

Bid Document/ बिड दस्तावेज़

Bid Details/बिड विवरण	
Bid End Date/Time/बिड बंद होने की तारीख/समय	18-10-2023 13:00:00
Bid Opening Date/Time/बिड खुलने की तारीख/समय	18-10-2023 13:30:00
Bid Offer Validity (From End Date)/बिड पेशकश वैधता (बंद होने की तारीख से)	90 (Days)
Ministry/State Name/मंत्रालय/राज्य का नाम	Ministry Of Petroleum And Natural Gas
Department Name/विभाग का नाम	Oil India Limited
Organisation Name/संगठन का नाम	Oil India Limited
Office Name/कार्यालय का नाम	Oil India Limited
Total Quantity/कुल मात्रा	798
Item Category/मद केटेगरी	Mat Code 99066648 , Mat Code 99066649 , Mat Code 99066683 , Mat Code 99066684 , Mat Code 99066650 , Mat Code 99066682 , Mat Code 99066681 , Mat Code 99065821 , Mat Code 99065822 , Mat Code 99065826 , Mat Code 99065827 , Mat Code 99065823 , Mat Code 99065825 , Mat Code 99065824 , Mat Code 99065828
BOQ Title/बीओक्यू शीर्षक	Liquid and Pressure Control Valves
MSE Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से एमएसई छूट	No
Startup Exemption for Years of Experience and Turnover/ अनुभव के वर्षों से स्टार्टअप छूट	No
Document required from seller/विक्रेता से मांगे गए दस्तावेज़	Experience Criteria,Bidder Turnover,Certificate (Requested in ATC),OEM Authorization Certificate,Additional Doc 1 (Requested in ATC),Additional Doc 2 (Requested in ATC),Additional Doc 3 (Requested in ATC),Additional Doc 4 (Requested in ATC),Compliance of BoQ specification and supporting document *In case any bidder is seeking exemption from Experience / Turnover Criteria, the supporting documents to prove his eligibility for exemption must be uploaded for evaluation by the buyer
Bid to RA enabled/बिड से रिवर्स नीलामी सक्रिय किया	No
Type of Bid/बिड का प्रकार	Two Packet Bid
Primary product category	Mat Code 99066648

Bid Details/बिड विवरण	
Time allowed for Technical Clarifications during technical evaluation/तकनीकी मूल्यांकन के दौरान तकनीकी स्पष्टीकरण हेतु अनुमत समय	5 Days
Inspection Required (By Empanelled Inspection Authority / Agencies pre-registered with GeM)	No
Payment Timelines	Payments shall be made to the Seller within 21 days of issue of consignee receipt-cum-acceptance certificate (CRAC) and on-line submission of bills (This is in supersession of 10 days time as provided in clause 12 of GeM GTC)
Evaluation Method/मूल्यांकन पद्धति	Item wise evaluation/

EMD Detail/ईएमडी विवरण

Advisory Bank/एडवाइजरी बैंक	ICICI
Schedule 1 EMD Amount/ईएमडी राशि (In INR)	206552
Schedule 2 EMD Amount/ईएमडी राशि (In INR)	239266
Schedule 3 EMD Amount/ईएमडी राशि (In INR)	155688
Schedule 4 EMD Amount/ईएमडी राशि (In INR)	189412
Schedule 5 EMD Amount/ईएमडी राशि (In INR)	346101
Schedule 6 EMD Amount/ईएमडी राशि (In INR)	482086
Schedule 7 EMD Amount/ईएमडी राशि (In INR)	277465
Schedule 8 EMD Amount/ईएमडी राशि (In INR)	155911
Schedule 9 EMD Amount/ईएमडी राशि (In INR)	242631
Schedule 10 EMD Amount/ईएमडी राशि (In INR)	125453
Schedule 11 EMD Amount/ईएमडी राशि (In INR)	156601
Schedule 12 EMD Amount/ईएमडी राशि (In INR)	328081
Schedule 13 EMD Amount/ईएमडी राशि (In INR)	402382
Schedule 14 EMD Amount/ईएमडी राशि (In INR)	248643
Schedule 15 EMD Amount/ईएमडी राशि (In INR)	31496

ePBG Detail/ईपीबीजी विवरण

Advisory Bank/एडवाइजरी बैंक	ICICI
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ePBG Percentage(%) / ईपीबीजी प्रतिशत (%)	10.00
Duration of ePBG required (Months) / ईपीबीजी की अपेक्षित अवधि (महीने).	21

(a). EMD EXEMPTION: The bidder seeking EMD exemption, must submit the valid supporting document for the relevant category as per GeM GTC with the bid. Under MSE category, only manufacturers for goods and Service Providers for Services are eligible for exemption from EMD. Traders are excluded from the purview of this Policy./जेम की शर्तों के अनुसार ईएमडी छूट के इच्छुक बिडर को संबंधित केटेगरी के लिए बिड के साथ वैध समर्थित दस्तावेज़ प्रस्तुत करने हैं। एमएसई केटेगरी के अंतर्गत केवल वस्तुओं के लिए विनिर्माता तथा सेवाओं के लिए सेवा प्रदाता ईएमडी से छूट के पात्र हैं। व्यापारियों को इस नीति के दायरे से बाहर रखा गया है।

(b). The EMD Amount will be applicable for each schedule/group selected during Bid creation.

(c). EMD & Performance security should be in favour of Beneficiary, wherever it is applicable./ईएमडी और संपादन जमानत राशि, जहां यह लागू होती है, लाभार्थी के पक्ष में होनी चाहिए।

Beneficiary/लाभार्थी :

GM - Materials (HoD)

Oil India Limited, Materials Department, Duliajan, Dibrugarh, Assam, PIN - 786602

(G C Sarma)

Splitting/विभाजन

Bid splitting not applied/बोली विभाजन लागू नहीं किया गया.

MII Purchase Preference/एमआईआई खरीद वरीयता

MII Purchase Preference/एमआईआई खरीद वरीयता	Yes
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MSE Purchase Preference/एमएसई खरीद वरीयता

MSE Purchase Preference/एमएसई खरीद वरीयता	Yes
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1. Preference to Make In India products (For bids < 200 Crore): Preference shall be given to Class 1 local supplier as defined in public procurement (Preference to Make in India), Order 2017 as amended from time to time and its subsequent Orders/Notifications issued by concerned Nodal Ministry for specific Goods/Products. The minimum local content to qualify as a Class 1 local supplier is denoted in the bid document. If the bidder wants to avail the Purchase preference, the bidder must upload a certificate from the OEM regarding the percentage of the local content and the details of locations at which the local value addition is made along with their bid, failing which no purchase preference shall be granted. In case the bid value is more than Rs 10 Crore, the declaration relating to percentage of local content shall be certified by the statutory auditor or cost auditor, if the OEM is a company and by a practicing cost accountant or a chartered accountant for OEMs other than companies as per the Public Procurement (preference to Make-in -India) order 2017 dated 04.06.2020. Only Class-I and Class-II Local suppliers as per MII order dated 4.6.2020 will be eligible to bid. Non - Local suppliers as per MII order dated 04.06.2020 are not eligible to participate. However, eligible micro and small enterprises will be allowed to participate .The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023.

[OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

2. Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% (Selected by Buyer) of margin of purchase preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for 100%(selected by Buyer) percentage of total QUANTITY. The buyers are advised to refer the OM No.F.1/4/2021-PPD dated 18.05.2023 [OM No.1 4 2021 PPD dated 18.05.2023](#) for compliance of Concurrent application of Public Procurement Policy for Micro and Small Enterprises Order, 2012 and Public Procurement (Preference to Make in India) Order, 2017.

3. Estimated Bid Value indicated above is being declared solely for the purpose of guidance on EMD amount and for determining the Eligibility Criteria related to Turn Over, Past Performance and Project / Past Experience etc. This has no relevance or bearing on the price to be quoted by the bidders and is also not going to have any impact on bid participation. Also this is not going to be used as a criteria in determining reasonableness of quoted prices which would be determined by the buyer based on its own assessment of reasonableness and based on competitive prices received in Bid / RA process.

Evaluation Method (Item Wise Evaluation Method)

Contract will be awarded schedulewise and the determination of L1 will be done separately for each schedule. The details of item-consignee combination covered under each schedule are as under:

Evaluation Schedules	Item/Category	Quantity
Schedule 1	Mat Code 99066648	71
Schedule 2	Mat Code 99066649	72
Schedule 3	Mat Code 99066683	40
Schedule 4	Mat Code 99066684	43
Schedule 5	Mat Code 99066650	66
Schedule 6	Mat Code 99066682	80
Schedule 7	Mat Code 99066681	34
Schedule 8	Mat Code 99065821	54
Schedule 9	Mat Code 99065822	78
Schedule 10	Mat Code 99065826	32
Schedule 11	Mat Code 99065827	35
Schedule 12	Mat Code 99065823	63
Schedule 13	Mat Code 99065825	69
Schedule 14	Mat Code 99065824	31
Schedule 15	Mat Code 99065828	30

Mat Code 99066648

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

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

Consignees/Reporting Officer/परिषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परिषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	71	210

Mat Code 99066649

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परिषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परिषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	72	210

Mat Code 99066683

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	40	210

Mat Code 99066684

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	43	210

Mat Code 99066650

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	66	210

Mat Code 99066682

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	80	210

Mat Code 99066681

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	34	210

Mat Code 99065821

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	54	210

Mat Code 99065822

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	78	210

Mat Code 99065826

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	32	210

Mat Code 99065827

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	35	210

Mat Code 99065823

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

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Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	63	210

Mat Code 99065825

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

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

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	69	210

Mat Code 99065824

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

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

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	31	210

Mat Code 99065828

(Minimum 50% and 20% Local Content required for qualifying as Class 1 and Class 2 Local Supplier respectively/क्रमशः श्रेणी 1 और श्रेणी 2 के स्थानीय आपूर्तिकर्ता के रूप में अर्हता प्राप्त करने के लिए आवश्यक)

Technical Specifications/तकनीकी विशिष्टियाँ

Specification Document	View File
BOQ Detail Document	View File

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

Consignees/Reporting Officer/परेषिती/रिपोर्टिंग अधिकारी and/ तथा Quantity/मात्रा

S.No./क्र. सं.	Consignee Reporting/Officer/ परेषिती/रिपोर्टिंग अधिकारी	Address/पता	Quantity/मात्रा	Delivery Days/डिलीवरी के दिन
1	Krishna Mohan Kumar	786602,Oil India Limited, Duliajan, Assam	30	210

Buyer Added Bid Specific Terms and Conditions/क्रेता द्वारा जोड़ी गई बिड की विशेष शर्तें

1. Generic

OPTION CLAUSE: The Purchaser reserves the right to increase or decrease the quantity to be ordered up to 25 percent of bid quantity at the time of placement of contract. The purchaser also reserves the right to increase the ordered quantity by up to 25% of the contracted quantity during the currency of the contract at the contracted rates. Bidders are bound to accept the orders accordingly.

2. Generic

Bidder financial standing: The bidder should not be under liquidation, court receivership or similar proceedings, should not be bankrupt. Bidder to upload undertaking to this effect with bid.

3. Generic

Buyer Organization specific Integrity Pact shall have to be complied by all bidders. Bidders shall have to upload scanned copy of signed integrity pact as per Buyer organizations policy along with bid. [Click here to view the file](#)

4. Generic

Bidder shall submit the following documents along with their bid for Vendor Code Creation:

- a. Copy of PAN Card.
- b. Copy of GSTIN.
- c. Copy of Cancelled Cheque.
- d. Copy of EFT Mandate duly certified by Bank.

5. **Generic**

Manufacturer Authorization:Wherever Authorised Distributors/service providers are submitting the bid, Authorisation Form /Certificate with OEM/Original Service Provider details such as name, designation, address, e-mail Id and Phone No. required to be furnished along with the bid

6. **Generic**

Supplier shall ensure that the Invoice is raised in the name of Consignee with GSTIN of Consignee only.

7. **Generic**

The buyer organization is an institution eligible for concessional rates of GST as notified by the Government of India. The goods for which bids have been invited fall under classification of GST concession and the conditions for eligibility of concession are met by the institution. A certificate to this effect will be issued by Buyer to the Seller after award of the Contract. Sellers are requested to submit their bids after accounting for the Concessional rate of GST.

Applicable Concessional rate of GST :

12

%

Notification No.and date :

8/2022 - Integrated Tax (Rate)

dated

13/07/2022

8. **Generic**

While generating invoice in GeM portal, the seller must upload scanned copy of GST invoice and the screenshot of GST portal confirming payment of GST.

9. **Generic**

Whereever Essentiality Certificate is applicable (PEL/ML), successful bidder should provide Proforma Invoice for processeing for EC application and material should be dispatche after receiving of EC rom DGH. In view of the same, an ATC may be incorporated in GeM, viz, "BIDDER/OEM must provide Proforma Invoice for processeing for EC application within

165

days from date of issue of GeM Contract and material should be dispatche after receiving of EC rom DGH."

10. **Scope of Supply**

Scope of supply (Bid price to include all cost components) : Only supply of Goods

11. **Purchase Preference (Centre)**

Purchase preference to Micro and Small Enterprises (MSEs): Purchase preference will be given to MSEs as defined in Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012 dated 23.03.2012 issued by Ministry of Micro, Small and Medium Enterprises and its subsequent Orders/Notifications issued by concerned Ministry. If the bidder wants to avail the Purchase preference, the bidder must be the manufacturer of the offered product in case of bid for supply of goods. Traders are excluded from the purview of Public Procurement Policy for Micro and Small Enterprises. In respect of bid for Services, the bidder must be the Service provider of the offered Service. Relevant documentary evidence in this regard shall be uploaded along with the bid in respect of the offered product or service. If L-1 is not an MSE and MSE Seller (s) has/have quoted price within L-1+ 15% of margin of purchase

preference /price band defined in relevant policy, such Seller shall be given opportunity to match L-1 price and contract will be awarded for percentage of 100% of total value.

12. Purchase Preference (Centre)

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

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

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

13. Certificates

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

Disclaimer/अस्वीकरण

The additional terms and conditions have been incorporated by the Buyer after approval of the Competent Authority in Buyer Organization, whereby Buyer organization is solely responsible for the impact of these clauses on the bidding process, its outcome, and consequences thereof including any eccentricity / restriction arising in the bidding process due to these ATCs and due to modification of technical specifications and / or terms and conditions governing the bid. Any clause(s) incorporated by the Buyer regarding following shall be treated as null and void and would not be considered as part of bid:-

1. Definition of Class I and Class II suppliers in the bid not in line with the extant Order / Office Memorandum issued by DPIIT in this regard.
2. Seeking EMD submission from bidder(s), including via Additional Terms & Conditions, in contravention to exemption provided to such sellers under GeM GTC.
3. Publishing Custom / BOQ bids for items for which regular GeM categories are available without any Category item bunched with it.
4. Creating BoQ bid for single item.
5. Mentioning specific Brand or Make or Model or Manufacturer or Dealer name.
6. Mandating submission of documents in physical form as a pre-requisite to qualify bidders.
7. Floating / creation of work contracts as Custom Bids in Services.
8. Seeking sample with bid or approval of samples during bid evaluation process.
9. Mandating foreign / international certifications even in case of existence of Indian Standards without specifying equivalent Indian Certification / standards.
10. Seeking experience from specific organization / department / institute only or from foreign / export

experience.

11. Creating bid for items from irrelevant categories.
12. Incorporating any clause against the MSME policy and Preference to Make in India Policy.
13. Reference of conditions published on any external site or reference to external documents/clauses.
14. Asking for any Tender fee / Bid Participation fee / Auction fee in case of Bids / Forward Auction, as the case may be.

Further, if any seller has any objection/grievance against these additional clauses or otherwise on any aspect of this bid, they can raise their representation against the same by using the Representation window provided in the bid details field in Seller dashboard after logging in as a seller within 4 days of bid publication on GeM. Buyer is duty bound to reply to all such representations and would not be allowed to open bids if he fails to reply to such representations.

[This Bid is also governed by the General Terms and Conditions/ यह बिड सामान्य शर्तों के अंतर्गत भी शासित है](#)

In terms of GeM GTC clause 26 regarding Restrictions on procurement from a bidder of a country which shares a land border with India, any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority. While participating in bid, Bidder has to undertake compliance of this and any false declaration and non-compliance of this would be a ground for immediate termination of the contract and further legal action in accordance with the laws./जेम की सामान्य शर्तों के खंड 26 के संदर्भ में भारत के साथ भूमि सीमा साझा करने वाले देश के बिडर से खरीद पर प्रतिबंध के संबंध में भारत के साथ भूमि सीमा साझा करने वाले देश का कोई भी बिडर इस निविदा में बिड देने के लिए तभी पात्र होगा जब वह बिड देने वाला सक्षम प्राधिकारी के पास पंजीकृत हो। बिड में भाग लेते समय बिडर को इसका अनुपालन करना होगा और कोई भी गलत घोषणा किए जाने व इसका अनुपालन न करने पर अनुबंध को तत्काल समाप्त करने और कानून के अनुसार आगे की कानूनी कार्यवाई का आधार होगा।

---Thank You/धन्यवाद---



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

Conquering Newer Horizons

MATERIALS DEPARTMENT

P.O. Duliajan, Dist. Dibrugarh

ASSAM, PIN – 786 602, INDIA

TEL : (+91) 374 2808705

E-mail: bikramjit_singha@oilindia.in

ANNEXURE-I

TECHNICAL SPECIFICATIONS

A. TECHNICAL SPECIFICATION:

ITEM NO.	TECHNICAL SPECIFICATIONS
Item 1 OIL's Material Code 99066648	<u>LIQUID CONTROL VALVE, 50MM (2") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 SERVICE CONDITION: Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 50 mm (2") NB x ANSI 150 class End connection Size & Rating: Flanged, 50MM (2") NB, 150Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted. 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 2" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured

	Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application
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	6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 2 OIL's Materials Code 99066649	<u>LIQUID CONTROL VALVE, 50 MM (2") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 50 mm (2") NB x ANSI 300 class End connection Size & Rating: Flanged, 50MM (2") NB,300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No. of Port: Single/Double (as per design)

Port Size: 2" (Inch)
 Flow Direction: Flow to Open
 Seat Type: Threaded / Clamped (Quick Change)
 Plug Design: Contoured
 Plug Characteristics: Linear
 Plug Balance: Balanced/Unbalanced (as per design)
 Guiding: Top and Bottom guided
 Cage: Optional
 Seat Leakage: Class IV (ANSI FCI 70-2)
 Noise level: <90 dBA within 1 meter area from the control valve
 Hysteresis Error: +/-3% of Full Span or less
 Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Seat Ring: SS 440 Hard-faced
 Plug Material: SS 440 Hard-faced
 Guide Material: SS 440C Heat Treated or Tungsten
 Cage Material: SS 440C Heat Treated or Tungsten

4.0 ACTUATOR:

4.1 DESIGN PARAMETERS:

Actuator action: Direct acting, Normally / Fail Close, Air to open.
 Servo & Signal Supply Medium: Natural Gas
 Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum)
 Actuator Shutoff pressure: 1.2 times Maximum inlet pressure
 Gas/Air connection: ¼ inch NPT (F)

4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.
 Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.
 Spring material: Spring Steel (Epoxy coated)
 Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated.
 Plug, diaphragm & Stem connection: Clamp type (threaded stem).
 Stroke Scale: Required

5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve
 Output action: Direct
 Output characteristics: Linear
 Servo & input Signal Supply Medium: Natural Gas
 Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm)
 Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum)
 Maximum Steady State Servo Gas Consumption: 14.0 scfh
 Operating Temperature Limit: Up to 60 degree C
 Gas/Air connection Point: ¼ inch NPT (F)
 Hysteresis Error: +/- 1% of Full Span or less
 Independent Linearity: +/- 1% of Full Span or less
 Dead band: +/- 0.5% of Full Span or less

5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Type: Pneumatic, Linear Stem slide control, Single acting
 Independent adjustment of zero and span: Required
 Adjustable amplification & dampening: Required
 Adjustable Stem travel: Required
 Valve Position indicator: Required
 Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection.

	Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 3 OIL's Materials Code 99066683	<u>LIQUID CONTROL VALVE, 75MM (3") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 75 mm (3") NB x ANSI 150 class End connection Size & Rating: Flanged, 75MM (3") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition.

3.0 TRIM:

3.1 DESIGN PARAMETERS:

No. of Port: Single/Double (as per design)
Port Size: 3" (Inch)
Flow Direction: Flow to Open
Seat Type: Threaded / Clamped (Quick Change)
Plug Design: Contoured
Plug Characteristics: Linear
Plug Balance: Balanced/Unbalanced (as per design)
Guiding: Top guided
Cage: Optional
Seat Leakage: Class IV (ANSI FCI 70-2)
Noise level: <90 dBA within 1 meter area from the control valve
Hysteresis Error: +/-3% of Full Span or less
Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced
Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced
Guide Material: SS 440C Heat Treated or Tungsten
Cage Material: SS 440C Heat Treated or Tungsten

4.0 ACTUATOR:

4.1 DESIGN PARAMETERS:

Actuator action: Direct acting, Normally / Fail Close, Air to open
Servo & Signal Supply Medium: Natural Gas
Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum)
Actuator Shutoff pressure: 1.2 times Maximum inlet pressure
Gas/Air connection: ¼ inch NPT (F)

4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.
Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.
Spring material: Spring Steel (Epoxy coated)
Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated.
Plug, diaphragm & Stem connection: Clamp type (threaded stem).
Stroke Scale: Required

5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve
Output action: Direct
Output characteristics: Linear
Servo & input Signal Supply Medium: Natural Gas
Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm)
Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum)
Maximum Steady State Servo Gas Consumption: 14.0 scfh
Operating Temperature Limit: Up to 60 degree C
Gas/Air connection Point: ¼ inch NPT (F)
Hysteresis Error: +/- 1% of Full Span or less
Independent Linearity: +/- 1% of Full Span or less
Dead band: +/- 0.5% of Full Span or less

5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Type: Pneumatic, Linear Stem slide control, Single acting
Independent adjustment of zero and span: Required
Adjustable amplification & dampening: Required
Adjustable Stem travel: Required

	Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 4 OIL's Materials Code 99066684	<u>LIQUID CONTROL VALVE, 75MM (3") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 75 mm (3") NB x ANSI 300 class End connection Size & Rating: Flanged, 75MM (3") NB,300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland

	Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 3" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 440C Heat Treated Plug Material: SS 440C Heat Treated Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less
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	5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 COMPANION FLANGE AND STUDS & NUTS 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 5 OIL's Materials Code 99066650	LIQUID CONTROL VALVE, 100MM (4") X ANSI,150 CLASS Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 SERVICE CONDITION: Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 100 mm (4") NB x ANSI 150 class End connection Size & Rating: Flanged, 100MM (4") NB,150Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted

	2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition.
3.0	<u>TRIM:</u>
3.1	<u>DESIGN PARAMETERS:</u> No. of Port: Single/Double (as per design) Port Size: 4" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less
3.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten
4.0	<u>ACTUATOR:</u>
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required
5.0	<u>POSITIONER:</u>
5.1	<u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C

	Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 COMPANION FLANGE AND STUDS & NUTS 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 6 OIL's Materials Code 99066682	<u>LIQUID CONTROL VALVE, 100MM (4") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 SERVICE CONDITION: Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 100 mm (4") NB x ANSI 300 class End connection Size & Rating: Flanged, 100MM (4") NB, 300Class, Raised face Serrated.

2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Body Style: Single/Double Ported Globe (as per design)

Body and Bonnet material:

1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted

2. Casting must be of radiographic quality as per ASTM B16.34."

Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01

Bonnet Style: Plain, Bolted

Bonnet Bolting: SA-193-B7 Studs/2H Nuts

Gland Type: Bolted gland

Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid.

Stem Material: 316 SST

Stem Size: Suitable for service condition.

3.0 TRIM:

3.1 DESIGN PARAMETERS:

No. of Port: Single/Double (as per design)

Port Size: 4" (Inch)

Flow Direction: Flow to Open

Seat Type: Threaded / Clamped (Quick Change)

Plug Design: Contoured

Plug Characteristics: Linear

Plug Balance: Balanced/Unbalanced (as per design)

Guiding: Top & Bottom guided

Cage: Optional

Seat Leakage: Class IV (ANSI FCI 70-2)

Noise level: <90 dBA within 1 meter area from the control valve

Hysteresis Error: +/-3% of Full Span or less

Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Seat Ring: SS 440C Heat Treated

Plug Material: SS 440C Heat Treated

Guide Material: SS 440C Heat Treated or Tungsten

Cage Material: SS 440C Heat Treated or Tungsten

4.0 ACTUATOR:

4.1 DESIGN PARAMETERS:

Actuator action: Direct acting, Normally / Fail Close, Air to open

Servo & Signal Supply Medium: Natural Gas

Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum)

Actuator Shutoff pressure: 1.2 times Maximum inlet pressure

Gas/Air connection: ¼ inch NPT (F)

4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.

Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.

Spring material: Spring Steel (Epoxy coated)

Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated.

Plug, diaphragm & Stem connection: Clamp type (threaded stem).

Stroke Scale: Required

5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve

Output action: Direct

Output characteristics: Linear

Servo & input Signal Supply Medium: Natural Gas

	Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required 7.0 COMPANION FLANGE AND STUDS & NUTS 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 7 OIL's Material Code 99066681	<u>LIQUID CONTROL VALVE, 150MM (6") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 SERVICE CONDITION: Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 1.2 Kg/sq.cm Normal Inlet Pressure: 1.0 Kg/sq.cm Minimum Inlet Pressure: 0.8 Kg/sq.cm Maximum Outlet Pressure: 1.0 Kg/sq.cm Normal Outlet Pressure: 0.8 Kg/sq.cm Minimum Outlet Pressure: 0.5 Kg/sq.cm

	2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 150 mm (6") NB x ANSI 150 class End connection Size & Rating: Flanged, 150MM (6") NB,150Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 6" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required
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	5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 COMPANION FLANGE AND STUDS & NUTS 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H
Item no. 8 OIL's Material Code 99065821	<u>VALVE, CONTROL, PRESSURE, 50MM (2") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD

	Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm
2.0	<u>VALVE BODY & BONNET:</u>
2.1	<u>DESIGN PARAMETERS:</u> Valve Size & Rating: 50MM (2") NB,150Class End connection Size & Rating: Flanged,50MM (2") NB,150Class, Raised face Serrated.
2.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder).
3.0	<u>TRIM:</u>
3.1	<u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by Bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by Bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less
3.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten
4.0	<u>ACTUATOR:</u>
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.

	Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity : +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 9 OIL's Material Code 99065822	<u>VALVE, CONTROL, PRESSURE, 50 MM (2") NB, 300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water.

	Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 50MM (2") NB,300Class End connection Size & Rating: Flanged,50MM (2") NB,300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum)
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	Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity : +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required Drain: Required Manual 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 10 OIL's Material	VALVE, CONTROL, PRESSURE, 76.2 MM (3") NB, 150 CLASS Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following

Code 99065826	specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 76.2MM (3") NB,150Class End connection Size & Rating: Flanged,76.2MM (3") NB,150Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 TRIM: 3.1 DESIGN PARAMETERS: No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten
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	4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5”) Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼” NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required.
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	7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 11 OIL's Material Code 99065827	<u>VALVE, CONTROL, PRESSURE, 76.2 MM (3") NB, 300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 76.2MM (3") NB,300Class End connection Size & Rating: Flanged,76.2MM (3") NB,300Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 TRIM: 3.1 DESIGN PARAMETERS: No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less

	3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent.
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	Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 12 OIL's Material Code 99065823	<u>VALVE, CONTROL, PRESSURE, 100 MM (4") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 100MM (4") NB,150Class End connection Size & Rating: Flanged,100MM (4") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced

	Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application.
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	6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 13 OIL's Material Code 99065825	<u>VALVE, CONTROL, PRESSURE, 100 MM (4") NB, 300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 100MM (4") NB,300Class End connection Size & Rating: Flanged,100MM (4") NB,300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder).

	3.0 TRIM: 3.1 DESIGN PARAMETERS: No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required.
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	Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 14 OIL's Material Code 99065824	<u>VALVE, CONTROL, PRESSURE, 150 MM (6") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 150MM (6") NB,150Class End connection Size & Rating: Flanged,150MM (6") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted

	Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder).
3.0	<u>TRIM:</u>
3.1	<u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less
3.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten
4.0	<u>ACTUATOR:</u>
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required.
5.0	<u>POSITIONER:</u>
5.1	<u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less

	5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
Item no. 15 OIL's Material Code 99065828	VALVE, CONTROL, PRESSURE, 25 MM (1") NB, 300 CLASS Diaphragm operated pneumatic control valve along with positioner and air filter regulator, and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 25MM (1") NB x 300Class End connection Size & Rating: Flanged, 25MM (1") NB x 300Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM

	A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5 Face-to-face dimension as per ANSI/ISA 75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder).
3.0	<u>TRIM:</u>
3.1	<u>DESIGN PARAMETERS:</u> No of Port: Single /Double (To be specified by bidder). Seat Ring & Port Size: Full. Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top & Bottom / Top Post Guided, (To be specified by bidder). Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less
3.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten
4.0	<u>ACTUATOR:</u>
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required.
5.0	<u>POSITIONER:</u>
5.1	<u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm)

	Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 AIR/GAS FILTER REGULATOR: 6.1 DESIGN PARAMETERS: Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.
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B. SPECIAL TERMS & CONDITIONS

- 1.0** The bidder shall confirm that the goods, materials to be supplied shall be new, of recent make, of the best quality & workmanship. The bidder shall confirm that the materials shall be guaranteed for a period of 18 months from the date of despatch or 12 months from the date of receipt at destination, whichever is earlier, against defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL to the Seller shall be replaced immediately by the Seller on FOR destination basis including payment of all taxes and duties at Seller's expense. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.
- 2.0** The following documents/drawing/brochures shall be submitted along with technical bid:
- (i) Material datasheet / specification
 - (ii) General Arrangement Diagram (GAD) with dimensions
 - (iii) Technical catalogue for the quoted valves
 - (iv) Manufacturer's QAP

3.0 In the technical bid bidder shall submit the document of sizing calculations sheet, Characteristic Curve of Control Valve as per ANSI/ISA 75.02 standard for one no of similar type of control valve manufactured by them.

4.0 Valve body shall be manufactured in / procured from EIL / Lloyds approved foundries. The foundry certificate & Casting Heat No shall be provided along with the material supply.

5.0 The following tests shall be carried out and the test reports shall be submitted along with materials supply:

- (a) Chemical Analysis & Mechanical Property Test of all materials of components of the valves as per EN10204 Standard.
- (b) Radiographic testing of valve body & bonnet as per ASME SEC V / ASTM B16.34 Standard.
- (c) Hydraulic test for pressure containing part (Shell Test) of each valve as per ASME B 16.34/ISA S 75.19.01 Standard at 1.5 times the rated pressure.
- (d) Hydraulic test for Assembled valve (Body Mount Leak Test) of each valve as per ASME /ISA S 75.19.01 Standard at 1.1 times the rated pressure.
- (e) Seat Leakage Tests for Class IV as per FCI 70.2 standard, using air or water with suitable inhibitor to prevent corrosion.
- (f) Characteristic Curve of Control Valve for one no of each Purchase Order Item as per Purchase Order Specification shall be submitted for approval after placement of order.
- (g) Actuator Leak Test as per relevant standard/ Manufacturer's QAP, using compressed air at 1.5 times the supply pressure to the actuator as per Purchase Order specification.
- (h) Functional test with accessories connected shall be conducted as per relevant standard /Manufacturer's QAP.
- (i) Cyclic & physical tests on each actuator shall be performed to ensure sound quality of diaphragm & spring as per relevant standard /Manufacturer's QAP.
- (j) Valve Packing of each valve shall be compliant to Low Emission Gland Packing as per ISO 15848-1. Fugitive Emission Test Certificate must be submitted along with bid and supply of materials.

6.0 The valves shall bear the following permanent marks-

- (i) Manufacturer's Name
- (ii) Valve size
- (iii) Pressure Rating
- (iv) Serial No.
- (v) OIL's Purchase Order no.

7.0 **THIRD PARTY INSPECTION:** All valves shall be inspected by any one of following OIL approved Third-party inspection agencies. The bidder has to arrange and bear for the Third Party Inspection at manufacturer's plant as per the broad scope of work mentioned herein. Bidder should confirm that items/equipment/material supplied by them will be inspected by any of the following third party inspection agencies at their own cost. Third Party Inspection Report shall be submitted along with the Dispatch document. **Bidder to include the Third Party Inspection charges in their quoted price.**

- (i) M/s Lloyds
- (ii) M/s Bureau Veritas
- (iii) M/s Rites
- (iv) M/s IRCLASS System and Solutions Private Limited
- (v) M/s Tuboscope Vetco
- (vi) M/s DNV MES India Private Limited

7.1 **The Scope of Third-Party Inspection will be as detailed below:**

- (i) To review necessary chemical & mechanical test certificates to ensure that different components of the valve are as per relevant standards and Purchase Order specification.
- (ii) To review heat number wise foundry certificates of castings in order to ensure that the materials used are as per relevant standards and Purchase Order specification.
- (iii) To ensure that valve body castings are manufactured in / procured from foundries approved by M/s EIL or M/s Lloyds.

- (iv) To review and certify the radiographs of body & bonnet of all valves to ensure that casting are of radiographic quality.
 - (v) To review and certify radiography of 10% of valves randomly selected against each purchase order item to ensure that casting are of radiographic quality.
 - (vi) To witness, review & certify hydraulic & pneumatic test of each valve as per relevant standards and Purchase Order specification.
 - (vii) To witness functional test and review & certify Characteristic Curve (Cv) tests (one no. against each item), leakage test etc as per relevant standards and Purchase Order specification.
 - (viii) To carry out visual & dimensional inspection to ensure that the valves are manufactured as per relevant standards and Purchase Order specification.
 - (ix) To ensure that the valves are embossed as per relevant standards and Purchase Order specification.
 - (x) To document, review and issue all inspection certificates to be provided along with material supply.
- 8.0** OIL may reserve the right to depute its engineer at final stage of manufacturing for inspection of functional & hydraulic test of the valves either offline (physical) or online (virtual). The supplier has to arrange for the inspection accordingly and inform OIL for the same at least 15 days prior to such inspection. Expenditures related to such inspection visit shall be borne by OIL itself.
- 9.0** Only kerosene or water with suitable inhibitor to prevent corrosion shall be used for hydraulic testing. If water is used for testing, valves shall be properly dried and inside & internal parts of each valve shall be properly greased.
- 10.0** Valve body, bonnet & actuator shall be thoroughly cleaned & painted with suitable anti-corrosive epoxy paint.
- 11.0** Both ends of each valve/companion flange should also be provided with protective rubber / plastic caps, securely attached to the valves to prevent entry of foreign material during transportation and storage.
- 12.0** Valve shall be suitably protected to avoid any damage during transit or storage.

ANNEXURE - II

BID REJECTION CRITERIA (BEC/BRC)

The bids shall broadly conform to the specifications and terms and conditions given in this bid document. Bids shall be rejected in case the items offered do not conform to required parameters stipulated in the technical specifications and to the respective international /national standards wherever stipulated. Notwithstanding the general conformity of the bids to the stipulated specifications and terms and conditions, the following requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected.

(A.1) TECHNICAL

1.0 BIDDER'S ELIGIBILITY:

- 1.1 The bidder should be an Original Equipment Manufacturer (OEM) of the tendered item(s)/ equipment.

OR

- 1.2 The bidder should be a sole selling agent/authorised distributor/authorised dealer/authorised supply house of an Original Equipment Manufacturer (OEM) of the tendered item (s).

- 1.3 In case the bidder is quoting as agent /distributor/dealer/supply house, the bidder should submit valid authorisation certificate/letter issued by its Original Equipment Manufacturer (OEM), confirming the Bidders' status as their authorised supplier/dealer/distributor/wholly owned subsidiary (*as the case may be*) to sell their products with proper warranty and guarantee back up. Such authorisation certificate/letter shall be valid for the entire period of execution of the order.

1.4 NOTES TO BIDDER REGARDING AUTHORISATION:

- 1.4.1 Authorization letter must be issued on the official letter head only of the OEM clearly mentioning the status of Bidder i.e., whether sole selling agent/authorised distributor / authorised dealer/authorised supply house of Original Equipment Manufacturer (OEM), failing which the bid shall not be considered for evaluation and in that case the offer shall be rejected straightway. Such certificates/authority letter issued by a party other than the OEM shall not be considered as valid authorization letter and in such case, the bid shall be rejected without any further reference.
- 1.4.2 Authorization letter issued by the OEM in any other form such as Direct Chanel Partner/Indirect Chanel Partner/Chanel Partner/Seller/Reseller/Sub Dealer/Sub Distributor/Sister Concern shall not be considered for bid evaluation and the offer shall be rejected.
- 1.4.3 In case the bidder is a wholly owned subsidiary company of the parent company (OEM), in addition to the authorization letter including warranty/guarantee back-up, the bidder shall also upload/submit the documents such as board resolution/certificate of incorporation/any other legal certificate along with their offer that would establish the relation between the parent company with the subsidiary company without which the bid will not be evaluated and will be rejected straightway.
- 1.5 The bidder/OEM must submit an undertaking along with the Technical Bid that their offered equipment is not going to become obsolete during the next 5 (five) years from the date of supply, if order is awarded on them by OIL and must guarantee uninterrupted supply of spares and availability of services for at least for ten (10) years with effect from the supply of the equipment, without which offer will not be considered for evaluation / placement of order. This clause will be applicable only if the tender item has requirement of spares.

2.0 BIDDERS' EXPERIENCE

2.1 IN CASE THE BIDDER IS AN ORIGINAL EQUIPMENT MANUFACTURER (OEM):

The bidder must comply with the following:

- 2.1.1 The bidder (OEM) should have at least 5 (five) years manufacturing experience of similar items, viz., control valves of same or higher working pressure, preceding the original bid closing date of the tender. Suitable documentary evidence (*such as past Purchase Order prior to 5 years from BCD, etc.*) should be provided to substantiate manufacturing experience as above to the satisfaction of OIL.
- 2.1.2 In addition to above, the bidder (OEM) should have supply experience of successful execution of at least 50% of each of tendered quantity (rounded off to the next higher integer) of each tendered item/equipment (*same or higher working pressure and same or higher sizes*), to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender (*either by themselves or through their sole selling agent/distributor/dealer/supply house*).
- 2.1.3 Documentary evidence to substantiate manufacturing & supply records must be submitted in the form of copies of relevant Purchase Order(s) & any one or combination of the following documents evidencing satisfactory execution of those Purchase Orders(s) such as:
- (i) Satisfactory supply /completion/installation report (OR)
 - (ii) Bill of lading, Commercial Invoice/Payment Invoice (OR)
 - (iii) Consignee receipt, delivery receipt (OR)
 - (iv) Central Excise Gate Pass/Tax invoice issued under relevant rules of Central Excise/VAT/GST invoice.
 - (v) Any other documents which shall prove that the bidder has successfully executed such order(s)

2.1.4 NOTES TO BIDDER REGARDING EXPERIENCE CRITERIA

- a) *The Purchase Order need not be within 5 (five) years preceding original bid closing date of this tender. However, execution of supply should be within 5 (five) years preceding original bid closing date of this tender.*
 - b) *Satisfactory supply/completion/installation report should be issued on company's letterhead with signature and stamp.*
 - c) *Bidders showing supply experience towards supply to its sister concern/ subsidiaries shall not be considered as experience for the purpose of meeting BRC.*
- 2.1.5 Domestic manufacturer who has satisfactorily executed development order(s) placed by OIL/ONGCL for the tendered materials/items (*same or higher working pressure and same or higher sizes*) during recent years (*i.e. during the last five years from the original bid closing date of this tender*) shall also be considered as established sources for supply of the tendered item(s). Under such a situation, the bidder need not satisfy BRC clauses 2.1.1 and 2.1.2. But they must submit the following along with their techno-commercial bid:
- (i) Copy of relevant valid API certificate (as applicable).
 - (ii) Copy of PO and successful Field Trial Report issued by OIL/ONGCL (*bearing the PO No. & Date in their letter head*), if executed against OIL/ONGCL's development order.

2.2 IN CASE THE BIDDER IS A SOLE SELLING AGENT/AUTHORISED DISTRIBUTOR/AUTHORISED DEALER/AUTHORISED SUPPLY HOUSE OF OEM:

The bidder must fulfil the following requirements:

- 2.2.1 The bidder's OEM (the Principal) should have at least 5 (five) years manufacturing experience of similar items, viz., control valves of same or higher working pressure, preceding to the original bid closing date of the tender. Suitable documentary evidence (*such as past Purchase Order prior to 5 years from BCD, etc.*) should be provided to substantiate manufacturing experience as above to the satisfaction of OIL.
- 2.2.2 The bidder's OEM (the Principal) should have supply experience of successful execution of at least 50% of the tendered quantity (*rounded off to next higher integer*) of each of tendered item/equipment (*same or higher working pressure and same or higher sizes*), to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender (*either by themselves or through their sole selling agent/distributor/dealer/supply house*).

2.2.3 Additionally, the bidder himself/themselves as sole selling agent/distributor/dealer/supply house should have supply experience of successful execution of at least 50% of the tendered quantity (*rounded off to next higher integer*) of each of tendered item/equipment (*same or higher working pressure and same or higher sizes*) to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender [*either from same OEM (the principal) or from any other OEM*].

2.2.4 Documentary evidence to substantiate manufacturing & supply records must be submitted in the form of copies of relevant Purchase Order(s) & any one or combination of the following documents evidencing satisfactory execution of those Purchase Orders(s) such as:

- (i) Satisfactory supply /completion/installation report (OR)
- (ii) Bill of lading, Commercial Invoice/Payment Invoice (OR)
- (iii) Consignee receipt, delivery receipt (OR)
- (iv) Central Excise Gate Pass/Tax invoice issued under relevant rules of Central Excise/VAT/GST invoice.
- (v) Any other documents which shall prove that the bidder has successfully executed such order(s)

2.2.5 **NOTES TO BIDDER REGARDING EXPERIENCE CRITERIA**

- a) *The Purchase Order need not be within 5 (five) years preceding original bid closing date of this tender. However, execution of supply should be within 5 (five) years preceding original bid closing date of this tender.*
- b) *Satisfactory supply/completion/installation report should be issued on company's letterhead with signature and stamp.*
- c) *Bidders showing supply experience towards supply to its sister concern/ subsidiaries shall not be considered as experience for the purpose of meeting BRC.*

3.0 **DELIVERY PERIOD:**

Delivery to be completed within **210 days** from the date of placement of order by OIL. The date of receipt of materials at site shall be considered as the date of delivery. Bidders must categorically confirm the above in their Technical Bid.

(A.2) BRC - FINANCIAL:

1.0 The bidder must have an annual financial turnover from Operations of minimum **INR 8,96,94,214.00** during any of the preceding 3 (Three) financial/accounting years reckoned from the original bid closing date of the tender Audited Annual Reports.

[Annual Financial Turnover of the bidder from Operations shall mean - "Aggregate value of the realization of amount made from the sale, supply or distribution of goods or on account of services rendered, or both, by the company (bidder) during a financial year" as per the Companies Act, 2013 Section 2 (91).]

2.0 "Net Worth" of the bidder must be positive for the financial/accounting year just preceding to the original Bid Closing Date of the Tender.

[Net worth shall mean: "Share capital + Reserves created out of profits and securities Premium - Aggregate value of accumulated losses (excluding revaluation reserves) - deferred expenditure - Miscellaneous Expenditure to the extent not written off and carried forward loss - Reserves created out of write back of depreciation and amalgamation"]

3.0 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 (**PROFORMA - A**) certifying that 'the balance sheet/Financial Statements for the financial year (as applicable) has actually not been audited so far'.

Note:

- a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the technical bid:-
 - i) A certificate issued by a practicing Chartered Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual Turnover & Net worth as per format prescribed in **(PROFORMA – B)**.
OR
 - ii) Audited Balance Sheet alongwith 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.
- 4.0 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\$.
- 5.0 In case the Bidder is subsidiary company (should be 100% owned subsidiary of the parent/ultimate parent/holding company) who does not meet financial criteria by itself and submits its bid based on the strength of parent/ultimate parent/holding company, then following documents need to be submitted:
- (i) Turnover of the parent/ultimate parent/holding company should be in line with Para A.2 (1.0) above.
 - (ii) Net Worth of the parent/ultimate parent/holding company should be positive in line with Para A.2 (2.0) above
 - (iii) Corporate Guarantee **(PROFORMA - C)** on parent/ultimate parent/holding company's company letter head signed by an authorized official undertaking that they would financially support their wholly owned subsidiary company for executing the project/job in case the same is awarded to them.
 - (iv) Documents to substantiate that the bidder is as 100% subsidiary of the parent/ultimate parent/holding company.

ANNEXURE - III

GENERAL NOTES TO BIDDERS

- 1.0 The bid is governed by GeM General Terms & Conditions (GeM GTC) prevalent on the bid closing date of tender.
- 2.0 Bidders shall submit their offer mentioning pointwise compliance/noncompliance to all the terms & conditions, BEC/BRC, Specifications etc. Any deviation(s) from the tender terms & conditions, BEC/BRC, Specifications etc. should be clearly highlighted specifying justification in support of deviation.
- 3.0 To ascertain the substantial responsiveness of the bid, OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by OIL, failing which the offer will be summarily rejected. However, bidder(s) must note that there should not be any additional financial involvement arising out of such post tender clarifications.

- 4.0 The Bidder to submit following Technical Evaluation Sheet along with technical bid -

Annexure – IV: Bid Evaluation Matrix (Technical Specification)

Annexure – V: Bid Evaluation Matrix (Bid Rejection Criteria)

- 5.0 **INTEGRITY PACT**

OIL shall be entering into an Integrity Pact, **if applicable** with the bidders as per format enclosed vide **PROFORMA - D** of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who signed the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact have been signed by the bidder's authorized signatory who sign the Bid. If any bidder refuses to sign Integrity Pact or declines to submit Integrity Pact with the offer, their bid shall be rejected straightway.

OIL's Independent External Monitors at present are as under:

DR. TEJENDRA MOHAN BHASIN,
Former Vigilance Commissioner, CVC
E-mail: tmbhasin@gmail.com

SHRI RAM PHAL PAWAR, IPS (Retd.),
Former Director, NCRB, MHA
E-mail: rpawar61@hotmail.com
ramphal.pawar@ips.gov.in

SHRI OM PRAKASH SINGH, IPS (Retd.)
Former DGP, Uttar Pradesh
E-mail: Ops2020@rediffmail.com

- 5.1 In case of a joint venture, all the partners of the joint venture should sign the Integrity Pact.
- 5.2 In the event of any dispute between the management and the contractor relating to those contracts where Integrity Pact is applicable, in case, both the parties are agreeable, they may try to settle dispute through mediation before the panel of IEMs in a time bound manner. If required, the organizations may adopt any mediation rules for this purpose. In case, the dispute remains unresolved even after mediation by the panel of IEMs, the organisation may take further action as per the terms and conditions of the contract.

- 6.0 ~~**DOMESTICALLY MANUFACTURED IRON & STEEL PRODUCTS (DMI & SP):**~~

~~Steel Policy notified vide Notification No. 324 dated 29.05.2019 and as amended from time to time by Ministry of Steel, Government of India is applicable against this tender. The detailed policy may be referred in Ministry's website. Also, refer **ANNEXURE – VI** to this tender in this regard.~~

7.0 **MICRO AND SMALL ENTERPRISES (MSE)**

Categorisation and various Criteria applicable to MSE bidders shall be guided by the Gazette Notification No. CG-DL-E-26062020-220191 dated 26.06.2020 and Amendment vide Gazette Notification no. CG-DL-E-16062021-227649 dated 16th June, 2021 issued by Ministry of Micro, Small and Medium Enterprises.

The bidder claiming as MSE status (MSE-General, MSE-SCIST, MSE -Woman) against this tender has to submit the following documents for availing the benefits applicable to MSEs:

Udyam Registration Number with Udyam Registration Certificate.

Note: *In case bidding MSE is owned by Schedule Caste or Schedule Tribe entrepreneur or Woman Entrepreneur, valid documentary evidence issued by the agency who has registered the bidder as MSE owned by SC/ST entrepreneur/ Woman Entrepreneurs should also be enclosed.*

7.1 **For availing benefits under Public Procurement Policy (Purchase preference), the interested MSE Bidders must ensure that they are the manufacturer of tendered item (Primary Product Category) and registered with the appropriate authority for the said item(s).**

8.0 **PREFERENCE TO MAKE IN INDIA (MII)**

Department for Promotion of Industry and Internal Trade (DPIIT), has issued the revised 'Public Procurement (Preference to Make in India), Order 2017" vide Order no. No. P-45021/2/2017-PP (BE-II) dated 04.06.2020. Bidders are requested to go through the policy and its subsequent amendments, if any, and take note of the same while submitting their offer.

8.1 The 'Class-I local supplier'/ 'Class-II local supplier' at the time of tender, bidding or solicitation shall be required to **indicate percentage of local content and provide self-certification (PROFORMA – E) that the item offered meets the local content requirement for 'Class-I local supplier'/ 'Class-II local supplier', as the case may be.** They shall also give details of the location(s) at which the local value addition is made. Such undertaking shall become a part of the contract.

8.2 In cases of procurement **for a value in excess of Rs. 10 crores**, the 'Class-I local supplier'/ 'Class-II local supplier' shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in the case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content.

9.0 **RESTRICTIONS ON PROCUREMENT FROM A BIDDER OF A COUNTRY SHARING LAND BORDER WITH INDIA:**

Ministry of Finance of Govt. of India, Department of Expenditure, Public procurement Division vide office memorandum F. No. 6/18/2019-PPD dated 23rd July, 2020 (order-Public Procurement no.1) has proclaimed the insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017 w.e.f. 23rd July, 2020 and amended vide O.M. No. F.7/10/2021-PPD (1) dated 23.02.2023 (order public procurement no. 4) from Procurement Policy Division, Department of Expenditure, Ministry of Finance forwarded by Department of Public Enterprises vide O.M. No. F. No. DPE/7 (4)/2017-Fin dated 24.02.2023 regarding restrictions on procurement from a bidder of a country which shares a land border with India on the grounds of defence of India on matters directly or indirectly related thereto including national security. Bidders are requested to take note of the following clauses and submit their offers accordingly wherever applicable.

- (1) Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority [Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT)]. Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority to be eligible to bid in this tender.
- (2) "Bidder" (including the term 'tenderer', 'consultant' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

- (3) "Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means:
- a. An entity incorporated, established or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

- (4) The beneficial owner for the purpose of para (3) above will be as under:

- (i) In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation:

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five percent of shares or capital or profits of the company.
 - b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholder's agreements or voting agreements.
- (ii) In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;
- (iii) In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;
- (iv) Where no natural person is identified under (i) or (ii) or (iii) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
- (v) In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.
- (5) An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- (6) The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.
- (7) **Validity of Registration:** The registration should be valid at the time of submission of bid and at the time of acceptance of bid. If the bidder was validly registered at the time of acceptance/placement of order, registration shall not be a relevant consideration during contract execution.
- (8) **Undertaking regarding compliance:** The bidders are required to provide undertakings as per **PROFORMA – F(I), PROFORMA – F(II) & PROFORMA – F(III)** along with their bid towards compliance of the above guidelines for participation in this tender. If the undertakings given by a bidder whose bid is accepted is found to be false, this would be a ground for debarment/action as per OIL's Banning Policy and further legal action in accordance with law.

10.0 SETTLEMENT OF COMMERCIAL DISPUTES BETWEEN CENTRAL PUBLIC ENTERPRISES (CPSES) INTER-SE AND CPSE(S) AND GOVERNMENT DEPARTMENT(S)/ORGANISATIONS(S) - ADMINISTRATIVE MECHANISM FOR RESOLUTION OF CPSES DISPUTES (AMRCD).

In the event of any dispute or difference relating to the interpretation and application of the provisions of commercial contract(s) between Central Public Sector Enterprises (CPSEs) / Port Trusts inter se and also between CPSEs and Government Department/Organisations (excluding disputes relating to Railways, Income Tax, Customs and Excise Departments), such dispute or difference shall be taken up by either party for its resolution through AMRCD as mentioned in DPE OM No. 05/003/2019-FTS- 10937 dated 14th December, 2022 and the decision of AMRCD on the said dispute will be binding on both the parties.

11.0 TAX COLLECTIBLE AT SOURCE (TCS):

Tax Collectible at Source (TCS) applicable under the Income-tax Law and charged by the SUPPLIER shall also be payable by OIL along with consideration for procurement of goods/materials/ equipment. If TCS is collected by the SUPPLIER, a TCS certificate in prescribed Form shall be issued by the SUPPLIER to OIL within the statutory time limit.

Payment towards applicable TCS u/s 206C (IH) of Income Tax Act, 1961 will be made to the supplier provided they are claiming it in their invoice and on submission of following undertaking along with the invoice stating that:

- a. TCS is applicable on supply of goods invoiced to OIL as turnover of the supplier in previous year was more than Rs. 10 Cr. And
- b. Total supply of goods to OIL in FY (As applicable) exceeds Rs. 50 Lakh and
- c. TCS as charged in the invoice has already been deposited (duly indicating the details such as challan No. and date) or would be deposited with Exchequer on or before the due date and
- d. TCS certificate as provided in the Income Tax Act will be issued to OIL in time.

However, Performance Security deposit will be released only after the TCS certificate for the amount of tax collected is provided to OIL. Supplier will extend the performance bank guarantee (PBG), wherever required, till the receipt of TCS certificate or else the same will be forfeited to the extent of amount of TCS, if all other conditions of Purchase order are fulfilled.

The above payment condition is applicable only for release of TCS amount charged by supplier u/s 206C (I H) of Income tax Act, 1961.

12.0 CONCESSIONAL GST

The items covered in this Tender shall be used by Oil India Limited in the PEL/ML areas and hence concessional **GST @12%** will be applicable as per Govt. Policy in vogue.

Note: Successful bidder shall arrange to provide all necessary documents (invoice etc.) to OIL for applying Essentiality Certificate on receipt of request from OIL or at least **45 days** prior to their readiness for despatch, whichever is earlier. Further, successful bidder shall affect dispatch only on receipt of relevant certificates/shipment clearance from OIL, failing which all related liabilities shall be to supplier's account.

13.0 APPLICABILITY OF BANNING POLICY OF OIL INDIA LIMITED:

OIL's Banning Policy, 2023 will be applicable against the tender (and order in case of award) to deal with any agency (bidder/contractor/supplier/ vendor/service provider) who commits deception, default, fraud or indulged in other misconduct of whatsoever nature in the tendering process and/or order execution processes.

The bidders who are on Holiday/Banning/Suspension list of OIL on due date of submission of bid/ during the process of evaluation of the bids, the offers of such bidders shall not be considered for bid opening/evaluation/award. If the bidding documents were issued inadvertently/downloaded from website, the offers submitted by such bidders shall also not be considered for bid opening/evaluation/ Award of Work.

- 13.1** The bidder shall fill up and submit proforma of declaration of Blacklisting/Holiday Listing (**PROFORMA – G**) along with the technical bid.

14.0 **PERFORMANCE SECURITY**

Successful bidder will be required to furnish a Performance Bank Guarantee @3% of the order value with validity as mentioned in the tender document. The Performance Security must be submitted exactly as per **PROFORMA – H**. Bidder must confirm the same in their Technical Bid.

The Bank Guarantee issued by the bank must be routed through SFMS platform as per the following details:

- (i) MT 760/MT 760 COV for issuance of bank guarantee.
- (ii) MT 760/MT 767 COV for amendment of bank guarantee.

[Order Number should reflect in the SFMS text under MT 760/MT 760 COV]

The above message/intimation shall be sent through SFMS by the BG issuing Bank branch to ICICI Bank, Duliajan Branch, IFSC Code- ICIC0000213, Branch Address.: ICICI Bank Ltd, Kunja Bhavan, Daily Bazaar, Duliajan, Dibrugarh, Assam - 786602. The Bank details are as under:

Bank Details of Beneficiary	
Bank Name	ICICI BANK LTD.
Branch Name	DULIAJAN
Branch Address	KUNJA BHAVAN, DAILY BAZAAR, DULIAJAN, DIBRUGARH, ASSAM - 786602
IFSC Code	ICIC0000213
Unique identifier code (Field 7037)	OIL503988890
Company name	Oil India Limited

The vendor shall submit to OIL the copy of the SFMS message as sent by the issuing bank branch along with the original bank guarantee.

- 14.1 Performance Security shall be issued from any scheduled Indian Bank or any branch of an International Bank situated in India and registered with the Reserve Bank of India as scheduled foreign Bank in case of domestic suppliers.
- 14.2 Bank Guarantees issued by a Bank in India should be on non-judicial Stamp Paper/Franking receipt of requisite value, as per Indian Stamp Act, purchased in the name of the Banker or the Seller.
- 14.3 Bank Guarantee with condition other than those mentioned in OIL's prescribed format shall not be accepted.
- 14.4 The Bank Guarantee issued by a Bank amongst others shall contain the complete address of the Bank including Phone Nos., Fax Nos., E-mail address, Code Nos. of the authorized signatory with full name and designation and Branch Code.
- 14.5 The Performance Security shall be payable to Purchaser as compensation for any breach or loss resulting from Supplier's failure to fulfil its obligations under the Purchase Order/Contract. In the event of such default on the part of Seller, the Performance Security shall be encashed unconditionally, and the proceeds thereof shall be forfeited without any further reference to the Seller. In such an eventuality, the Seller shall be liable to face penal actions including debarment as per OIL's Banning Policy, 2023.
- 14.6 The Performance Security shall be discharged by Purchaser not later than 30 days following its expiry after completion of obligations under the order/contract. In the event of any extension to the contractual validity or delay in supply/ execution or extension of Warranty Period of the Purchase Order/Contract, validity of the Performance Security shall be extended by the Seller/Contractor by the equivalent period.
- 14.7 The Performance Security shall not accrue any interest during its period of validity or extended validity. OIL shall not be liable to pay any bank charges, commission or interest on the amount of Performance Security.
- 14.8 Failure of the successful Bidder to comply with the requirements of above clauses shall constitute sufficient grounds for annulment of the award and forfeiture of their Bid Security or Performance Security. The defaulting party shall also be debarred from business as per OIL's Banning Policy, 2023.

- 14.9 In case, the Performance Security in the form of a Bank Guarantee is found to be not genuine or issued by a fake banker or issued under the fake signatures, the Purchase Order placed on the bidder shall be treated as cancelled forthwith and the bidder shall be banned from participating in future tenders in accordance with the provisions of Company's Banning Policy, 2023. Further, the Bid Security submitted by such bidder shall be invoked without any further reference, besides other penal action, as the Company may think appropriate.
- 14.10 In case Annual Maintenance Contract (AMC) is required and OIL intends to enter into a separate contract with the successful bidder for AMC, the Successful bidder must undertake to submit separate Performance Security against the AMC at the applicable rate & validity to be stipulated in the contract. (3% of annualized contract value valid for three months beyond entire execution period).
- 14.11 Performance Security if submitted in the form of fixed/term deposit; the following details must be provided in the form of declaration by the vendor/party for confirmation of Term deposit/Fixed Deposit from the issuing bank.
1. Full address of the issuing bank
 2. Branch Code
 3. Authorized signatory with full name and designation
 4. Phone (Mobile) Numbers of the branch
 5. Email address of the branch
 6. Such fixed/term deposit must be pledged in favour of OIL and it must in the printed form on the physical original FDR in words "Pledged in favour of Oil India Limited"

Further, to avoid delay in confirmation of Fixed deposit from the issuing bank and consequent delay in processing of bills and payment, vendor/party may arrange the confirmation mail regarding issue of fixed deposit with the following details directly from bank's official email id to OIL's following e-mail id (FD_PS@OILINDIA.IN):

FD NO.	Issue Date	Maturity Date	FD Amount	Beneficiary/ Contractor Name	Whether above FD is pledged in favour of 'Oil India Limited' (Yes/No)	FD amount pledged (in ₹) as per bank's books of accounts	Mode of FD Renewal (Auto Renewal/ Auto closure)	Remarks (if any) of the issuing Bank
A	B	C	D	E	F	G	H	I

15.0 **BID SECURITY:**

Bids must be accompanied by Bid Security for the amount as mentioned in the tender and shall be in the prescribed format (**PROFORMA – I**) as Bank Guarantee (BG) or Online payment. (*Refer GeM GTC for details*).

In case of the Bid Security is submitted in the form of Bank Guarantee, scanned copy of Bank Guarantee shall be uploaded by the bidder in the online bid and hard copy of the Bank Guarantee will have to be submitted directly to OIL **within the Bid Closing (BC) date and time**, failing which the bid may be treated as incomplete and may lead to rejection of the bid by OIL without making any reference to the bidder.

The Original Bid Security shall be submitted manually in sealed envelope **superscribed** with tender no., tendered item detail and due date to: **GM-MATERIALS, MATERIALS DEPARTMENT, KIND ATTENTION – M. B. SINGHA, CHIEF MANAGER MATERIALS, OIL INDIA LIMITED, DULIAJAN- 786602, ASSAM.**

In case of Online payment of Bid Security, bidder shall provide the Online transaction details in their online bid as proof of submission of Bid Security to OIL. The online payment of Bid Security amount should be received in OIL's bank account on or before the Bid closing date and time failing which the offer will be rejected outright without any further reference.

OIL's Bank account Details for Online submission of Bid Security	
Name	Oil India Limited
Bank	State Bank of India
Branch	Duliajan
Account Number	10494832599
Account Type	Current
IFSC Code	SBIN0002053

- 15.1 Bid Security shall be issued from any scheduled Indian Bank or any branch of an International Bank situated in India and registered with the Reserve Bank of India as scheduled foreign Bank in case of domestic suppliers.
- 15.2 Bank Guarantee issued by a scheduled Bank in India at the request of some other non-scheduled Bank in India shall not be accepted.
- 15.3 Bank Guarantees issued by a Bank in India should be on non-judicial Stamp Paper/Franking receipt of requisite value, as per Indian Stamp Act, purchased in the name of the Banker or the Seller.
- 15.4 Bank Guarantee with condition other than those mentioned in OIL's prescribed format shall not be accepted.
- 15.5 The Bank Guarantee issued by a Bank amongst others shall contain the complete address of the Bank including Phone Nos., Fax Nos., E-mail address, Code Nos. of the authorized signatory with full name and designation and Branch Code.
- 15.6 The bidders will extend the validity of the Bid Security, if and whenever specifically advised by OIL, at the bidder's cost.
- 15.7 The Bid Security shall not accrue any interest during its period of validity or extended validity. OIL shall not be liable to pay any bank charges, commission or interest on the amount of Bid Security.
- 15.8 In case, the Bid Security in the form of a Bank Guarantee is found to be not genuine or issued by a fake banker or issued under the fake signatures, the bid submitted by the concerned bidder shall be rejected and the bidder shall be banned from participating in future tenders in accordance with the provisions of OIL's Banning Policy. Further, the Bid Security submitted by such bidder shall be invoked without any further reference, besides other penal action, as OIL may think appropriate.
- 15.9 In case of Bank Guarantee, the Bank Guarantee issuing bank branch must ensure the following:

The Bank Guarantee issued by the bank must be routed through SFMS platform as per the following details:

- (i) MT 760/MT 760 COV for issuance of bank guarantee.
- (ii) MT 760/MT 767 COV for amendment of bank guarantee.

[Tender Number should reflect in the SFMS text under MT 760/MT 760 COV]

The above message/intimation shall be sent through SFMS by the BG issuing Bank branch to ICICI Bank, Duliajan Branch, IFSC Code- ICIC0000213, Branch Address: ICICI Bank Ltd, Kunja Bhavan, Daily Bazaar, Duliajan, Dibrugarh, Assam – 786602. The Bank details are as under:

Bank Details of Beneficiary	
Bank Name	ICICI BANK LTD.
Branch Name	DULIAJAN
Branch Address	KUNJA BHAVAN, DAILY BAZAAR, DULIAJAN, DIBRUGARH, ASSAM – 786602
IFSC Code	ICIC0000213
Unique identifier code (Field 7037)	OIL503988890
Company name	Oil India Limited

The bidder shall submit to OIL the copy of the SFMS message as sent by the issuing bank branch along with the original bank guarantee.

- 15.10 The Bid Security of the unsuccessful bidders will be returned after finalization of tender whereas the Bid Security of the successful bidder will be discharged on such bidder's furnishing the Performance Security to OIL against the Purchase Order secured by the bidder within the stipulated time frame. The successful bidder will, however, extend validity of the Bid Security till such time the Performance Security is furnished.

15.11 For timely return of Bid Security, bidders shall submit following details alongwith their technical bid.

- For Bank Guarantee((BG): Name, Email id, Phone number and Address where the Bid Security is to be returned by Courier.
- Online payment: Name, Email id, Phone number and Bank details (Bank Name, Branch Name, Branch Address, IFSC Code, Unique identifier code, Company name) where the Bid Security amount shall be returned by Online transfer.

In case of non-submission of above details, return of Bid Security may be delayed.

16.0 FINANCING OF TRADE RECEIVABLES OF MICRO AND SMALL ENTERPRISES (MSEs) THROUGH TRADE RECEIVABLES DISCOUNTING SYSTEM (TREDS) PLATFORM.

Based on the initiatives of Government of India to help MSE vendors get immediate access to liquid fund based on Buyers credit rating by discounting, OIL has registered itself on TReDS platform with M/s RXIL and M/s A TREDS Ltd. (Invoice Mart). MSE vendors can avail this benefit by registering themselves with any of the exchanges providing e-discounting/electronic factoring services on TReDS platform and following the procedures defined therein, provided OIL is also participating in such TReDS Platform as a Buyer.

- MSE Vendor should be aware that all costs relating to availing the facility of discounting on TReDS platform including but not limited to Registration charges, Transaction charges for financing, Discounting Charges, Interest on financing, or any other charges known by any name shall be borne by MSE Vendor.
- MSE Vendor hereby agrees to indemnify, hold harmless and keep OIL and its affiliates, Directors, officers, representatives, agents and employees indemnified, from any and all damages, losses, claims and liabilities (including legal costs) which may arise from Sellers submission, posting or display, participation, in any manner, on the TReDS Platform or from the use of Services or from the Buyer's breach of any of the terms and conditions of the Usage Terms or of this Agreement and any Applicable Law on a full indemnity basis.
- OIL shall not be liable for any special, indirect, punitive, incidental, or consequential damages or any damages whatsoever (including but not limited to damages for loss of profits or savings, business interruption, loss of information), whether in contract, tort, equity or otherwise or any other damages resulting from using TReDS platform for discounting their (MSE Vendor's) invoices.

Note:

- Buyer means OIL who has placed Purchase Order/ Contract on a MSE Vendor (Seller).
- Seller means a MSE vendor, who has been awarded Purchase Order/ Contract by OIL (Buyer).

17.0 UNLOADING FOR BULKY/HEAVY ITEMS:

All the Goods in the GeM shall be offered on Free Delivery at Site basis including unloading. **HOWEVER, OIL SHALL PROVIDE CRANE FOR UNLOADING OF BULKY/HEAVY ITEMS ONLY.** Supplier shall depute adequate crew, who has experience of unloading of such items at Destination (Duliajan) with necessary safety gears i.e. helmet, safety boots, hand gloves etc. at unloading point.

The safety of the crew deputed by the supplier shall entirely be the responsibility of supplier and therefore they shall take all necessary measures/precautions to ensure that no injuries occur to personnel or property. Supplier must ensure that the crew involved for unloading are properly trained on the procedures and aware of the potential hazards while handling the items.

18.0 UNLOADING OF TUBULARS:

All the Goods in the GeM shall be offered on Free Delivery at Site basis including unloading. **HOWEVER, OIL SHALL PROVIDE CRANE FOR UNLOADING OF TUBULARS ONLY.** Supplier shall depute adequate crew, who has experience of unloading of tubulars, at Destination (Duliajan) with necessary safety gears i.e. helmet, safety boots, hand gloves etc. at unloading point. **THE ONLY RESPONSIBILITY OF THE CREW TO BE DEPUTED BY THE SUPPLIER IS TO FASTEN/FIX CRANE'S HOOK SLING TO BUNDLES ON THE LOADED VEHICLE.** Once the hook sling is securely fastened complying to the safety instructions, OIL's Crane shall lift and unload tubulars from the vehicle. Following points are to be noted and complied in this connection:

- (a) Supplier to ensure that height of the loaded tubular is below the cabin height of the vehicle for safe off-loading.
- (b) Supplier to ensure that tubular bundles are securely fastened by very strong material to withstand the rigors of road transportation and capable of lifting by Crane. In the case tubular bundles are found loosened and/or tubulars found completely resting on the side support/bales of vehicle in way that it may free fall upon unshackling, OIL will not unload such vehicle due to safety reasons.

The safety of the crew deputed by the supplier shall entirely be the responsibility of supplier and therefore they shall take all necessary measures/precautions to ensure that no injuries occur to personnel or property. Supplier must ensure that the crew involved for unloading are properly trained on the procedures and aware of the potential hazards while handling tubulars.

19.0 **UNLOADING OF CONSIGNMENT RECEIVED THROUGH RAIL:**

Unloading of consignment from Railway Wagons at Destination (**Duliajan**) shall be completely in OIL's scope.

20.0 **QUANTITY TOLERANCE FOR TUBULARS:**

Bidders should note that, in the event of order, quantity tolerance of +0%/-2% of order quantity will be applicable, if otherwise mentioned elsewhere in this document.

21.0 **SET-OFF:**

Any sum of money due and payable to the Seller (including Security Deposit refundable to them) under any purchase order may be appropriated by Oil India Limited and set-off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of any other purchase order made by the Seller with Oil India Limited (or such other person or persons contracting through Oil India Limited).

22.0 **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 are requested to submit an Undertaking as per **PROFORMA - J** along with their offer failing which their offer shall be liable for rejection.

23.0 **MODIFICATION/AMENDMENT OF TENDER DOCUMENT:** At any time prior to the deadline for submission of bids, the Company may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the tender Documents through issuance of Corrigendum(s)/Addendum(s). Bidders are expected to take the Corrigendum(s)/ Addendum(s) into account in preparation and submission of their bid. No separate intimation for Corrigendum(s)/Addendum(s) published by OIL shall be sent to the Bidders.

24.0 **GENERAL CONDITIONS OF CONTRACT FOR SERVICES (ANNEXURE - VI)**

General Conditions of Contract FOR SERVICES (GCC - SERVICES) shall be applicable for all services to be rendered including AMC (as and when entered into).

25.0 **SIGNING OF BIDS:**

25.1 Bids are to be submitted online in GeM portal. The bid including all uploaded documents shall be signed by duly authorized representative of the bidder holding a Power of Attorney to bind the Bidder to the contract. The letter of authorisation (**PROFORMA-K**) shall be indicated by written Power of Attorney accompanying the Bid.

26.0 **BIDDERS FINANCIAL STANDING:**

The bidder should not be under liquidation, court receivership or similar proceedings and should not be bankrupt. Bidder to upload undertaking (**PROFORMA-L**) to this effect with bid.

27.0 **GENERAL HEALTH, SAFETY & ENVIRONMENT (HSE) GUIDELINES:**

27.1 It will be solely the Supplier's responsibility to fulfil 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, if any, hired by Supplier comply with the same requirement as the Supplier himself and shall be liable for ensuring compliance all HSE laws.

- 27.2 It will be entirely the responsibility of the Supplier/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.
- 27.3 Any compensation arising out of the job carried out by the Supplier whether related to pollution, Safety or Health will be paid by the Supplier only.
- 27.4 Any compensation arising due to accident of the Supplier's personnel while carrying out the job, will be payable by the Supplier.
- 27.5 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 shall have the right to direct the Supplier to cease work until the non-compliance is corrected.
- 28.0 **DOCUMENTATION (FOR DOMESTIC/INDIGENOUS SUPPLIERS):**
- 28.1 Preparation and submission of proper documents by Seller is one of the very important requirements. The Seller must strictly follow the instructions.
- 28.2 Seller shall ensure that all the documents have clear reference of OIL's Purchase Order number.
- 28.3 Seller shall forward the documents, as mentioned below, by courier service immediately after the dispatch is made:

1. **WHERE PAYMENT AGAINST DIRECT SUBMISSION OF DESPATCH DOCUMENTS TO COMPANY:**

A)	General Manager (A/P), Finance & Accounts Department Oil India Limited, Duliajan, PIN - 786602	i) Bill in original + one copy. ii) Copy of the C-Note/RR. iii) Copy of Mill Inspection Certificate, if any. iv) Copy of Third-Party Inspection Certificate, if any. v) Copy of Delivery Challan. vi) Copy of TPI Declaration vii) Copy of Tax Invoice. viii) Copy of packing list. ix) Documentary evidence of payment of Customs Duty, if any.
B)	DGM - Materials (Receiving), Materials Department Oil India Limited, Duliajan, PIN - 786602	i) Clear Consignee copy of RR/C-Note - Original + 1 copy. ii) Copy of Tax Invoice. iii) Delivery Challan (Original). iv) Packing list (Original). v) Mill inspection certificate, if any (Original). vi) Copy of Third-Party Inspection certificate, if any. vii) Copy of TPI Declaration viii) Warranty Certificate (Original)
C)	Chief Manager Materials (FP) Materials Department Oil India Limited, Duliajan, PIN - 786602	One set consisting copies of all the documents as mentioned in (B) above.

Note: *Where payment is after receipt and acceptance of materials i.e. after CRAC, the complete set of documents meant for General Manager (A/P) as indicated in (A) above should be submitted to Dy. General Manager Materials (Receiving).*

PROFORMA – A

FORMAT FOR CERTIFICATE OF COMPLIANCE OF FINANCIAL CRITERIA
(ON THE OFFICIAL PAD OF THE BIDDER TO BE EXECUTED BY THE AUTHORIZED SIGNATORY OF THE BIDDER)

Ref: Clause No. A.2 (3.0) - Financial Criteria of the BEC

Tender No.: _____

I the authorized signatory(s) of.....(Company or firm name of address) do hereby affirm and declare as under:-

The balance sheet/Financial Statements for the financial year _____ (as the case may be) has actually not been audited as on the Original Bid closing Date.

Place :.....

Date :.....

signatory

Signature of the authorized

Note: *This certificate are to be issued only considering the time required for preparation of Financial Statements i.e. if the last date of preceding financial / accounting year falls within the preceding six months reckoned from the original bid closing date.*

PROFORMA – B

CERTIFICATE OF ANNUAL TURNOVER & NETWORTH

TO BE ISSUED BY PRACTISING CHARTERED ACCOUNTANTS' FIRM ON THEIR LETTER HEAD		
<u>TO WHOM IT MAY CONCERN</u>		
This is to certify that the following financial positions extracted from audited financial statements of M/s..... (Name of the bidder) for the last 3 (three) completed accounting years upto.....(as the case may be) are correct.		
YEAR	TURNOVER In INR (Rs.) Crores/ USD Million*	NET WORTH In INR (Rs.) Crores / USD Million*

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

Place:

Date:

Seal:

Membership No.:

Registration Code:

Signature:

****Applicable for Global Tenders.***

NOTE: As per the guidelines of ICAI, every practicing CA is required to mention Unique Document Identification Number (UDIN) against each certification work done by them. Documents certified by CA without UDIN shall not be acceptable.

PROFORMA – C

PARENT/ ULTIMATE PARENT/ HOLDING COMPANY'S CORPORATE GUARANTEE TOWARDS FINANCIAL STANDING (Delete whichever not applicable) (TO BE EXECUTED ON COMPANY'S LETTER HEAD)

DEED OF GUARANTEE

THIS DEED OF GUARANTEE executed at this day of by M/s(mention complete name) a company duly organized and existing under the laws of (insert jurisdiction/country), having its Registered Office at.....herein after called "the Guarantor" which expression shall, unless excluded by or repugnant to the subject or context thereof, be deemed to include its successors and permitted assigns.

WHEREAS M/s. Oil India Limited (hereinafter referred to as OIL) has invited offers vide their Tender No..... for.....and M/s.....(Bidder) intends to bid against the said tender and desires to have Financial support of M/s..... [Parent / Ultimate Parent/Holding Company(Delete whichever not applicable)] and whereas Parent/Ultimate Parent/Holding Company(Delete whichever not applicable) represents that they have gone through and understood the requirements of subject tender and are capable and committed to provide the Financial support as required by the bidder for qualifying and successful execution of the contract, if awarded to the bidder.

Now, it is hereby agreed by the Guarantor to give this Guarantee and undertakes as follows:

1. The Guarantor confirms that the Bidder is a 100% subsidiary of the Guarantor.
2. The Guarantor agrees and confirms to provide the Audited Annual Reports of any of the preceding 03(three) financial/accounting years reckoned from the original bid closing date.
3. The Guarantor have an annual financial turnover of minimum INR..... Cr or USD during any of the preceding 03(three) financial/ accounting years reckoned from the original bid closing date.
4. Net worth of the Guarantor is positive for preceding financial/ accounting year.
5. The Guarantor undertakes to provide financial support to the Bidder for executing the project/job, in case the same is awarded to the Bidder.
6. The Guarantor represents that:
 - (a) this Guarantee herein contained shall remain valid and enforceable till the satisfactory execution and completion of the work (including discharge of the warranty obligations) awarded to the Bidder.
 - (b) the liability of the Guarantor, under the Guarantee, is limited to the 100% of the order value between the Bidder and OIL. This will, however, be in addition to the forfeiture of the Performance Guarantee furnished by the Bidder.
 - (c) this Guarantee has been issued after due observance of the appropriate laws in force in India.
 - (d) this Guarantee shall be governed and construed in accordance with the laws in force in India and subject to the exclusive jurisdiction of the courts of New Delhi, India.
 - (e) this Guarantee has been given without any undue influence or coercion, and that the Guarantor has fully understood the implications of the same.
 - (f) the Guarantor has the legal capacity, power and authority to issue this Guarantee and that giving of this Guarantee and the performance and observations of the obligations hereunder do not contravene any existing laws.

for and on behalf of (Parent/Ultimate Parent/
Holding Company) (Delete whichever not
applicable)

Witness:

- 1.
- 2.

for and on behalf of (Bidder)

Witness:

- 1.
- 2.

PROFORMA – D

INTEGRITY PACT

Between

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

And

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

Preamble:

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

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

Section: 1 - Commitments of the Principal

- (1)** The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - (i) No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
 - (ii) The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
 - (iii) The Principal will exclude from the process all known prejudiced persons.
- (2)** If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officers and in addition can initiate disciplinary actions.

Section: 2 - Commitments of the Bidder/Contractor

- (1)** The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - (i) The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - (ii) The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, Subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelization in the bidding process.

- (iii) The Bidder (s) / Contractor (s) will not commit any offence under the relevant Anticorruption Laws of India, further, the Bidder (s) / Contractor (s) will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - (iv) The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
 - (v) Bidders to disclose any transgressions with any other company that may impinge on the anti-corruption principle.
 - (vi) The Bidder (s)/ Contractor (s) of foreign origin shall disclose the name and address of the Agents/ representatives in India, if any. Similarly, the Bidder (s)/ Contractor (s) of Indian Nationality shall furnish the name and address of the foreign principals, if any. Further, all the payments made to the Indian agent/ representative have to be in India Rupees only.
 - (vii) Bidders not to pass any information provided by Principal as part of business relationship to others and not to commit any offence under PC/ IPC Act;
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- (3) The Bidder/Contractor signing Integrity Pact shall not approach the Courts while representing the matters to IEMs and he/she will await their decision in the matter.

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

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

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

Section 4 - Compensation for Damages

- (1) If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to Earnest Money Deposit / Bid Security.
- (2) If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to Section 3, the principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to Security Deposit / Performance Bank Guarantee.
- (3) The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

- (1) The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

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

- (1) The Principal will enter into Pacts on identical terms with all bidders and contractors.
- (2) The Bidder / Contractor undertake(s) to procure from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the provisions laid down in this agreement/Pact by any of its sub-contractors/sub-vendors.
- (3) The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

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

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

Section: 8 -External Independent Monitor/Monitors

- (1) The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- (2) The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
- (3) The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality. However, the documents/records/ information having National Security implications and those documents which have been classified as Secret/Top Secret are not to be disclosed.

- (4) The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
- (5) As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action. However, the Independent External Monitor shall give an opportunity to the bidder / contractor to present its case before making its recommendations to the Principal.
- (6) The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
- (7) If the Monitor has reported to the Chairperson of the Board a Substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
- (8) The word 'Monitor' would include both singular and plural.
- (9) In case of any complaints referred under IP Program, the role of IEMs is advisory and would not be legally binding and it is restricted to resolving the issues raised by an intending bidder regarding any aspect of the tender which allegedly restricts competition or bias towards some bidder.

Section: 9 - Pact Duration

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

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

Section: 10 - Other provisions

- (1) This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal. The Arbitration clause provided in the main tender document / contract shall not be applicable for any issue / dispute arising under Integrity Pact.
- (2) Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
- (3) If the Contractor / Bidder is a Joint Venture or a partnership concern or a consortium, this agreement must be signed by all partners or consortium members. In case of sub-contracting, the Principal contractor shall take the responsibility of the adoption of IP by the sub-contractor and all sub-contractors shall also sign the IP.
- (4) Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) Issues like warranty / guarantee, etc. shall be outside the purview of IEMs.

M. B. SINGHA

.....
For the Principal

Date: 22.09.2023

Place: Duliajan

.....
For the Bidder/Contractor

Witness 1:

Witness 2:

PROFORMA – E

UNDERTAKING FOR LOCAL CONTENT

(To be submitted in the letter head of the bidder)

We, _____ (Name of the bidder) have submitted Bid against Tender No. _____ dated _____ of Oil India Limited. We hereby undertake that we meet the mandatory minimum local content requirement as per the provision of Public Procurement (Preference to Make in India) Order, 2017 of Department for Promotion of Industry and Internal Trade (DPIIT), Govt. of India as revised vide Order No. P45021/2/2017-PP (BE-II) dated 16th September 2020 (and as amended time to time) with modifications as notified vide MoP&NG Order No. FP-20013/2/2017-FP-PNG-Part (4) (E-41432) dated 26th April 2022. The percentage of Local Content in the bid is _____ %.

For and on behalf of _____

Authorized signatory _____

Name _____

Designation _____

Contact No. _____

PROFORMA – F(I)

**UNDERTAKING TOWARDS COMPLIANCE OF PROVISIONS FOR RESTRICTIONS ON PROCUREMENT FROM A
BIDDER OF A COUNTRY WHICH SHARES LAND BORDER WITH INDIA**

(To be typed on the letter head of the bidder)

Ref. No _____

Date: _____

Tender No. _____ Date: _____

**OIL INDIA LIMITED
MATERIALS DEPARTMENT,
DULIAJAN, ASSAM, INDIA**

Dear Sirs,

We, M/s _____, have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; we certify that we are not from such a country/or if from such a country, have been registered with the Competent Authority. We hereby certify that we fulfil all requirements in this regard and are eligible to be considered. *[wherever applicable, evidence of valid registration by the Competent Authority shall be attached]*

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)

PROFORMA – F(II)

UNDERTAKING FOR WORKS INVOLVING POSSIBILITY OF SUB-CONTRACTING

(To be typed on the letter head of the bidder)

Ref. No _____

Date: _____

Tender No. _____ Date: _____

**OIL INDIA LIMITED
MATERIALS DEPARTMENT,
DULIAJAN, ASSAM, INDIA**

Dear Sirs,

We, M/s _____, have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India and on sub-contracting to contractors from such-countries, we certify that we are not from such a country/or if from such a country, have been registered with the Competent Authority and will not sub-contract any work to a contractor from such countries unless such contractor is registered with the Competent Authority. We hereby certify that we fulfil all requirements in this regard and is eligible to be considered. *[wherever applicable, evidence of valid registration by the Competent Authority shall be attached]*

Yours faithfully,
For (type name of the firm here)

Signature of Authorized Signatory

Name:

Designation:

Phone No.

Place:

Date:

(Affix Seal of the Organization here, if applicable)

PROFORMA – F(III)

ADDITIONAL UNDERTAKING BY BIDDER IN CASES OF SPECIFIED TRANSFER OF TECHNOLOGY

(To be typed on the letter head of the bidder)

Ref. No _____

Date: _____

Tender No. _____ Date: _____

**OIL INDIA LIMITED
MATERIALS DEPARTMENT,
DULIAJAN, ASSAM, INDIA**

We, M/s _____, have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. We certify that we do not have any ToT arrangement requiring registration with the competent authority.

OR

We, M/s _____, have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. We certify that we have valid registration to participate in this procurement. *[Evidence of valid registration by the Competent Authority shall be attached]*

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)

PROFROMA – G

PROFORMA OF DECLARATION OF BLACKLISTING / HOLIDAY LISTING

TO,

**GM- MATERIALS
MATERIALS DEPARTMENT
P.O. DULIAJAN, PIN-786602
DIST. DIBRUGARH, ASSAM, INDIA**

Dear Sir,

Sub: OIL's Tender No. _____

We hereby declare that we are presently neither placed on any holiday list or blacklist declared by OIL India Limited, nor any inquiry is pending by Oil India Limited in respect of corrupt or fraudulent practice.

It is understood that if this declaration is found to be false in any particular, Oil India Limited shall have the right to reject my/our bid, and if the bid has resulted in a contract, the contract is liable to be terminated without prejudice to any other right or remedy (include blacklisting or holiday listing) available to Oil India Limited.

For and on behalf of _____
Authorized signatory _____
Name _____
Designation _____
Contact No. _____

PROFORMA – H

FORMAT FOR PERFORMANCE BANK GUARANTEE

To,
GENERAL MANAGER – MATERIALS (HOD)
OIL INDIA LIMITED, MATERIALS DEPARTMENT,
DULIAJAN, ASSAM, INDIA, PIN – 786602

WHEREAS.....(Name and address of Contractor)
(hereinafter called "Contractor") had undertaken, in pursuance of Contact No..... to
execute (Name of Contract and Brief Description of the Work)
(hereinafter called "the Contract").

AND WHEREAS it has been stipulated by you in the said Contract that the Contractor shall furnish you with a Bank Guarantee as security for compliance with Contractor's obligations in accordance with the Contract.

AND WHEREAS we (May incorporate the Bank Name) have agreed to give the Contractor such a Bank Guarantee; NOW THEREFORE we hereby affirm that we are Guarantors on behalf of the Contractor, up to a total of (Amount of Guarantee in figures)..... (in words), such amount being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or arguments, any sum or sums within the limits of guarantee sum as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein. We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or the work to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in any way cease us from any liability under this guarantee, and we hereby waive notice of such change, addition or modification.

This guarantee is valid until theday of.....

The details of the Issuing Bank and Controlling Bank are as under:

A. Issuing Bank:

BANK FAX NO:
BANK EMAIL ID:
BANK TELEPHONE NO:
IFSC CODE OF THE BANK:

B. Controlling Office:

Address of the Controlling Office of the BG issuing Bank:
Name of the Contract Person at the Controlling Office with Mobile No. and e-mail address:

Notwithstanding anything contained herein:

- (a) Our liability under this Bank Guarantee shall be restricted up to Rs.....
- (b) This guarantee shall be valid till
- (c) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before(Date of Expiry of BG PLUS one year claim period).
- (d) At the end of the claim period that is on or after.....(Date of expiry of.....the Bank Guarantee Plus Minimum of 1 year claim period shall be stipulated) all your rights under this Guarantee shall stand extinguished and we shall be discharged from all our liabilities under this Guarantee irrespective of receipt of original Bank Guarantee duly discharged, by Bank.

Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:

SIGNATURE AND SEAL OF THE GUARANTORS.....
Designation:.....
Name of the Bank:.....
Address:.....

UNDERTAKING BY VENDOR ON SUBMISSION OF BANK GUARANTEE

To,

Oil India Limited,
Materials Department,
Duliajan, Assam - 786602

We, M/s..... are submitting the Bid Security/Performance Security (strike out whichever not applicable) in favour of Oil India Limited, Duliajan in the form of bank guarantee bearing Reference No.....for an amount of INR.....valid up to as per terms and conditions of Tender / Contract No.....

BG issuing bank details:

Bank:	
Branch:	
IFS Code:	
Contact Details E-mail Addresses:	Mobile No.: Telephone No.: Fax No.:
Correspondence Address H No/Street/City:	State: Country: Pin Code:

Declaration:

We have arranged to send the confirmation of issuance of the bank guarantee via SFMS portal through our bank using the details mentioned in the tender and hereby confirming the correctness of the details mentioned.

Authorized Signature: _____

Name: _____

Vendor Code: _____

Email ID: _____

Mobile No.: _____

Enclosure: Original bank guarantee

PROFORMA - I

BID SECURITY FORM

To:
M/s. OIL INDIA LIMITED,
MATERIALS DEPARTMENT

Whereas.....(hereinafter called 'the Bidder') has submitted their Bid No. dated..... against OIL INDIA LIMITED, DULIAJAN, ASSAM, INDIA (hereinafter called the Purchaser) 's Tender No.for the supply of (hereinafter called 'the Bid') KNOW ALL MEN by these presents.

That we ofhaving our registered office at (hereinafter called 'the Bank') are bound unto the Purchaser, in the sum of for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.

Sealed with the said Bank thisday of

THE CONDITIONS of this obligation are:

1. If the Bidder withdraws their Bid during the period of Bid validity specified by the Bidder,
or
2. If the Bidder, having been notified of the acceptance of their bid by the Purchaser during the period of bid validity:
 - a) fails or refuses to accept the order; or
 - b) fails or refuses to furnish the performance securityor
3. If the Bidder furnishes fraudulent document/information in their bid.

We undertake to pay to the Purchaser up to the above amount upon receipt of their first written demand (by way of letter /fax/Email) without the Purchaser having to substantiate their demand, provided that in their demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of any of the conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including (Bidder to indicate specific date as mentioned in the tender), and any demand in respect thereof should reach the Bank not later than the above date.

The details of the Issuing Bank and Controlling Bank are as under:

A. Issuing Bank:

BANK FAX NO:
BANK EMAIL ID:
BANK TELEPHONE NO.:
IFSC CODE OF THE BANK:

B. Controlling Office:

Address of the Controlling Office of the BG issuing Bank:
Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:

Notwithstanding anything contained herein:

- a) Our liability under this Bank Guarantee shall be restricted up to Rs
- b) This guarantee shall be valid till
- c) We are liable to pay the guarantee amount or any part thereof under this Bank Guarantee only and only if you serve upon us a written claim or demand on or before (Date of Expiry of BG PLUS one year claim period).
- d) At the end of the claim period that is on or after (Date of expiry of the Bank Guarantee Plus Minimum of 1 year claim period shall be stipulated) all your rights under this Guarantee shall stand extinguished and we shall be discharged from all our liabilities under this Guarantee irrespective of receipt of original Bank Guarantee duly discharged, by Bank.

Name of the Contact Person at the Controlling Office with Mobile No. and e-mail address:

SIGNATURE AND SEAL OF THE GUARANTORS _____

Designation: _____

Name of Bank: _____

Address: _____

Date: _____

Place: _____

PROFORMA - J

**FORMAT OF UNDERTAKING BY BIDDERS TOWARDS SUBMISSION
OF AUTHENTIC INFORMATION/DOCUMENTS**

(To be typed on the letter head of the bidder)

Ref. No _____

Date _____

To,

**General Manager (Materials)
Materials Department
Oil India Limited, Duliajan**

Sub: Undertaking of authenticity of information/documents submitted

Ref: Your tender No. _____ Dated _____

Sir,

With reference to our quotation no. dated..... 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)

PROFORMA – K

LETTER OF AUTHORITY

TO,

**GM- MATERIALS
MATERIALS DEPARTMENT
P.O. DULIAJAN, PIN-786602
DIST. DIBRUGARH, ASSAM, INDIA**

Dear Sir,

Sub: OIL's Tender No. _____

We _____ of _____
confirm that Mr. _____ (Name and address) is
authorised to represent us to Bid, negotiate and conclude the agreement on our behalf with you against OIL's
Tender No. _____ for any commercial /Legal purpose etc.

We confirm that we shall be bound by all and whatsoever our said representative shall commit.

Authorised Person's Signature: _____

Name: _____

Designation: _____

Yours faithfully,

Signature: _____

Name & Designation: _____

For & on behalf of: _____

Note: *This letter of authority shall be on printed letter head of the Bidder and shall be signed by a person competent and having the power of attorney (power of attorney shall be annexed) to bind such Bidder.*

PROFORMA – L

UNDERTAKING FOR BIDDERS FINANCIAL STANDING

**TO,
GM- MATERIALS
MATERIALS DEPARTMENT
P.O. DULIAJAN, PIN-786602
DIST. DIBRUGARH, ASSAM, INDIA**

Dear Sir,

Sub: OIL's Tender No. _____

We, _____ (Name of the bidder) have submitted Bid against Tender
No. _____ dated _____ of Oil India Limited. We hereby
undertake that we are not under liquidation, court receivership or similar proceedings and we are not bankrupt.

For and on behalf of _____
Authorized signatory _____
Name _____
Designation _____
Contact No. _____

PROFORMA – M

EXCEPTION / DEVIATION PROFORMA

Oil India Limited expects the bidders to fully accept the terms and conditions of the bidding documents. However, should the bidder experience some exception and deviations to the terms of the bidding documents, the same should be indicated here and put in unpriced bid. In order to be considered responsive, Bidder's offer must specifically include the following statement:

(a) We certify that our offer complies with all NIT requirements and specifications without any deviations.

Or

(b) We certify that our offer complies with all NIT requirements and specifications with the following deviations:

Clause No. of Bidding Document	Full compliance/ not agreed	Exception/ deviations taken by the Bidders	Remarks

Signature of the Bidder: _____

Name: _____

Seal of the company

PROFORMA – N

PROFORMA OF AUTHORISATION LETTER FOR ATTENDING TENDER OPENING

Ref No. _____

Date: _____

**TO,
GM- MATERIALS
MATERIALS DEPARTMENT
P.O. DULIAJAN, PIN-786602
DIST. DIBRUGARH, ASSAM, INDIA**

Dear Sir,

Sub: OIL's Tender No. _____

I/We _____ confirm that Mr. _____ (Name and address) is
authorized to represent us during bid opening on our behalf against Tender No. _____

Yours Faithfully,

Authorised Person's Signature: _____

Name: _____

Signature of Bidder: _____

Name: _____

Date: _____

Note: *This letter of authority shall be on printed letter head of the Bidder and shall be signed by a person who signs the bid.*

ANNEXURE – IV

BID EVALUATION MATRIX (TECHNICAL SPECIFICATION)

BID EVALUATION MATRIX (TECHNICAL SPECIFICATION)			
Item	DESCRIPTION	BIDDER'S RESPONSE (Complied / Not Complied /Deviation/Not Applicable)	TO BE FILLED BY THE BIDDER Relevant Location of their Bid to support the remarks / compliance (Reference of Document name / Serial number / Page number of bid for documentary evidence)
A.	TECHNICAL SPECIFICATION		
Item No	Technical Specifications		
Item 1 OIL's Material Code 99066648	<u>LIQUID CONTROL VALVE, 50MM (2") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 50 mm (2") NB x ANSI 150 class End connection Size & Rating: Flanged, 50MM (2") NB,150Class, Raised face		

	Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted. 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 2" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten		
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	4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm		
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	(1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 2 OIL's Materials Code 99066649	<u>LIQUID CONTROL VALVE, 50 MM (2") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm		

	Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 50 mm (2") NB x ANSI 300 class End connection Size & Rating: Flanged, 50MM (2") NB,300Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted. 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 2" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top and Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve		
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	Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 440 Hard-faced Plug Material: SS 440 Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less		
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	Dead band: +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
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Item no. 3 OIL's Materials Code 99066683	<u>LIQUID CONTROL VALVE, 75MM (3") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 75 mm (3") NB x ANSI 150 class End connection Size & Rating: Flanged, 75MM (3") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 3. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 4. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition.		
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3.0 TRIM:

3.1 DESIGN PARAMETERS:

No. of Port: Single/Double (as per design)
Port Size: 3" (Inch)
Flow Direction: Flow to Open
Seat Type: Threaded / Clamped (Quick Change)
Plug Design: Contoured
Plug Characteristics: Linear
Plug Balance: Balanced/Unbalanced (as per design)
Guiding: Top guided
Cage: Optional
Seat Leakage: Class IV (ANSI FCI 70-2)
Noise level: <90 dBA within 1 meter area from the control valve
Hysteresis Error: +/-3% of Full Span or less
Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced
Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced
Guide Material: SS 440C Heat Treated or Tungsten
Cage Material: SS 440C Heat Treated or Tungsten

4.0 ACTUATOR:

4.1 DESIGN PARAMETERS:

Actuator action: Direct acting, Normally / Fail Close, Air to open
Servo & Signal Supply Medium: Natural Gas
Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum)
Actuator Shutoff pressure: 1.2 times Maximum inlet pressure
Gas/Air connection: ¼ inch NPT (F)

4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.
Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.
Spring material: Spring Steel (Epoxy coated)
Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated.
Plug, diaphragm & Stem connection: Clamp type (threaded stem).
Stroke Scale: Required

5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve
Output action: Direct
Output characteristics: Linear
Servo & input Signal Supply Medium: Natural Gas
Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm)
Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum)
Maximum Steady State Servo Gas Consumption: 14.0 scfh
Operating Temperature Limit: Up to 60 degree C
Gas/Air connection Point: ¼ inch NPT (F)
Hysteresis Error: +/- 1% of Full Span or less
Independent Linearity: +/- 1% of Full Span or less
Dead band: +/- 0.5% of Full Span or less

5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Type: Pneumatic, Linear Stem slide control, Single acting
Independent adjustment of zero and span: Required
Adjustable amplification & dampening: Required
Adjustable Stem travel: Required
Valve Position indicator: Required
Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection.
Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side.
Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application

6.0 AIR/GAS FILTER REGULATOR:

6.1 DESIGN PARAMETERS:

Setting Range: 0 to 7.0 Kg/sq cm
Inlet & Outlet connection: ¼" NPTF
Filter porosity: 5 Micron

6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent
Pressure Gauge: Required
Drain: Required Manual

	7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 4 OIL's Materials Code 99066684	<u>LIQUID CONTROL VALVE, 75MM (3") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 545 KLPD Normal Throughput: 300 KLPD Minimum Throughput: 100 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 75 mm (3") NB x ANSI 300 class End connection Size & Rating: Flanged, 75MM (3") NB,300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 3. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 4. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face		

	dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition.		
3.0	<u>TRIM:</u>		
3.1	<u>DESIGN PARAMETERS:</u> No. of Port: Single/Double (as per design) Port Size: 3" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less		
3.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Seat Ring: SS 440C Heat Treated Plug Material: SS 440C Heat Treated Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten		
4.0	<u>ACTUATOR:</u>		
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)		
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm		

	operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required		
5.0	<u>POSITIONER:</u>		
5.1	<u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less		
5.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application		
6.0	<u>AIR/GAS FILTER REGULATOR:</u>		
6.1	<u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm		

	Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 COMPANION FLANGE AND STUDS & NUTS 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 5 OIL's Materials Code 99066650	<u>LIQUID CONTROL VALVE, 100MM (4") X ANSI,150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 SERVICE CONDITION: Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 2.0 Kg/sq.cm Maximum Outlet Pressure: 3.5 Kg/sq.cm Normal Outlet Pressure: 1.0 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 100 mm (4") NB x ANSI 150 class End connection Size & Rating: Flanged, 100MM (4") NB,150Class, Raised		

	face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 TRIM: 3.1 DESIGN PARAMETERS: No. of Port: Single/Double (as per design) Port Size: 4" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten		
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	4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm		
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	(1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 6 OIL's Materials Code 99066682	<u>LIQUID CONTROL VALVE, 100MM (4") X ANSI,300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 23 Kg/sq.cm		

	Normal Inlet Pressure: 21 Kg/sq.cm Minimum Inlet Pressure: 18 Kg/sq.cm Maximum Outlet Pressure: 6.0 Kg/sq.cm Normal Outlet Pressure: 5.0 Kg/sq.cm Minimum Outlet Pressure: 1.0 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 100 mm (4") NB x ANSI 300 class End connection Size & Rating: Flanged, 100MM (4") NB, 300Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition. 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No. of Port: Single/Double (as per design) Port Size: 4" (Inch) Flow Direction: Flow to Open Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2)		
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	Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 440C Heat Treated Plug Material: SS 440C Heat Treated Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less		
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	5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 7 OIL's Material Code 99066681	<u>LIQUID CONTROL VALVE, 150MM (6") X ANSI, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Crude Oil + formation water + Suspended Particle (Fine		

	sand) Gas Gravity: 0.60 - 0.70 Normal Operating Temp: 45 Deg C Maximum Throughput: 900 KLPD Normal Throughput: 600 KLPD Minimum Throughput: 400 KLPD Maximum Inlet Pressure: 1.2 Kg/sq.cm Normal Inlet Pressure: 1.0 Kg/sq.cm Minimum Inlet Pressure: 0.8 Kg/sq.cm Maximum Outlet Pressure: 1.0 Kg/sq.cm Normal Outlet Pressure: 0.8 Kg/sq.cm Minimum Outlet Pressure: 0.5 Kg/sq.cm		
	2.0 <u>VALVE BODY & BONNET:</u>		
	2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 150 mm (6") NB x ANSI 150 class End connection Size & Rating: Flanged, 150MM (6") NB,150Class, Raised face Serrated.		
	2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Single/Double Ported Globe (as per design) Body and Bonnet material: 1. Carbon steel ASTM A 216 Gr. WCB or ASTM A352, Gr. LCB/LCC, epoxy painted 2. Casting must be of radiographic quality as per ASTM B16.34." Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts Gland Type: Bolted gland Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: 316 SST Stem Size: Suitable for service condition.		
	3.0 <u>TRIM:</u>		
	3.1 <u>DESIGN PARAMETERS:</u> No. of Port: Single/Double (as per design) Port Size: 6" (Inch) Flow Direction: Flow to Open		

	Seat Type: Threaded / Clamped (Quick Change) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced/Unbalanced (as per design) Guiding: Top & Bottom guided Cage: Optional Seat Leakage: Class IV (ANSI FCI 70-2) Noise level: <90 dBA within 1 meter area from the control valve Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Seat Ring: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Plug Material: SS 410 + Stellite No. 6 (Full Stellite) Hard-faced Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct acting, Normally / Fail Close, Air to open Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 35 psig (2.5 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated. Plug, diaphragm & Stem connection: Clamp type (threaded stem). Stroke Scale: Required 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas		
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	Input signal Pressure: 3-15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 35 psig (2.5 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Tubes & tube fittings: Complete with necessary SS tubes & tube fittings of size suitable for application 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required.		
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	7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Stud as per A-193-Gr B7 & Nuts as per A-194- Gr 2H		
Item no. 8 OIL's Material Code 99065821	<u>VALVE, CONTROL, PRESSURE, 50MM (2") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 50MM (2") NB,150Class End connection Size & Rating: Flanged,50MM (2") NB,150Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the		

	handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 TRIM: 3.1 DESIGN PARAMETERS: No of Port: Single/Double (To be specified by Bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by Bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.		
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	Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity : +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5”) Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼” NPTF Filter porosity: 5 Micron		
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	6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 9 OIL's Material Code 99065822	VALVE, CONTROL, PRESSURE, 50 MM (2") NB, 300 CLASS Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 50MM (2") NB,300Class End connection Size & Rating: Flanged,50MM (2") NB,300Class, Raised face Serrated.		

2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Body Style: Globe

Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34.

Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01

Bonnet Style: Plain, Bolted

Bonnet Bolting: SA-193-B7 Studs/2H Nuts.

Gland Type: Bolted

Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316)

Stem Size: Suitable for service condition. (To be specified by bidder).

3.0 TRIM:

3.1 DESIGN PARAMETERS:

No of Port: Single/Double (To be specified by bidder)

Seat Ring & Port Size: Full

Flow Direction: Flow to open

Seat Ring Type: Threaded/Clamped (Quick open)

Plug Design: Contoured

Plug Characteristics: Linear

Plug Balance: Balanced

Guiding: Top Guided/Top & Bottom guided (To be specified by bidder)

Cage: Optional

Seat Leakage: Class IV as per ANSI/FCI 70.2 standard.

Noise level: <90 dBA within 1 meter area from the control valve.

Hysteresis Error: +/-3% of Full Span or less

Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath

Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath

Guide Material: SS 440C Heat Treated or Tungsten

Cage Material: SS 440C Heat Treated or Tungsten

	4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity : +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5”) Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼		
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	inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 10 OIL's Material Code 99065826	<u>VALVE, CONTROL, PRESSURE, 76.2 MM (3") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD		

	Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 76.2MM (3") NB,150Class End connection Size & Rating: Flanged,76.2MM (3") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve.		
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	Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 ACTUATOR: 4.1 DESIGN PARAMETERS: Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 POSITIONER: 5.1 DESIGN PARAMETERS: Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less		
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	5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 11	<u>VALVE, CONTROL, PRESSURE, 76.2 MM (3") NB, 300 CLASS</u>		
OIL's Material Code 99065827	Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification.		

1.0 SERVICE CONDITION:

Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water.

Gas Gravity: 0.65-0.70

Normal Operating Temp: 45 Deg C.

Maximum Throughput: 0.30 MMSCMD

Normal Throughput: 0.20 MMSCMD

Minimum Throughput: 0.15 MMSCMD

Maximum Inlet Pressure: 23.0 Kg/sq.cm

Normal Inlet Pressure: 21.0 Kg/sq.cm

Minimum Inlet Pressure: 18.0 Kg/sq.cm

Maximum Outlet Pressure: 20.0 Kg/sq.cm

Normal Outlet Pressure: 18.0 Kg/sq.cm

Minimum Outlet Pressure: 16.0 Kg/sq.cm

2.0 VALVE BODY & BONNET:

2.1 DESIGN PARAMETERS:

Valve Size & Rating: 76.2MM (3") NB,300Class

End connection Size & Rating: Flanged,76.2MM (3") NB,300Class, Raised face Serrated.

2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Body Style: Globe

Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34.

Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01

Bonnet Style: Plain, Bolted

Bonnet Bolting: SA-193-B7 Studs/2H Nuts.

Gland Type: Bolted

Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316)

Stem Size: Suitable for service condition. (To be specified by bidder).

3.0 TRIM:

3.1 DESIGN PARAMETERS:

No of Port: Single/Double (To be specified by bidder)

Seat Ring & Port Size: Full

	Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required.		
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5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve
Output action: Direct
Output characteristics: Linear
Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm)
Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum)
Maximum Steady State Servo Gas Consumption: 14.0 scfh.
Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F)
Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less

5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Type: Pneumatic, Linear Stem slide control, Single acting
Independent adjustment of zero and span: Required
Adjustable amplification & dampening: Required Adjustable Stem travel: Required
Valve Position indicator: Required.
Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection.
Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side.
Enclosure Rating: Ingression protection rating IP65 or IP66.
Tube fitting: Complete with necessary SS tube fitting of size suitable for application.

6.0 AIR/GAS FILTER REGULATOR:

6.1 DESIGN PARAMETERS:

Setting Range: 0 to 7.0 Kg/sq cm
Inlet & Outlet connection: ¼" NPTF
Filter porosity: 5 Micron

6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent.
Pressure Gauge: Required
Drain: Required Manual

	7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 12 OIL's Material Code 99065823	<u>VALVE, CONTROL, PRESSURE, 100 MM (4") NB, 150 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 100MM (4") NB,150Class End connection Size & Rating: Flanged,100MM (4") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of		

	radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure		
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Gas/Air connection: ¼ inch NPT (F)

4.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated.

Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.

Spring material: Spring Steel (Epoxy coated)

Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated

Plug, diaphragm & Stem connection: Clamp type (threaded stem)

Stroke Scale: Required.

5.0 POSITIONER:

5.1 DESIGN PARAMETERS:

Split Range: Single Valve

Output action: Direct

Output characteristics: Linear

Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm)

Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum)

Maximum Steady State Servo Gas Consumption: 14.0 scfh.

Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F)

Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less

5.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Type: Pneumatic, Linear Stem slide control, Single acting

Independent adjustment of zero and span: Required

Adjustable amplification & dampening: Required Adjustable Stem travel: Required

Valve Position indicator: Required.

Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection.

Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side.

Enclosure Rating: Ingression protection rating IP65 or IP66.

Tube fitting: Complete with necessary SS tube fitting of size suitable for application.

	6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 13 OIL's Material Code 99065825	<u>VALVE, CONTROL, PRESSURE, 100 MM (4") NB, 300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u> Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm		

2.0 VALVE BODY & BONNET:

2.1 DESIGN PARAMETERS:

Valve Size & Rating: 100MM (4") NB,300Class

End connection Size & Rating: Flanged,100MM (4") NB,300Class, Raised face Serrated.

2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION:

Body Style: Globe

Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34.

Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01

Bonnet Style: Plain, Bolted

Bonnet Bolting: SA-193-B7 Studs/2H Nuts.

Gland Type: Bolted

Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316)

Stem Size: Suitable for service condition. (To be specified by bidder).

3.0 TRIM:

3.1 DESIGN PARAMETERS:

No of Port: Single/Double (To be specified by bidder)

Seat Ring & Port Size: Full

Flow Direction: Flow to open

Seat Ring Type: Threaded/Clamped (Quick open)

Plug Design: Contoured

Plug Characteristics: Linear

Plug Balance: Balanced

Guiding: Top Guided/Top & Bottom guided (To be specified by bidder)

Cage: Optional

Seat Leakage: Class IV as per ANSI/FCI 70.2 standard.

Noise level: <90 dBA within 1 meter area from the control valve.

Hysteresis Error: +/-3% of Full Span or less

Independent Linearity: +/- 5% of Full Span or less

3.2 MATERIAL OF CONSTRUCTION & SPECIFICATION

Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath

	Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten		
4.0	<u>ACTUATOR:</u>		
4.1	<u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F)		
4.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required.		
5.0	<u>POSITIONER:</u>		
5.1	<u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less		
5.2	<u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required		

	Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm²), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required Drain: Required Manual 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 14 OIL's Material Code 99065824	VALVE, CONTROL, PRESSURE, 150 MM (6") NB, 150 CLASS Diaphragm operated pneumatic control valve along with positioner and air filter regulator, complete with companion flange and requisite number of Studs & Nuts, as per the following specification. 1.0 <u>SERVICE CONDITION:</u>		

	Fluid to be handled: Sweet Natural Gas contaminated with condensate & formation water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 6.0 Kg/sq.cm Normal Inlet Pressure: 3.5 Kg/sq.cm Minimum Inlet Pressure: 1.0 Kg/sq.cm Maximum Outlet Pressure: 2.5 Kg/sq.cm Normal Outlet Pressure: 2.1 Kg/sq.cm Minimum Outlet Pressure: 0.7 Kg/sq.cm 2.0 <u>VALVE BODY & BONNET:</u> 2.1 <u>DESIGN PARAMETERS:</u> Valve Size & Rating: 150MM (6") NB,150Class End connection Size & Rating: Flanged,150MM (6") NB,150Class, Raised face Serrated. 2.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION:</u> Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5. Face-to-face dimension as per ANSI/ISA-75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single/Double (To be specified by bidder) Seat Ring & Port Size: Full Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open)		
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	Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Unbalanced Guiding: Top Guided/ Top & Bottom guided (To be specified by bidder) Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo. Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 -		
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	15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band : +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5”) Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼” NPTF Filter porosity: 5 Micron 6.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 <u>COMPANION FLANGE AND STUDS & NUTS:</u> 7.1 <u>DESIGN PARAMETERS:</u> Flange Size & Class: Same as End connection Studs & Nuts: As required.		
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	7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
Item no. 15 OIL's Material Code 99065828	<u>VALVE, CONTROL, PRESSURE, 25 MM (1") NB, 300 CLASS</u> Diaphragm operated pneumatic control valve along with positioner and air filter regulator, and air filter regulator, complete with companion flange and requisite number of Studs& Nuts, as per the following specification. 1.0 SERVICE CONDITION: Fluid to be handled: Sweet Natural Gas contaminated with water. Gas Gravity: 0.65-0.70 Normal Operating Temp: 45 Deg C. Maximum Throughput: 0.30 MMSCMD Normal Throughput: 0.20 MMSCMD Minimum Throughput: 0.15 MMSCMD Maximum Inlet Pressure: 23.0 Kg/sq.cm Normal Inlet Pressure: 21.0 Kg/sq.cm Minimum Inlet Pressure: 18.0 Kg/sq.cm Maximum Outlet Pressure: 20.0 Kg/sq.cm Normal Outlet Pressure: 18.0 Kg/sq.cm Minimum Outlet Pressure: 16.0 Kg/sq.cm 2.0 VALVE BODY & BONNET: 2.1 DESIGN PARAMETERS: Valve Size & Rating: 25MM (1") NB x 300Class End connection Size & Rating: Flanged, 25MM (1") NB x 300Class, Raised face Serrated. 2.2 MATERIAL OF CONSTRUCTION & SPECIFICATION: Body Style: Globe Body and Bonnet Material: Cast carbon Steel (ASTM A-216, Gr. WCB/WCC or ASTM A352, Gr. LCB/LCC), epoxy painted. Casting must be of radiographic quality as per ASTM B16.34. Body End Connection: Flanges conforming to ANSI B-16.5 Face-to-face dimension as per ANSI/ISA 75.08.01 Bonnet Style: Plain, Bolted Bonnet Bolting: SA-193-B7 Studs/2H Nuts. Gland Type: Bolted Gland Packing: Double, PTFE V-ring or equivalent/superior, suitable for the		

	handling fluid. Stem Material: S31600 SST (SS 316) Stem Size: Suitable for service condition. (To be specified by bidder). 3.0 <u>TRIM:</u> 3.1 <u>DESIGN PARAMETERS:</u> No of Port: Single /Double (To be specified by bidder). Seat Ring & Port Size: Full. Flow Direction: Flow to open Seat Ring Type: Threaded/Clamped (Quick open) Plug Design: Contoured Plug Characteristics: Linear Plug Balance: Balanced Guiding: Top & Bottom / Top Post Guided, (To be specified by bidder). Cage: Optional Seat Leakage: Class IV as per ANSI/FCI 70.2 standard. Noise level: <90 dBA within 1 meter area from the control valve. Hysteresis Error: +/-3% of Full Span or less Independent Linearity: +/- 5% of Full Span or less 3.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Seat Ring: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Plug Material: S31600 SST (SS 316)/ S 41000 SST (SS 410), with CoCr-A (Stellite 6, Full Stellite) Sheath Guide Material: SS 440C Heat Treated or Tungsten Cage Material: SS 440C Heat Treated or Tungsten 4.0 <u>ACTUATOR:</u> 4.1 <u>DESIGN PARAMETERS:</u> Actuator action: Direct, Normally / Fail open, Air to Close. Servo & Signal Supply Medium: Natural Gas Servo gas supply pressure: 20 psig (1.4 kg / sq. cm) (maximum) Actuator Shutoff pressure: 1.2 times Maximum inlet pressure Gas/Air connection: ¼ inch NPT (F) 4.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Actuator type: Yolk mounted, spring loaded, pneumatic diaphragm operated. Diaphragm material: Nylon reinforced Neoprene rubber material suitable for natural gas as servo.		
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	Spring material: Spring Steel (Epoxy coated) Casing: Weatherproof, Corrosion Resistant, Pressed steel, Epoxy coated Plug, diaphragm & Stem connection: Clamp type (threaded stem) Stroke Scale: Required. 5.0 <u>POSITIONER:</u> 5.1 <u>DESIGN PARAMETERS:</u> Split Range: Single Valve Output action: Direct Output characteristics: Linear Servo & input Signal Supply Medium: Natural Gas Input signal Pressure: 3 - 15 psig (0.21 -1.05 Kg/sq cm) Servo gas supply Pressure: 20 psig (1.4 Kg/Sq cm) (maximum) Maximum Steady State Servo Gas Consumption: 14.0 scfh. Operating Temperature Limit: Up to 60 degree C Gas/Air connection Point: ¼ inch NPT (F) Hysteresis Error: +/- 1% of Full Span or less Independent Linearity: +/- 1% of Full Span or less Dead band: +/- 0.5% of Full Span or less 5.2 <u>MATERIAL OF CONSTRUCTION & SPECIFICATION</u> Type: Pneumatic, Linear Stem slide control, Single acting Independent adjustment of zero and span: Required Adjustable amplification & dampening: Required Adjustable Stem travel: Required Valve Position indicator: Required. Pressure Gauge: Required for Inlet, output & Instrument (Signal), 40 mm (1.5") Dia, dual scale (psig & Kg/cm2), MS Powder coated/plastic casing, ¼ inch NPT brass connection. Enclosure: Gas & Dust proof/Weatherproof with screened venting at bottom/side. Enclosure Rating: Ingression protection rating IP65 or IP66. Tube fitting: Complete with necessary SS tube fitting of size suitable for application. 6.0 <u>AIR/GAS FILTER REGULATOR:</u> 6.1 <u>DESIGN PARAMETERS:</u> Setting Range: 0 to 7.0 Kg/sq cm Inlet & Outlet connection: ¼" NPTF Filter porosity: 5 Micron		
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	6.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Filter material: Sintered Bronze/Ultra High Molecular Weight Polyethylene (UHMWPE) or equivalent. Pressure Gauge: Required. Drain: Required Manual. 7.0 COMPANION FLANGE AND STUDS & NUTS: 7.1 DESIGN PARAMETERS: Flange Size & Class: Same as End connection Studs & Nuts: As required. 7.2 MATERIAL OF CONSTRUCTION & SPECIFICATION Flange: Raised faced Serrated as per ANSI B-16.5 Studs & Nuts: Studs as per SA-193-B7 & Nuts as per SA-193-2H.		
B	SPECIAL TERMS & CONDITIONS		
1.0	The bidder shall confirm that the goods, materials to be supplied shall be new, of recent make, of the best quality & workmanship. The bidder shall confirm that the materials shall be guaranteed for a period of 18 months from the date of despatch or 12 months from the date of receipt at destination, whichever is earlier, against defects arising from faulty materials, workmanship or design. Defective goods / materials or parts notified by OIL to the Seller shall be replaced immediately by the Seller on FOR destination basis including payment of all taxes and duties at Seller's expense. This guarantee shall survive and hold good notwithstanding inspection, payment for and acceptance of the goods.		
2.0	The following documents/drawing/brochures shall be submitted along with technical bid: (i) Material datasheet / specification (ii) General Arrangement Diagram (GAD) with dimensions (iii) Technical catalogue for the quoted valves (iv) Manufacturer's QAP		
3.0	In the technical bid, bidder shall submit the document of sizing calculations sheet, Characteristic Curve of Control Valve as per ANSI/ISA 75.02 standard for one no of similar type of control valve manufactured by them.		
4.0	Valve body shall be manufactured in / procured from EIL / Lloyds approved foundries. The foundry certificate & Casting Heat No shall be provided along with the material supply.		
5.0	(a) The following tests shall be carried out and the test reports shall be submitted along with materials supply:		

	(b) (c) Chemical Analysis & Mechanical Property Test of all materials of components of the valves as per EN10204 Standard. (d) Radiographic testing of valve body & bonnet as per ASME SEC V / ASTM B16.34 Standard. (e) Hydraulic test for pressure containing part (Shell Test) of each valve as per ASME B 16.34/ISA S 75.19.01 Standard at 1.5 times the rated pressure. (f) Hydraulic test for Assembled valve (Body Mount Leak Test) of each valve as per ASME /ISA S 75.19.01 Standard at 1.1 times the rated pressure. (g) Seat Leakage Tests for Class IV as per FCI 70.2 standard, using air or water with suitable inhibitor to prevent corrosion. (h) Characteristic Curve of Control Valve for one no of each Purchase Order Item as per Purchase Order Specification shall be submitted for approval after placement of order. (i) Actuator Leak Test as per relevant standard/ Manufacturer's QAP, using compressed air at 1.5 times the supply pressure to the actuator as per Purchase Order specification. (j) Functional test with accessories connected shall be conducted as per relevant standard /Manufacturer's QAP. (k) Cyclic & physical tests on each actuator shall be performed to ensure sound quality of diaphragm & spring as per relevant standard /Manufacturer's QAP. (l) Valve Packing of each valve shall be compliant to Low Emission Gland Packing as per ISO 15848-1. Fugitive Emission Test Certificate must be submitted along with bid and supply of materials.		
6.0	The valves shall bear the following permanent marks- (i) Manufacturer's Name (ii) Valve size (iii) Pressure Rating (iv) Serial No. (v) OIL's Purchase Order no.		
7.0	THIRD PARTY INSPECTION: All valves shall be inspected by any one of following OIL approved Third-party inspection agencies. The bidder has to arrange and bear for the Third Party Inspection at manufacturer's plant as per the broad scope of work mentioned herein. Bidder should confirm that items/equipment/material supplied by them will be inspected by any of the following third party inspection agencies at their own cost. Third Party Inspection Report shall be submitted along with the Dispatch document. <u>Bidder to include the Third Party Inspection charges in their quoted price.</u>		

	(i) M/s Lloyds (ii) M/s Bureau Veritas (iii) M/s Rites (iv) M/s IRCLASS System and Solutions Private Limited (v) M/s Tuboscope Vetco (vi) M/s DNV MES India Private Limited		
7.1	The Scope of Third-Party Inspection will be as detailed below: (i) To review necessary chemical & mechanical test certificates to ensure that different components of the valve are as per relevant standards and Purchase Order specification. (ii) To review heat number wise foundry certificates of castings in order to ensure that the materials used are as per relevant standards and Purchase Order specification. (iii) To ensure that valve body castings are manufactured in / procured from foundries approved by M/s EIL or M/s Lloyds. (iv) To review and certify the radiographs of body & bonnet of all valves to ensure that casting are of radiographic quality. (v) To review and certify radiography of 10% of valves randomly selected against each purchase order item to ensure that casting are of radiographic quality. (vi) To witness, review & certify hydraulic & pneumatic test of each valve as per relevant standards and Purchase Order specification. (vii) To witness functional test and review & certify Characteristic Curve (Cv) tests (one no. against each item), leakage test etc as per relevant standards and Purchase Order specification. (viii) To carry out visual & dimensional inspection to ensure that the valves are manufactured as per relevant standards and Purchase Order specification. (ix) To ensure that the valves are embossed as per relevant standards and Purchase Order specification. (x) To document, review and issue all inspection certificates to be provided along with material supply.		
8.0	OIL may reserve the right to depute its engineer at final stage of manufacturing for inspection of functional & hydraulic test of the valves either offline (physical) or online (virtual). The supplier has to arrange for the inspection accordingly and inform OIL for the same at least 15 days prior to such inspection. Expenditures related to such inspection visit shall be borne by OIL itself.		
9.0	Only kerosene or water with suitable inhibitor to prevent corrosion shall be used for hydraulic testing. If water is used for testing, valves shall be properly dried and		

	inside & internal parts of each valve shall be properly greased.		
10.0	Valve body, bonnet & actuator shall be thoroughly cleaned & painted with suitable anti-corrosive epoxy paint.		
11.0	Both ends of each valve/companion flange should also be provided with protective rubber / plastic caps, securely attached to the valves to prevent entry of foreign material during transportation and storage.		
12.0	Valve shall be suitably protected to avoid any damage during transit or storage.		

CHECKLIST			
1.0	Whether quoted as manufacturer?		
2.0	Whether quoted as OEM Dealer/Supply House?		
3.0	If quoted as OEM Dealer/Supply House -		
	a) Whether submitted valid and proper authorization letter from manufacturer confirming that bidder is their authorized Dealer/supply House for the product offered?		
	(b) Whether manufacturer's back-up Warranty/Guarantee certificate submitted?		
4.0	Whether agreed to the tender warranty clause of the tender?		
5.0	Whether submitted EMD/Bid Security within the bid closing date as per tender requirement?		
6.0	Whether quoted a firm delivery period as per the tender requirement?		
7.0	Whether confirmed to submit PBG as asked for in tender?		
8.0	Whether Bid Security submitted as per requirement of the tender?		
9.0	Whether confirmed Bid Validity as per the tender requirement?		
10.0	Whether confirmed Payment Terms as per the tender?		
11.0	Whether quoted as MSE unit? If yes, whether necessary document submitted?		
12.0	Whether submitted Integrity Pact duly signed and sealed as per PROFORMA – D?		
13.0	Ministry of Finance of Govt. of India, Department of Expenditure, Public procurement Division vide office memorandum F. No. 6/18/2019-PPD dated 23rd July, 2020 (order-Public Procurement no.1) has proclaimed the insertion of Rule 144 (xi) in the General Financial Rules (GFRs), 2017 w.e.f. 23rd July, 2020 regarding restrictions on procurement from a bidder of a country which shares a land border with India on the grounds of defence of India on matters directly or indirectly related thereto including national security. Bidders are requested to take note of the office memorandum and submit their offers accordingly, wherever applicable. In this regard, bidders must submit duly sealed & signed undertaking as per format provided vide, PROFORMA – E(I), E(II) & E(III) along with the technical bid. Whether		

	uploaded along with the bid?		
14.0	Whether indicated the country of origin for the items quoted? Please mention the "Country of origin" under Remarks here.		
15.0	Whether submitted format of undertaking by bidders towards submission of authentic information/ documents as per PROFORMA - H		
16.0	Whether copy of the SFMS message for Bid Security/ EMD as sent by the issuing bank branch submitted along with the original bank guarantee?		

ANNEXURE – V

BID EVALUATION MATRIX (BID REJECTION CRITERIA)

BID EVALUATION MATRIX (BID REJECTION CRITERIA) (TO BE FILLED IN BY BIDDER DULY SIGNED)			
Item	DESCRIPTION	BIDDER'S RESPONSE (Complied / Not Complied /Deviation/Not Applicable)	TO BE FILLED BY THE BIDDER Relevant Location of their Bid to support the remarks / compliance (Reference of Document name / Serial number / Page number of bid for documentary evidence)
A	BID REJECTION CRITERIA (BRC)		
A.1	TECHNICAL		
1.0	BIDDER'S ELIGIBILITY:		
1.1/1.2	The bidder should be an Original Equipment Manufacturer (OEM) of the tendered item(s)/ equipment. OR The bidder should be a sole selling agent/authorised distributor/authorised dealer/ authorised supply house of an Original Equipment Manufacturer (OEM) of the tendered item (s).		
1.3	In case the bidder is quoting as agent /distributor/dealer/supply house, the bidder should submit valid authorisation certificate/letter issued by its Original Equipment Manufacturer (OEM), confirming the Bidders' status as their authorised supplier/ dealer/ distributor/ wholly owned subsidiary (<i>as the case may be</i>) to sell their products with proper warranty and guarantee back up. Such authorisation certificate/letter shall be valid for the entire period of execution of the order.		
1.4	NOTES TO BIDDER REGARDING AUTHORISATION:		
1.4.1	Authorization letter must be issued on the official letter head only of the OEM clearly mentioning the status of Bidder i.e., whether sole selling agent / authorised distributor / authorised dealer / authorised supply house of Original Equipment Manufacturer (OEM), failing which the bid shall not be considered for evaluation and in that case the offer shall be rejected straightway. Such certificates/authority letter issued by a party other than the OEM shall not be considered as valid authorization letter and in such case, the bid shall be rejected without any further reference.		

1.4.2	Authorization letter issued by the OEM in any other form such as Direct Chanel Partner/Indirect Chanel Partner/Chanel Partner/Seller/Reseller/Sub Dealer/Sub Distributor/Sister Concern shall not be considered for bid evaluation and the offer shall be rejected.		
1.4.3	In case the bidder is a wholly owned subsidiary company of the parent company (OEM), in addition to the authorization letter including warranty/guarantee back-up, the bidder shall also upload/submit the documents such as board resolution/certificate of incorporation/any other legal certificate along with their offer that would establish the relation between the parent company with the subsidiary company without which the bid will not be evaluated and will be rejected straightway.		
1.5	The bidder/OEM must submit an undertaking along with the Technical Bid that their offered equipment is not going to become obsolete during the next 5 (five) years from the date of supply, if order is awarded on them by OIL and must guarantee uninterrupted supply of spares and availability of services for at least for ten (10) years with effect from the supply of the equipment, without which offer will not be considered for evaluation / placement of order. This clause will be applicable only if the tender item has requirement of spares.		
2.0	BIDDERS' EXPERIENCE		
2.1	IN CASE THE BIDDER IS AN ORIGINAL EQUIPMENT MANUFACTURER (OEM):		
2.1.1	The bidder (OEM) should have at least 5 (five) years manufacturing experience of similar items, viz., control valves of same or higher working pressure, preceding the original bid closing date of the tender. Suitable documentary evidence (<i>such as past Purchase Order prior to 5 years from BCD, etc.</i>) should be provided to substantiate manufacturing experience as above to the satisfaction of OIL.		
2.1.2	In addition to above, the bidder (OEM) should have supply experience of successful execution of at least 50% of each of tendered quantity (rounded off to the next higher integer) of each tendered item/ equipment (<i>same or higher working pressure and same or higher sizes</i>), to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender (<i>either by themselves or through their sole selling agent/ distributor/dealer/ supply house</i>).		
2.1.3	Documentary evidences to substantiate manufacturing & supply records must be submitted in the form of copies of relevant Purchase Order(s) & any one or combination of the following documents evidencing satisfactory execution of those Purchase Orders(s) such as: (i) Satisfactory supply /completion/installation report (OR) (ii) Bill of lading, Commercial Invoice/Payment Invoice (OR) (iii) Consignee receipt, delivery receipt (OR) (iv) Central Excise Gate Pass/Tax invoice issued under relevant rules of Central Excise/VAT/GST invoice.		

	(v) Any other documents which shall prove that the bidder has successfully executed such order(s)		
2.1.4	NOTES TO BIDDER REGARDING EXPERIENCE CRITERIA		
	a) <i>The Purchase Order need not be within 5 (five) years preceding original bid closing date of this tender. However, execution of supply should be within 5 (five) years preceding original bid closing date of this tender.</i> b) <i>Satisfactory supply/completion/installation report should be issued on company's letterhead with signature and stamp.</i> c) <i>Bidders showing supply experience towards supply to its sister concern/ subsidiaries shall not be considered as experience for the purpose of meeting BRC.</i>		
2.1.5	Domestic manufacturer who has satisfactorily executed development order(s) placed by OIL/ONGCL for the tendered materials/items (<i>same or higher working pressure and same or higher sizes</i>) during recent years (<i>i.e. during the last five years from the original bid closing date of this tender</i>) shall also be considered as established sources for supply of the tendered item(s). Under such a situation, the bidder need not satisfy BRC clauses 2.1.1 and 2.1.2. But they must submit the following along with their techno-commercial bid: (i) Copy of relevant valid API certificate (as applicable). (ii) Copy of PO and successful Field Trial Report issued by OIL/ONGCL (<i>bearing the PO No. & Date in their letter head</i>), if executed against OIL/ONGCL's development order.		
2.2	IN CASE THE BIDDER IS A SOLE SELLING AGENT/AUTHORISED DISTRIBUTOR/AUTHORISED DEALER / AUTHORISED SUPPLY HOUSE OF OEM:		
2.2.1	The bidder's OEM (the Principal) should have at least 5 (five) years manufacturing experience of similar items, viz., control valves of same or higher working pressure, preceding to the original bid closing date of the tender. Suitable documentary evidence (<i>such as past Purchase Order prior to 5 years from BCD, etc.</i>) should be provided to substantiate manufacturing experience as above to the satisfaction of OIL.		
2.2.2	The bidder's OEM (the Principal) should have supply experience of successful execution of at least 50% of the tendered quantity (<i>rounded off to next higher integer</i>) of each of tendered item/equipment (<i>same or higher working pressure and same or higher sizes</i>), to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender (<i>either by themselves or through their sole selling agent/distributor/dealer/supply house</i>).		
2.2.3	Additionally, the bidder himself/themselves as sole selling agent/distributor/dealer/supply house should have supply experience of successful execution of at least 50% of the tendered quantity (<i>rounded off to next higher integer</i>) of each of tendered item/equipment (<i>same or higher working pressure and same or higher sizes</i>) to any E&P companies/Oil & Gas Companies during last 5 (five) years as on original bid closing date of the tender (<i>either from same OEM (the principal) or from any other OEM</i>).		

2.2.4	Documentary evidences to substantiate manufacturing & supply records must be submitted in the form of copies of relevant Purchase Order(s) & any one or combination of the following documents evidencing satisfactory execution of those Purchase Orders(s) such as: (i) Satisfactory supply /completion/installation report (OR) (ii) Bill of lading, Commercial Invoice/Payment Invoice (OR) (iii) Consignee receipt, delivery receipt (OR) (iv) Central Excise Gate Pass/Tax invoice issued under relevant rules of Central Excise/VAT/GST invoice. (v) Any other documents which shall prove that the bidder has successfully executed such order(s)		
2.2.5	NOTES TO BIDDER REGARDING EXPERIENCE CRITERIA		
	a) <i>The Purchase Order need not be within 5 (five) years preceding original bid closing date of this tender. However, execution of supply should be within 5 (five) years preceding original bid closing date of this tender.</i> b) <i>Satisfactory supply/completion/installation report should be issued on company's letterhead with signature and stamp.</i> c) <i>Bidders showing supply experience towards supply to its sister concern/ subsidiaries shall not be considered as experience for the purpose of meeting BRC.</i>		
3.0	DELIVERY PERIOD:		
	Delivery to be completed within 210 days from the date of placement of order by OIL. The date of receipt of materials at site shall be considered as the date of delivery. Bidders must categorically confirm the above in their Technical Bid.		
A.2	BRC - FINANCIAL:		
1.0	The bidder must have an annual financial turnover from Operations of minimum INR 8,96,94,214.00 during any of the preceding 3 (Three) financial/accounting years reckoned from the original bid closing date of the tender Audited Annual Reports. <i>[Annual Financial Turnover of the bidder from Operations shall mean - "Aggregate value of the realization of amount made from the sale, supply or distribution of goods or on account of services rendered, or both, by the company (bidder) during a financial year" as per the Companies Act, 2013 Section 2 (91).]</i>		
2.0	"Net Worth" of the bidder must be positive for the financial/accounting year just preceding to the original Bid Closing Date of the Tender. <i>[Net worth shall mean: "Share capital + Reserves created out of profits and securities Premium - Aggregate value of accumulated losses (excluding revaluation reserves) - deferred expenditure - Miscellaneous Expenditure to the extent not written off and carried forward loss - Reserves created out of write back of depreciation and amalgamation"]</i>		

3.0	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 (PROFORMA - A) certifying that 'the balance sheet/Financial Statements for the financial year (as applicable) has actually not been audited so far'. Note: a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the technical bid:- i) A certificate issued by a practicing Chartered Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual Turnover & Net worth as per format prescribed in (PROFORMA – B). OR ii) Audited Balance Sheet alongwith 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.		
4.0	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\$.		
5.0	In case the Bidder is subsidiary company (should be 100% owned subsidiary of the parent/ultimate parent/holding company) who does not meet financial criteria by itself and submits its bid based on the strength of parent/ultimate parent/holding company, then following documents need to be submitted:		

	(i) Turnover of the parent/ultimate parent/holding company should be in line with Para A.2 (1.0) above. (ii) Net Worth of the parent/ultimate parent/holding company should be positive in line with Para A.2 (2.0) above (iii) Corporate Guarantee (PROFORMA - C) on parent/ultimate parent/holding company's company letter head signed by an authorized official undertaking that they would financially support their wholly owned subsidiary company for executing the project/job in case the same is awarded to them. (iv) Documents to substantiate that the bidder is as 100% subsidiary of the parent/ultimate parent/holding company.		
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