATOR:	CDS Engg. BV Internals.		
	MANUFACTURER Sr. No.:	OGED / 532 - 01		
	YEAR OF FABRICATION:	2008		
	CODES:	ASME Sec. VIII Div. 1 2000		
	INSPECTED BY:	Bureau Veritas	CERTIFICATE No. :	
	DESIGN Pr.:	53 Kg/cm2	HYDROTEST Pr.	68.9 Kg/cm2
	DESIGN Temp.:	100 C	DATE OF TEST:	11.10.2008
	CAPACITY:		CORROSION ALLO.:	0
	OPERATING FLUID:	HC gas + Oil + Water	RADIOGRAPHY:	100%
	TOTAL Wt. EMPTY:	14000 Kgs	HEAT TREATMENT:	NIL

10	V-108	INSTRUMENT GAS RECEIVER		
	DESIGN BY:	TRUINE PROJECTS Pvt. Ltd.		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-108		
	MANUFACTURER Sr. No.:	P - 1295		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1 1995		
	INSPECTED BY:	QUEST	CERTIFICATE No. :	960502
	DESIGN Pr.:	9.0 Kg/cm2	HYDROTEST Pr.	13.5 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	5.5.1996
	CAPACITY:	4.03 M3	CORROSION ALLO.:	3.0 mm
	OPERATING FLUID:	NATURAL GAS	RADIOGRAPHY:	100
	TOTAL Wt. EMPTY:	2000 Kgs	HEAT TREATMENT:	0

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11	V-102	DND TEST SEPARATOR		
	DESIGN BY:			
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-102		
	MANUFACTURER Sr. No.:	23595		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1	1995	
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	69 Kg/cm2	HYDROTEST Pr.	106 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:		CORROSION ALLO.:	
	OPERATING FLUID:	HC	RADIOGRAPHY:	
	TOTAL Wt. EMPTY:		HEAT TREATMENT:	

12	V-104	DND PRODUCTION SEPARATOR		
	DESIGN BY:			
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-104		
	MANUFACTURER Sr. No.:	23583		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1	1995	
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	60 Kg/cm2 (MAWP)	HYDROTEST Pr.	89 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:	223 m3	CORROSION ALLO.:	SS
	OPERATING FLUID:	HC	RADIOGRAPHY:	RT2
	TOTAL Wt. EMPTY:		Dimension	1000mm ID; 2500 TT;

13		FLARE SEAL POT		
	DESIGN BY:	ADOR SAMIA LIMITED		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	WS / 046 / 03		
	MANUFACTURER Sr. No.:	F046-96-03		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1	1995	
	INSPECTED BY:	DNV	CERTIFICATE No. :	
	DESIGN Pr.:	2 Kg/cm2	HYDROTEST Pr.	3 Kg/cm2
	DESIGN Temp.:	100 C	DATE OF TEST:	4.10.1996
	CAPACITY:	5 M3	CORROSION ALLO.:	3.0 mm
	OPERATING FLUID:	HC / WATER	RADIOGRAPHY:	10%
	TOTAL Wt. EMPTY:	2351 KG	HEAT TREATMENT:	

14	V-103	TOT PRODUCTION SEPARATOR		
	DESIGN BY:			

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	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-103		
	MANUFACTURER Sr. No.:	23588		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1 1995		
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	44 Kg/cm2	HYDROTEST Pr.	67 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:		CORROSION ALLO.:	3.0 mm
	OPERATING FLUID:	HC	RADIOGRAPHY:	
	TOTAL Wt. EMPTY:		HEAT TREATMENT:	

15	V-101	TOT TEST SEPARATOR		
	DESIGN BY:	TRIUNE PROJECT PVT. LTD.		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-101		
	MANUFACTURER Sr. No.:	P-1299		
	YEAR OF FABRICATION:	1996		
	CODES:	ASME Sec. VIII Div. 1 1995		
	INSPECTED BY:	QUEST	CERTIFICATE No. :	960602
	DESIGN Pr.:	65 Kg/cm2	HYDROTEST Pr.	104 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	4.6.1996
	CAPACITY:	0.33M3	CORROSION ALLO.:	3.0 mm
	OPERATING FLUID:	HC	RADIOGRAPHY:	100%
	TOTAL Wt. EMPTY:	1500Kg	HEAT TREATMENT:	Ford / End

16	V-109	TOT INSTT. GAS RECEIVER		
	DESIGN BY:	PUNJ LLOYDS LTD.		
	MANUFACTURED FOR:	OIL INDIA.		
	ITEM No.:	V-109		
	MANUFACTURER Sr. No.:			
	YEAR OF FABRICATION:	1997		
	CODES:			
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	90 Kg/cm2	HYDROTEST Pr.	135 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:	0.72M3	CORROSION ALLO.:	3.0 mm
	OPERATING FLUID:	NATURAL GAS	RADIOGRAPHY:	100%
	TOTAL Wt. EMPTY:	721Kg	HEAT TREATMENT:	

17	GF-101 A / B	CTM GAS FILTER		
	DESIGN BY:	MULTITEX		
	MANUFACTURED FOR:	PUNJ LLOYDS		
	ITEM No.:	GF - 101 A / B		
	MANUFACTURER Sr. No.:	762 / 763		

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	YEAR OF FABRICATION:	1996		
	CODES:			
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	45 Kg/cm2	HYDROTEST Pr.	67.5 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	
	CAPACITY:		CORROSION ALLO.:	
	OPERATING FLUID:	HC	RADIOGRAPHY:	Spot 10%
	TOTAL Wt. EMPTY:	525 Kg	HEAT TREATMENT:	

18	F - 202	CHARCOAL FILTER		
	Manufactured & Certified by:	THERMODESIGN ENGG. Ltd. CANADA.		
	ITEM No.:	F-202	DRW. No. 9044-0.350-009	
	CR. No.:	N - 0856 . 2	Sr. No.:	1299
	MAWP :	150 Psig At 150 F	MDMT:	-20 F at 150 psig
	MANUFACTURED:	1995	Corr. Allow:	0.125 in
	DIA. :	16 in OD	LENGTH:	3 - 11 S / F
	CAPACITY:	5.15 ft3	Weight:	731 Lbs
	SHELL MATERIAL:	SA -106 -B	HEAD:	SA-105 SA-234WPB
	SHELL THICKNESS:	0.375 in	HEAD :	150 BLD Flng 0.328 in
	DRWG No.	9044-0350-013		

19	F-101 A / B	TOT INSTT. GAS FILTER		
	DESIGN BY:	MULTITEX		
	MANUFACTURED FOR:	PUNJ LLOYDS		
	ITEM No.:	F - 101 A / B		
	MANUFACTURER Sr. No.:	712 / 713		
	YEAR OF FABRICATION:	1996		
	CODES:			
	INSPECTED BY:		CERTIFICATE No. :	
	DESIGN Pr.:	10 Kg/cm2	HYDROTEST Pr.	15 Kg/cm2
	DESIGN Temp.:	65 C	DATE OF TEST:	19.03.1996
	CAPACITY:		CORROSION ALLO.:	
	OPERATING FLUID:	HC	RADIOGRAPHY:	100%
	TOTAL Wt. EMPTY:	80 Kg	HEAT TREATMENT:	

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

FOR DESIGN, FABRICATION, INSTALLATION, REPLACEMENT OF EXISTING GLYCOL PLANT AND COMMISSIONING OF 1.5 MMSCMD OF GLYCOL DEHYDRATION UNIT

In addition to the General Terms and Conditions for Global Tender, the following BEC / BRC criteria will be applicable against this tender:

The Bid shall conform generally to the specifications and terms and conditions including the scope of work/supply given in the bidding document. Bids will be rejected in case services offered do not conform to the required parameters stipulated in the technical specifications/scope of work/terms of reference. Notwithstanding the general conformity of the bid to the stipulated specifications/terms, the following requirements will have to be particularly met by the bidders without which the same will be considered as non-responsive and rejected.

All the documents related to BEC / BRC must be submitted along with the technical bid.

BID REJECTION CRITERIA (BRC):

1.0 TECHNICAL:

1.1 The bidder should have experience in design, manufacture and supply of Glycol Dehydration Unit (GDU) for oil/gas field services. Documentary evidence including list of clients must be submitted along-with the technical bid.

1.2 The Bidder must have experience of successfully executing similar order including successful installation & commissioning for at least one unit of similar capacity or higher in preceding 5 (five) years to be reckoned from the original stipulated bid closing date of the tender.

1.3 Declaration/confirmation that the Glycol Dehydration Unit (GDU) shall be manufactured as per relevant codes and the bidder or its partner in case of JV or Consortium of Companies is authorized to carry out such jobs. Documentary evidence in support of the above must also be furnished. (Note: Documents establishing successful execution as above must be submitted along with the techno-commercial bid. These documents should be in the form of duly attested copies of Purchase order/contracts/work order/completion certificate/payment certificate etc. issued by clients, failing which offer will be rejected.)

1.4 The Bidder should be able to provide services of adequately qualified and trained/experienced key-manpower for intended work as specified in the Scope of Work. Technical bid should include bio-data of the key personnel proposed to be deployed which shall comply with the requirements, failing which the offer will not be accepted.

1.5 Bids which do not include all the jobs/services mentioned in the tender document will be considered as incomplete and rejected.

Audited Balance Sheet along with Profit & Loss account. In case of foreign bidders, self-attested/digitally signed printed published accounts are also acceptable.

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.

2.5 In case the Audited Balance sheet and Profit Loss Account submitted along with the bid are in currencies other than INR or US$, the bidder shall have to convert the figures in equivalent INR or US$ considering the prevailing conversion rate on the date on which the Audited Balance Sheet and Profit & Loss Account is signed. A CA Certificate is to be submitted by the bidder regarding converted figures in equivalent INR or US$.

2.6 In case the Bidder is subsidiary company (should be a wholly owned subsidiary of the parent/ultimate parent/holding company) who does not meet financial criteria by itself and submits his bid based on the strength of his parent/holding company, then following documents need to be submitted:

i) Turnover of parent/ultimate parent/holding company should be in line with para 2.1 above.

ii) Net worth of the parent/ultimate parent/holding company should be positive.

iii) Corporate guarantee on parent/ultimate parent/holding company's letter head signed by an authorized official undertaking that they shall financially support their wholly owned subsidiary company for executing the project/job in case the same is awarded to them.

iv) Document of subsidiary company towards wholly owned subsidiary of the parent/ultimate parent/holding company.

3.0 Bid from Indian Company / India Joint Venture Company with Technical Collaboration/ Joint Venture Partner:

a) In case, the bidder is an Indian Company / Indian Joint Venture Company, who meets the Financial Turnover criteria as per clause No. 2.1 but do not meet criterion as per clause Nos. 1.1 and 1.2 above, they may also bid on the strength of Technical Collaborator / Joint Venture Partner who meets the criteria laid down at clause No. 1.2.

b) Indian bidders quoting based on technical collaboration/ joint venture, shall submit a Memorandum of Understanding (MOU) / Agreement with their technical collaborator/ joint venture partner clearly indicating their roles under the scope of work which shall be addressed to OIL and shall remain valid and binding for the entire duration period under this tender/order/contract.

3.1 Bid from Consortium of companies:

In case, the bidder is a consortium of companies, the following requirement should be satisfied by the bidder:

a) The Leader of the consortium (Principal Bidder) shall have experience of Design, Manufacturing, supply and installation of Glycol Dehydration Unit (GDU) of similar nature or of higher capacity and satisfy the minimum experience requirement as per clause No. 1.1 and/or 1.2 above.

b) Consortium bids shall be submitted with a Memorandum of Understanding between the consortium members duly signed by the authorized Executives of the consortium members

1.6 Bidders must confirm categorically in their Technical Bid that third party inspection shall be carried out by any of the OIL approved inspection agency viz. Lloyds/DNV/RITEs/Bureau Veritas to ensure quality and also to conform compliance of all inspection clauses as called for vide clause for TPI (Clause No. 13) under Scope of Supply/Technical Specifications/Terms of Reference.

1.7 Bidders should further confirm that all metallurgical test conforming Chemical analysis and Physical properties of important components for the Glycol Dehydration Unit (GDU) shall be carried out in any Govt. approved test house like CMERI and certificates of the same must be provided to OIL.

1.8 All accessories/fittings for the Glycol Dehydration Unit (GDU) must be sourced only from the Vendors as indicated in 'Scope of Supply". Bidders must categorically confirm the same in their Technical Bid, failing which offer will be rejected.

1.9 Bidder has to get the design including MOC of the plant approved by reputed third party. Bidder has to confirm the same along with the bid.

2.0 FINANCIAL CRITERIA:

2.1 The bidder shall have an annual financial turnover of minimum **INR 9.5 Crores (US$ 13,19,440.00)** during any of the preceding 03 (three) financial years reckoned from the original bid closing date.

2.2 In case of Consortium, atleast one member of the consortium shall have an annual financial turnover as mentioned in clause 2.1 above and the other members of the consortium should meet minimum turnover of INR 4.25 Crores (US$ 6.59.720.00) during any of the preceding 03(three) financial years reckoned from the original bid closing date.

2.3 "Net Worth" of the bidder should be **positive** for the preceding financial/ accounting year.

2.4 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.

Note:

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

a. 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-A.

OR

clearly defining the role/scope of work of each partner/member, binding the members jointly and severally to the responsibility for discharging all obligations under the contract and identifying the Leader of Consortium. Unconditional acceptance of full responsibility for executing the 'Scope of Work' of this bid document by the Leader of the Consortium shall be submitted along with the Techno-commercial bid.

c) Only the Leader of the consortium shall buy the bid document, submit bid and sign the order/contract agreement (in the event of award of order/contract) on behalf of the consortium.

d) The Bid Security shall be in the name of the Leader of the consortium on behalf of consortium with specific reference to consortium bid and name & address of consortium members. Similarly, the Performance Security shall be submitted by the Leader on behalf of the consortium.

e) Bidder(s) quoting in Collaboration / joint venture Partnership/ Consortium with any firm are not allowed to quote separately/independently against this tender. The collaborator is also not allowed to quote separately/independently against this tender. All the bids received in such case will be summarily rejected.

f) The leader of the consortium on behalf of the consortium shall coordinate with OIL during the period the bid is under evaluation as well as during the execution of works in the event contract is awarded and he shall also be responsible for resolving dispute/misunderstanding/undefined activities, if any, amongst all the consortium members.

g) Any correspondence exchanged with the leader of consortium shall be binding on all the consortium /joint venture members.

h) Payment shall be made by OIL only to the leader of the consortium towards fulfillment of the contract obligation.

i) In case of consortium bids, the bid shall be digitally signed by the authorized representative of the leader of the consortium. The power of Attorney from each member authorizing the leader for signing and submission of Bid on behalf of individual member must accompany the bid, if the same is not mentioned in the MOU submitted along with the bid.

j) Document/details pertaining to qualification of the bidder of document attached with the bidding documents must be furnished by each partner/member of consortium complete in all respects along with the bid clearly bringing up their experience especially in the form of work in their scope.

k) The Consortium Leader and the distribution of work will be identified and set forth in the bid and will not be permitted to change thereafter without the consent of the Company. No change in project plans, time tables or pricing will be permitted as a consequence of any withdrawal or failure to perform by a Consortium Member.

l) Members of the consortium are not allowed to quote separately/independently against this tender. All the bids received in such case will be summarily rejected. Further, all bids from parties with technical support from the same principal/Subsidiary/Co-Subsidiary/Sister subsidiary will be rejected. Joint venture partnership / collaboration, with a firm bidding as an independent identity against this tender, will not be accepted.

m) Certified copies (attested by Director/Company Secretary) of Board resolutions passed by respective Board of Directors of the companies (Consortium leader and members) agreeing to entering into such consortium with each other for submission of bid for the NIT and authorising designated executives of each company to sign in the MOU to be provided along with the technical bid.

n) The MOU/Agreement should be legally valid i.e. it should be on a non-judicial stamp paper and notarised. In case of involvement of overseas bidder, the MOU / Agreement should be notarised / endorsed by Indian Embassy.

3.2 Eligibility criteria in case Bid is submitted on the basis of the Technical Experience of the Parent/Subsidiary Company: Offers of those bidders who themselves do not meet experience criteria as stipulated in clauses above can also be considered provided the bidder is a wholly subsidiary company of the parent company which meets the above mentioned experience criteria or the parent company can also be considered on the strength of its wholly subsidiary company. However, the parent/subsidiary company of the bidder should on its own meet the technical experience as aforesaid and should not rely on its sister subsidiary/co-subsidiary company or through any other arrangement like technical collaboration etc. In that case, as the subsidiary company is dependent upon the technical experience of the parent company or vice-versa, with a view to ensure commitment and involvement of the parent/subsidiary company for successful execution of the contract, the participating bidder must enclose an agreement, as per format furnished vide **Attachment-I,** between the parent and the subsidiary company or vice-versa and Parent/Subsidiary Guarantee, as per format furnished vide **Attachment-II**, from the parent/subsidiary company to OIL for fulfilling the obligations under the agreement, along with the technical bid.

3.3 Eligibility criteria in case Bid is submitted on the basis of the Technical Experience of Sister Subsidiary/Co-Subsidiary Company: Offers of those bidders who themselves do not meet the technical experience criteria stipulated in clauses above can also be considered based on the experience of their Sister Subsidiary/Co-Subsidiary company within the ultimate parent/holding company subject to meeting the following conditions:

(a) Provided that the sister subsidiary/co-subsidiary company and the bidding company are both wholly subsidiaries of an ultimate parent/holding company either directly or through intermediate wholly subsidiaries of the ultimate parent/holding company or through any other wholly subsidiary company within the ultimate parent/holding company. Documentary evidence to this effect to be submitted by the ultimate parent/holding company along with the technical bid.

(b) Provided that the sister subsidiary/co-subsidiary company on its own meets the technical experience criteria laid down in clauses above and not through any other arrangement like technical collaboration etc.

(c) Provided that with a view to ensure commitment and involvement of the ultimate parent/holding company for successful execution of the contract, the participating bidder must submit an agreement, as per format furnished vide **Attachment-III**, between them, their ultimate parent/holding company, along with the technical bid.

A. **In both the situations mentioned in 3.2 and 3.3 above, following conditions are required to be fulfilled /documents to be submitted:**

A-1. Undertaking by ultimate parent to provide a Performance Security (as per format enclosed as Proforma-FA), equivalent to 50% of the value of the Performance Security which is to be submitted by the bidding company, in case the supported bidding company is the successful bidder. In cases where foreign based ultimate parent does not have Permanent Establishment in India, the bidding company can furnish Performance Security for an amount which is sum of Performance Security amount to be submitted by the bidder and additional 50% Performance Security amount required to be submitted by the ultimate parent. In such case bidding

company shall furnish an undertaking that their foreign based ultimate parent is not having any Permanent Establishment in India in terms of Income Tax Act of India.

A-2. Undertaking from the ultimate parent to the effect that in addition to invoking the Performance Security submitted by the contractor, the Performance Security provided by ultimate parent shall be invoked by OIL due to non-performance of the contractor.

Note: In case ultimate parent fails to submit Performance Bank Guarantee as per A-1. above, Bid Security submitted by the bidder shall be forfeited.

3.4 DOCUMENTS:

Bidders must furnish documentary evidences, in support of fulfilling the entire above requirement as under along with the Techno-Commercial Bid:

a) Copies of relevant pages of order/contract & Completion Certificate issued by the clients in support of successful execution as per above clause Nos. 1.1 & 1.2 must be submitted along with the techno-commercial bid. These documents should be in the form of duly attested copies of order/contract/work order/completion certificate/payment certificates etc. issued by clients.

b) Audited balance sheets and profit and loss accounts for last 3(three) years in equivalent INR or US$ as mentioned in clause No. 2.1 above.

c) MOU should be a legally acceptable documents (wherever applicable) in support of collaboration/JV/ consortium arrangement.

d) All documents submitted with bid must be self-certified by the bidder's authorized person signing the bid. However, OIL reserves the right to ask for any Original document for verification.

Bidder while submitting the documents in support of their experience vide Clause Nos. 1.1 & 1.2 above shall also submit details of experience and past performance of the collaborator (in case of collaborator) or of joint venture partner (in case of a joint venture), or Leader of the consortium (in case of Consortium bid) on works/jobs done of similar nature in the past along with the Techno-Commercial Bid. Also, details of current work in hand and other contractual commitments of the bidder (indicating areas and clients) are to be submitted along with documentary experience in the Techno-Commercial Bid in support of the experience laid down in Clause Nos. 1.1 & 1.2 above.

NOTE:

Required Certificates/Confirmation document as indicated above should be submitted along with the un-priced Techno-Commercial bid; absence of which will render the offers Non responsive.

4.0 COMMERCIAL CRITERIA:

i) Bids are invited under **Single Stage Two Bid System**. Bidders shall quote accordingly. **Price/Cost details should not be furnished in the Technical (i.e. Unpriced) bid**. The "Unpriced Bid" shall contain all techno-commercial details except the prices/rates, which shall be kept blank. The "Price Bid" must contain the price schedule and the bidder's commercial terms and conditions. Bids not complying with above submission procedure shall be rejected outright without any further reference.

ii) The prices offered shall 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.

iii) Bids received in physical form against online invitation through e-portal shall be rejected (except the documents specifically called for in hard copies, if any). Similarly, Bids received after the bid closing date and time shall be rejected. Also, modifications to bids received after the bid closing date & time shall not be considered.

iv) Bids containing incorrect statement shall be rejected.

v) Validity of the bid shall be minimum **120** days from the date of Bid closing. Bids with lesser validity shall be rejected.

vi) **Bid Security in ORIGINAL** shall be furnished by the Bidder as a part of their TECHNICAL BID. The amount of Bid Security and its validity shall be as specified in the Bid Document. **Any bid not accompanied by a proper bid security in ORIGINAL shall be rejected without any further consideration.** A bid shall be rejected straightway if Original Bid Security is not received within the stipulated date & time mentioned in the Tender and/or if the Bid Security validity is shorter than the validity indicated in Tender and/or if the Bid Security amount is lesser than the amount indicated in the Tender.

For exemption for submission of Bid Security please refer Bid security clause under Amendments of "General Terms & Conditions" for e-Procurement.

vii) Successful bidder shall be required to furnish a Performance Security equivalent to ten percent (10%) of total evaluated value of the Purchase Order. Bidders should undertake in their bids to submit Performance Security as stated above.

viii) 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 called for 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 called for 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 (if applicable)

ix) Bidder must accept and comply with the following clauses as given in the Bid Document, failing which bid shall be liable for rejection:

i) Liquidated Damages
ii) Guarantee of material
iii) Arbitration / Resolution of Dispute
iv) Force Majeure
v) Applicable Laws
vi) Performance Security

II. BID EVALUATION CRITERIA:

The bids conforming to the specifications, terms and conditions stipulated in the tender and considered to be responsive after subjecting to the Bid Rejection Criteria shall be considered for further evaluation as per General Terms and Conditions for Global Tender and the Bid Evaluation Criteria given below:

1.0 The evaluation of bids shall be done as per the Price Bid Format (SUMMARY) provided in the Tender / e-tender portal.

2.0 If there is any discrepancy between the unit price and the total price, the unit price shall prevail and the total price shall be corrected accordingly. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

3.0 For conversion of foreign currency into Indian currency, B.C. selling (Market) rate declared by State Bank of India, one day prior to the date of price bid opening shall be considered. However, if the time lag between the opening of the bids and final decision exceed 3(three) months, then B.C. Selling(Market) rate of exchange declared by SBI on the date prior to the date of final decision shall be adopted for conversion and evaluation.

4.0 To ascertain the inter-se-ranking, bid prices shall be converted into Indian Rupees and the comparison of responsive bids shall be made strictly as per online Price bid format, subject to corrections / adjustments, if any.

5.0 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for Global Tender. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) mentioned here contradict the Clauses in the General Terms & Conditions of Global Tender of the tender and/or elsewhere, those mentioned in this BEC / BRC shall prevail.

&&&&&&&&&

ANNEXURE

CERTIFICATE OF ANNUAL TURNOVER & NET WORTH

TO BE ISSUED BY PRACTISING **CHARTERED ACCOUNTANTS' FIRM** ON THEIR LETTER HEAD

TO WHOM IT MAY CONCERN

This is to certify that the following financial positions extracted from the audited financial statements of M/s..... (Name of the Bidder) for the last three (3) completed accounting years upto .....**(as the case may be)** are correct.

YEAR	TURN OVER In INR (Rs.) Crores / US $ Million)*	NET WORTH In INR (Rs.) Crores / US $ Million)*
[redacted]		
	[redacted]	

*Rate of Conversion (if used any): USD 1.00 = INR.....

Place:
Date:

Seal:

Membership No. :
Registration Code:

Signature

*** Applicable only for GLOBAL tenders.**

Annexure-X

Format of undertaking by Bidders towards submission of authentic information/documents
(To be typed on the letter head of the bidder)

Ref. No_____ Date _____

Sub: Undertaking of authenticity of information/documents submitted

Ref: Your tender No._____ Dated _____

To,
The HOD-Materials
Materials Deptt,
OIL, Rajasthan Project

Sir,

With reference to our quotation against your above-referred tender, we hereby undertake that no fraudulent information/documents have been submitted by us.

We take full responsibility for the submission of authentic information/documents against the above cited bid.

We also agree that, during any stage of the tender/contract agreement, in case any of the information/documents submitted by us are found to be false/forged/fraudulent, OIL has right to reject our bid at any stage including forfeiture of our EMD and/or PBG and/or cancel the award of contract and/or carry out any other penal action on us, as deemed fit.

Yours faithfully,

For (type name of the firm here)

Signature of Authorised Signatory

Name :

Designation :

Phone No.

Place :

Date :

(Affix Seal of the Organization here, if applicable)