



निविदा पूछताछ  
TENDER ENQUIRY

[सीमित निविदा]  
[LIMITED TENDER]

माझगांव डॉक शिपबिल्डर्स लिमिटेड  
(भारत सरकार का उपक्रम)  
MAZAGON DOCK SHIPBUILDERS LIMITED  
(Formerly known as Mazagon Dock Limited)  
(A Govt. of India Undertaking)  
CIN: L35100MH1934GOI002079  
Dockyard Road, Mumbai 400 010  
Website- [www.mazagondock.in](http://www.mazagondock.in)  
Certified - ISO 9001: 2008 for Shipbuilding Division  
GST ID : 27AAACM8029J1ZA

निविदा सं./Tender No	1300001535	विभाग/Department	EY COMMERCIAL
क्रय अधिकारी/Purchase Exec.	Shikha Pardhi	क्रय अधिकारी/Purchase Exec.	Shikha Pardhi
सेवा में/To		दूरभाष सं./Telephone No	23762630
		फैक्स सं./Fax No	23741386
		ई-मेल/E-Mail	spardhi@mazdock.com
दूरभाष सं./Telephone		निविदा सं./Tender No	1300001535
फैक्स सं./Fax		निविदा तिथि/ Tender Date	02.04.2024
ई-मेल/E-Mail		निविदा बंद की तिथि/Tender Closing Date	09.04.2024
		निविदा बंद होने का समय/Tender Closing Time	12:00:00
		आरएफक्यू सं./RFQ No	2130000445

निविदा शुल्क/Tender Fee	रु/Rs	0.00
बयाना राशि/EMD Amount	रु/Rs	0.00
पुर्व बिड बैठक तिथि और समय/Pre Bid Meeting Date & Time		,00:00:00
निविदा खोलने की तिथि और समय/Tender Opening Date & Time		09.04.2024,15:00:00
प्रस्ताव वैधता तिथि है/Offer should be valid up to		07.08.2024
सुरक्षा जमा/Security Deposit		5.00 %आदेश मूल्य का/PO value
वरीय बैंक जमानत /Perf. Bank Guarantee		5.00 %आदेश मूल्य का/PO value

( आगे के विवरण हेतु कृपया सम्बंधित नियम शर्तों को पढ़ें। सुनिश्चित करें कि कोटेशन और संबंधित पत्राचार के लिए विभाग का नाम, क्रय अधिकारी का नाम, निविदा संख्या, बंद होने का समय एवं तिथि एवं आरएफक्यू सं. अपने कोटेशनमें लिखें।  
Kindly read and refer relevant terms & conditions for further details. Do ensure to Quote Department Name, Purchase Executive \$ Name , Tender Number, closing date & time and RFQ Number in your Quotation & related correspondence )

प्रिय महोदय/महोदया  
Dear Sir / Madam ,

विषय /SUB:- PROCUREMENT OF LSAW PIPES FOR LR BENDS OF PART REPLACEMENT PIPELINES PROJECT (PRPP) FOR ONGC

माझगाँव डॉक शिपबिल्डर्स लिमिटेड प्रतिष्ठित/संभावित आपूर्तिकर्ताओं से निम्न हेतु, प्रतियोगितात्मक दो बोली प्रणाली में ( भाग -I तकनीकी - वाणिज्य बोली एवं भाग II मूल्य बोली ) बोली आमंत्रित करती है।  
Mazagon Dock Shipbuilders Limited (MDL) invites Competitive – Bid from reputed Supplier for the following in TWO BID system ( Part - I Techno - Commercial Bid & Part - II Price Bid ) .

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
00100	सामग्री सं./ Material Number :- 350000000000080558 CS LSAW Pipe OD 16 inch X 15.9 mm सामग्री वर्णन/Material Description :CS LSAW Pipe Outer Dia 16 inch (406.4mm) x Wall Thickness	864.00 Meter	30.04.2024

क्र सं. SL.No.	सामग्री / सेवा विवरण Material / Service Details	मात्रा / इकाई Quantity / unit	आपूर्ति तिथि Delivery Date
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	<p>15.9mm Material Specification API 5L X 60 (CS NON NACE)</p> <p>Each pipe should be of length 11.7 mtrs to 12.5 mtrs (Average 12.1 mtrs)</p>		
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00200	<p>सामग्री सं./ Material Number :- 350000000000080537 CS LSAW OD 16 inch X 17.5 mm SR9</p> <p>सामग्री वर्णन/Material Description :CS LSAW Pipe Outer Dia 16.00 Inch (406.4mm) x Wall Thickness 17.5mm Material Specification API 5L GR. X 60 (CS NON NACE)</p> <p>Each pipe should be of length 7.5 mtrs to 8.5 mtrs ( Avg 8.0 Mtrs)</p>	192.00 Meter	30.04.2024
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नियम और शर्तें : भाग ए में लिखी हुई और इतर संलग्नपत्रे इस निविदा एक अभिन्न अंग हैं। हमें आशा है की, हमें प्रतियोगित्मिक और उचित प्रस्ताव इस निविदा के लिए प्राप्त होगा।  
Terms & Conditions as indicated in Part A of this tender and other enclosures / annexures form an integral part of this tender document. We look forward to receive your most competitive and reasonable offer against this Tender.

माझगाँव डॉक शिपबिल्डर्स लिमिटेड के लिए /For Mazagon Dock Shipbuilders Ltd

# **Mazagon Dock Shipbuilders Limited**

## **Limited tender**

### **ADDITIONAL TERMS AND CONDITIONS (ATC)**

#### **TENDER ENQUIRY FORM (TEF)**

**DIVISION: SUBMARINE & HEAVY ENGINEERING  
DEPARTMENT- COMMERCIAL (EAST YARD)**

**This is a Limited Tender enquiry for nominated Indian vendors only. Intimations to the nominated vendors will be communicated by email for bidding against this tender. Unsolicited bids submitted by all other vendors will be summarily rejected.**

MAZAGON DOCK SHIPBUILDERS LIMITED (MDL), Mumbai India, a premier Warship building, Ship repair, Submarine Construction & Refits and Heavy Engineering Company owned by Government of India under Ministry of Defence.

**Issue of E - Tender Enquiry Document:** This e-tender enquiry can be downloaded from our E-procurement website <http://eprocuremdl.nic.in>. To login and quote against this e-tender on E-procurement portal, bidders should have Digital Signature Certificate (DSC). The details of DSC are available on the MDL website.

**Tender opening:** Technical bid (PART-I) will be opened immediately after the tender closing date and time through e-procurement portal. Bidders can view details of quotation received against tender after tender opening on e-procurement website.

**Price bid opening:** Similarly after completion of Technical scrutiny/evaluation, price bid (PART-II) opening will be done and intimation will be forwarded to Techno-Commercially accepted bidders. Bidders can view the details of price bid opening against the tender on e-procurement web site.

**SUBJECT: - PROCUREMENT OF LSAW PIPES FOR LR BENDS OF PART REPLACEMENT PIPELINES PROJECT (PRPP) FOR ONGC.**

#### **1. Description:**

**PROCUREMENT OF LSAW PIPES FOR LR BENDS OF PART REPLACEMENT PIPELINES PROJECT (PRPP) FOR ONGC.**

#### **Notes:**

**i) There should be provision for 10% increase / decrease in quantity and the quoted unit prices to remain fixed(unchanged) for the same.**

Provisions for 10% increase/decrease in quantity" is as under:

- 10% increase in quantity will be absorbed in the same PO price. No additional amount will be paid to vendor.
- In case of 10% decrease in quantity, amount equivalent to 10% short/less material will be deducted from the vendor amount.

**ii) Each pipes length should be of average length as mentioned in respective line items.**

**iii) Pipes to be manufactured and supplied from ONGC approved mills.**

SR NO.	Material /service details	QTY	Unit
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550	Material Number: -350000000000080558 Material Details: - CS LSAW Pipe Outer Dia 16 inch (406.4mm) x Wall Thickness 15.9mm Material Specification API 5L X 60 (CS NON NACE) Each pipe should be of length 11.7 mtrs to 12.5 mtrs (Average 12.1 mtrs)	864	M
560	Material Number: -350000000000080537 Material Details: - CS LSAW Pipe Outer Dia 16.00 Inch (406.4mm) x Wall Thickness 17.5mm Material Specification API 5L GR. X -60 Each pipe should be of length 7.5 mtrs to 8.5 mtrs (Average 8.0 mtrs)	192	M

Detailed Scope of Supply is attached at the **Enclosure**. Bidders shall confirm that the Scope of Supply at **Enclosure** is fully understood by them on their letterhead.

**Note:** - Any technical query related to SOW shall be forwarded to following:

Mr. Rupesh Mahajan, Chief Manager (PLG-EY).

E-mail: [rpmahajan@mazdock.com](mailto:rpmahajan@mazdock.com)

**Phone - 022-2376 3604**

**Or**

Mr Prashant Patil, Chief Manager (D-EY)

E-mail: [pbpatil@mazdock.com](mailto:pbpatil@mazdock.com)

**Phone - 022-2376 3604**

## 2. Instructions to the bidder:

- Bidders should submit all documents strictly through GeM only. Physical copy of the bid will not be accepted except for the physical copies of documents requested in the tender.
- In case of supply/services of duplicate / spurious / substandard items by the firm, MDL will resort to prosecution of the firm by legal action with all the stringent measures against the firm for supplying such items which had led to delay of the project of national importance and has endangered the national security. The firm will also be blacklisted in MDL & will be debarred from quoting in future MDL tenders and the same will be intimated to all other public sector undertakings and other Government organization.
- Delivery date mentioned in the RFQ/Tender is tentative. However, bidders have to follow delivery schedule as per purchase order. Non-compliance of the same beyond the contractual terms may lead to imposition of liquidated damages or cancellation of contract/ Purchase order.
- Bidders are requested to ensure that only relevant documents complete in all respect as indicated in the tender should be attached with their offer. The first page of every uploaded set of scanned document shall be an index of its contents. The evaluation of the offers will be carried out and bidders will be qualified based on the documents received along with their offer.
- Where requests are made by bidders with reasons for extension of the tender closing date provided such an extension will not adversely affect the project schedule and bidders are instructed for submission of such request in the concerned commercial department at least 2 days in advance excluding the day of tender closing date, amendment to the tender enquiry may be issued.

**3. Validity Period of Bid:**

Bid shall remain valid for a period of not less than **120 days** after the deadline date for bid submission.

**4. Delivery Schedule/period: 3 weeks to 6 months. starting form 03 weeks and complete within 06 months from date of PO.****5. Receipt of Bids / Offers:** Bidder have to submit their offers through e-Portal only.**6. Submission of Revised Bids:**

The bidder if so desire may modify their bids prior to the closing date and time of the tender enquiry. However, it shall be the responsibility of the bidder to ensure that they have submitted the revised bid in GEM.

**7. Bid Rejection Criteria:****i) Categorical Rejection Criteria**

The following conditions / deviations are non-negotiable and therefore, any bid falling under these conditions / deviations shall be summarily rejected. Bidder to note that they shall not be provided any opportunity to rectify these conditions / deviations post bid opening:

a) Bidders who are debarred under PPP MII order 2017, CPPP including Tender holiday issued by MDL.

**ii) Liable for Rejection Criteria:**

Non-compliance/non-acceptance to any of the terms and conditions of the tender shall render the bid liable for rejection. Equal time and opportunity for submission of deficient techno commercial documents and clarification shall be given to the bidder. Bidder are required to submit such documents / clarifications within the duration / date stipulated by MDL failing which their bid will be rejected.

**8. Submission of offer in Two Bid System:**

Offer must be submitted in two parts viz PART-I & PART-II as stated below:

**a. PART I: Technical Bid**

Soft Copies/Scanned Copies of below mentioned documents/details are to be attached on E procurement,

**Part-I:**

- i. Bidder's Statement on their Company Letterhead indicating Tender No, Tender Date, confirming compliance and acceptance on the Scope of Supplies and other Terms and Conditions as included in this tender enquiry, duly signed, stamped and dated by bidder's authorized person(s).
- ii. Technical Bid clearly indicating item wise descriptions & other details such as specifications, make/model, drawings etc as relevant to the offered materials.
- iii. Extract of official secret Act 1923' as per enclosure must be signed, stamped with company seal and submitted along with Part-I of the offer as a token of acceptance of the terms & conditions by the bidders.
- iv. Price schedule BLANKING the PRICES but clearly indicating 'QUOTED / NOT QUOTED' as applicable against each of the listed item/services in the prescribed format
- v. Bidder to submit acceptance on clauses of Tender Enquiry Form (TEF), and GENERAL CONDITIONS OF CONTRACT (GCC) as 'ACC OR DEV' as applicable for each of the clause of tender
- vi. Bidder to submit Deviation sheet at Enclosure in case of any deviation from TEF & GCC.
- vii. Bidder to submit their complete Bank details for payment by NEFT
- viii. Product data sheets / Catalogue / Technical Specification of the offered material.
- ix. GST registration details / GST acknowledgement or Tax Authority Letter.
- x. Bidder to submit undertaking for Conflict of Interest among Bidders/ Agents along as per Enclosure
- xi. Bidder to submit Declaration certificate for local content as per Enclosure

**b. PART II: Price Bid**

This should contain only the PRICES for the listed item strictly in the prescribed format provided with the e - tender at Enclosure. Prices mentioned/specified in any other format will not be considered for evaluation.

**9. Submission of Revised Bids:**

The bidders if so desire may modify their bids prior to the closing date and time of the tender enquiry. However, it shall be the responsibility of the bidder to ensure that they have submitted the revised bid.

**10. OEM/Authorised Dealer/Agents of Supplier:**

Except in case of Commercially-Off-The-Shelf (COTS) items, when a firm sends quotation for an item manufactured by some different company, the firm is also required to attach, in its quotation, the manufacturer's authorisation certificate and also manufacturer's confirmation of extending the required warranty for that product. This is necessary to ensure quotation from a responsible party offering genuine product, also backed by a warranty obligation from the concerned manufacturer. In the tender, either the manufacturer or its authorised dealer can be considered as valid bidders. In case of large contracts, especially capital equipment, the manufacturer's authorisation must be insisted upon on a tender specific basis, not general authorisation/dealership, by so declaring in the bid documents clearly. In cases where the manufacturer has submitted the bid, the bids of its authorised dealer will not be considered and EMD will be returned. And in case of violations, both infringing bids will be rejected.

There can be only one bid from the following:

- i) The principal manufacturer directly or through one Indian agent on his behalf; and
- ii) Indian/foreign agent on behalf of only one principal.

**11. Guarantee & warranty:**

Warranty period shall be for 12 months from the date of supply. Valid warranty certificate must be submitted. During this period, all defect arising out of defective material and faulty workmanship will be rectified by repairing or replacing part or whole material as necessary free of charge on delivery basis. Any consequential damage/defect or loss of item due to poor workmanship/poor material quality/ negligence etc. attribute to the bidder to be rectified / replaced by the bidder free of cost.

**Note:**

Any material, equipment, infrastructure facility, required directly or indirectly for completing the subject work, as per the scope of work & drawing given, if not mentioned in MDL's scope, has to be arranged by the subcontractor without any extra cost to MDL.

In case of the performance of the contractor is not satisfactory MDL reserves the right to cancel the order and lift the material from contractor.

**12. Performance Security (Performance Bank Guarantee & Security Deposit):**

Successful bidders need to submit Performance Bank Guarantee (PBG) cum Security Deposit (SD) for an amount of 5% of the value of the contract (excluding taxes & duties). Performance security may be furnished in the form of NEFT/ Demand Draft / Pay order / Bank Guarantee / Insurance Security Bond / e-Bank Guarantee in favour of Mazagon Dock Shipbuilders Limited, Mumbai from the list of Banks approved by SBI / Canara Bank published on MDL website. Performance Security is to be furnished within **25 days** after notification of the award of contract and it should remain valid for a period of **60 (sixty)** days beyond the date of completion of all contractual obligations of the supplier, including warranty obligations.

**13. Non submission of Performance Security:**

- i. In case of failure to submit performance security by the supplier within 15 days of transmission / notification of order by any mode, EMD (if available) will be forfeited and MDL reserves the right to cancel the order and invoke the risk purchase clause. If it is established that the contractor has failed to comply with the Guarantee/warranty obligations, the PSBG will be encashed by MDL. MDL's decision in this regard shall be final and binding on the supplier / contractor.
- ii. In cases where the supplier / contractor has not submitted the PS and already commenced supply / services, Performance security will be retained from the bills, if any. In such case, interest will be recovered for the period starting from 16th day of transmission / notification of order/contract by

any mode and amount involved at the relevant rate of interest for that quarter. For Indian suppliers, it will be SBI BPLR plus 2%.

#### **14. Forfeiture of Performance Security:**

Forfeiture of Performance Security shall be done in case of non-performance of agreed terms and or default/breach by bidder / supplier with application of risk purchase provisions or tender holiday where applicable.

#### **15. Free issue materials:**

- i) In cases where the materials such as MS / AL sheets, Steel, Components etc. are required to be issued free of cost to the Supplier for Galvanizing, Heat treatment, Fabrication, Fitment etc. on returnable basis, the Supplier shall furnish Bank Guarantee equivalent to the value of materials supplied by MDL free of cost for works undertaken outside MDL premises.
- ii) In cases such as low value contracts involving high value materials etc., the submission of Indemnity Bond and provision of insurance cover with MDL as the beneficiary may be acceptable. For any items that are being taken out for repairs during warranty period then a separate BG equivalent to the value of item need not be submitted if valid PBG is available to cover the cost of item. Such Bank Guarantee / Indemnity Bond / Insurance Cover shall be valid up to the execution of the contract / delivery of material, inspected /accepted and receipt at MDL.
- iii) The Free Issue Material can be issued against holding of equivalent amount from the payment due to the firm.
- iv) On completion / execution of the Order / Contract as per approved drawings and plans such as nesting plan, this should be returned within a period of 15 days from the date of receipt of finished product and leftover material in MDL OR any other location specified in the order along with the certified statement of reconciliation of MDL's property showing following details;
  - a. Quantity of material issued.
  - b. Quantity of materials consumed / vis-a vis percentage of job completed.
  - c. Quantity of material returned to respective stores / held in stock by Contractor at his end.
  - d. Actual quantity wasted / scrapped as a by-product of process as against stipulated amount.
- v) Supplier / Contractor shall also furnish undertaking regarding protection of intellectual property rights and that issued design drawing will be returned without reproducing and retaining any copies at their end.

#### **16. Pricing:**

- i. Bidder shall quote the prices in the Rate Sheet Format provided in e-tender.
- ii. The quoted prices shall remain firm and fixed during the currency of the order / contract unless agreed otherwise by MDL.
- iii. Bidder shall quote the prices for services indicated / listed in the e-tender Bid enquiry for execution of the services complying with the terms and conditions indicated at the Scope of Work.
- iv. The reference price, if any, indicated anywhere in the tender document against each line item is only notional and has no commercial relevance. Therefore, such reference price should not be considered as guidance price and the bidders shall quote their price based on their costing and pricing policies.
- v. There should be provision for 10% increase / decrease in quantity and the quoted unit prices to remain fixed(unchanged) for the same.  
Provisions for 10% increase/decrease in quantity" is as under:
  - 10% increase in quantity will be absorbed in the same PO price. No additional amount will be paid to vendor.
  - In case of 10% decrease in quantity, amount equivalent to 10% short/less material will be deducted from the vendor amount.

#### **17. Firm Price / Price Variation:**

Prices quoted by bidder shall remain firm and fixed during the period of the contract and not subject to variation on any account.

**18. Tie Breaker**

When multiple vendors quote same price for particular item(s)/services under such situation, following action in given sequence shall be done:

- (a) In case of divisible, 50-50 qty to be given to each.
- (b) In case of non-divisible, supplementary bid asking for discount to be obtained.
- (c) In case of both divisible or non-divisible, lottery option to be exercised after above options are not conclusive.

**19. Payment Terms:**

**No Advance in any manner will be paid to the Supplier / Bidder / Vendor / Contractor.**

100% Payment of items will be made against supply and acceptance of materials of the order and as reduced by any deductibles and/or the amount liveable towards liquidated damages, if any and after including statutory taxes, duties and levies as applicable may be payable through RTGS/NEFT within 15 days from the date of receipt of the invoice and following relevant documents at MDL as mentioned below:

- i) Set of Original + 2 Copies of Original Signed Invoice in triplicate showing item wise prices as per the contract/ order.
- ii) Set of Original + 2 copies of Signed Packing Lists showing item wise description, Qty, Size, Net Weight & Gross Weight etc.
- iii) Set of Original + 2 Copies of Delivery Challan
- iv) Signed copy of Material acceptance report by executive of MDL PRPP monitoring team of rank CM or above.
- v) Set of Original+2 copies of PSBG as per the Enclosure.

**Note:**

- Material will be accepted on progressive arrival of material at onsite/fabricator premises, submission of material test certificate and test reports, verification by MDL End user (MDL PRPP Monitoring team)/TPI and acceptance by ONGC
- Wherever GST is applicable, payment will be released against e-Invoice, or Invoice accompanied with vendor's self-declaration that

"We do not fall under the category of registered persons notified under Rule 48(4) of the Central GST Rules, 2017 and we are not required to comply with e-Invoicing provisions under GST Act, as our aggregate turnover in any preceding financial year from 2017-18 onwards has not exceeded Rs. 5 Cr. as per GST Act."

**20. Taxes and Duties:**

- i) Bidders must quote the amounts of Taxes and Duties as applicable, separately, duly indicating the base amount(s) and the applicable rate(s), under each of the heads indicated above. Wherever Exemption Certificates are issued, no liability for payment of taxes and duties arises and hence taxes and duties shall not be reimbursed / allowed.
- ii) Supplier / contractor will not be entitled to any increase in rate of taxes occurring during the period of extended delivery completion schedule if there is delay in supplies / completion attributed to him.
- iii) However, if there is a decrease in taxes, the same must be passed on to MDL.

- iv) Wherever all-inclusive prices are quoted by the Tenderer(s) without bifurcation of tax elements, no escalation can be considered in respect of any variations in statutory levies arising subsequently because of the absence of the required base figures in the purchase order / contract.

**Note:**

- a) GST shall be payable extra as quoted and agreed as per GST Laws.
- b) In case of purchases of goods/services from unregistered dealers under GST Laws, GST will be paid by MDL under reverse charge mechanism.
- c) Benefits from reduction in rate of tax/ITC is required to be passed on to consumer. Where "applicable GST" has been quoted as extra, Goods and service providers (except unregistered dealers under GST Law) have to submit declaration that they have complied with 'Anti profiteering clause' under GST Law. Such declaration be given in technical bid.
- d) If the vendor is registered under GST, vendor shall mention the HSN code for goods and/or services in their tax invoice, etc. These codes must be in accordance with GST Laws and responsibility of specifying correct HSN codes for goods and/or services is that of the vendor. MDL shall not be responsible for any error in HSN code for goods and/or services specified by supplier / contractor. Supplier /Contractor shall pay penalty and/ or interest imposed on MDL or any loss due to delay in availing ITC by MDL or any loss of ITC to MDL due to errors by vendors at any stage. MDL reserves right to recover any such interest, penalty or loss from any amount due to supplier /contractor or otherwise.
- e) In case, MDL is unable to avail ITC, supplier/contractor at their own cost shall rectify the shortcoming in the returns to be filed immediately thereafter. Further, if the ITC is delayed / denied to MDL / reversed subsequently as per GST Laws due to non / delayed receipt of goods and / or services and / or tax invoice or expiry of timelines prescribed in GST Laws for availing ITC, non-payment of taxes or non-filing of returns or any other reason not attributable to MDL, supplier /contractor shall pay any loss of amount along with interest and penalty on MDL under GST Laws for the number of days the ITC was delayed. If the short coming is not rectified by supplier/contractor and MDL ends up in reversal of credits and / or payments, supplier /contractor is fully liable for making good all the loss incurred by MDL. MDL reserves right to recover any interest, penalty or loss from any amount due to supplier /contractor or otherwise.
- f) If the vendor is registered under GST, the GST registration number (15 digit GSTIN) issued by GoI shall be mandatorily provided by the vendor. Vendor having multiple business verticals within state / at multiple states with separate GST registration numbers shall forward GSTIN of only that vertical which is involved in supply of goods and/or services. MDL GSTIN is 27AAACM8029J1ZA and vendor shall mention the same while invoicing and avoid any data entry error on GST portal.
- g) If the vendor is registered under GST; Vendor shall ensure timely submission of invoice as per the provisions / requirement / timeline promulgated by GOI in relation to GST Law with all required supporting documents to enable MDL to avail input tax credit promptly. The vendors invoice inter alia should contain GSTIN of vendor, GSTIN of MDL (i.e.27AAACM8029J1ZA), GST tax rate separately, HSN code wise goods or services, place of supply, signature of vendor, etc. Original invoice needs to be submitted to Bill Receipt Centre at MDL gate, and a copy of the invoice should be given to the goods receiving section (GRS).
- h) If the vendor is registered under GST, vendor shall file all applicable returns under GST Laws in the stipulated time and any losses of tax credit to MDL arising due to delay in filing will be recovered from their invoice wherever MDL is eligible to avail tax credit. Any default towards payment of tax and / or uploading of monthly returns by supplier/contractor, MDL retains right to withhold payments towards tax portion until the same is corrected and complied by the supplier/contractor with the requirement of GST along with satisfactory evidence.
- i) The rate sheet enclosed with the tender will indicate the rates to be entered under each head wherever applicable. Bidders must clearly mention the applicable taxes and duties. The item-

wise rates (Inclusive of packing forwarding, freight & insurance) quoted in the rate sheet should exclude taxes and duties. Bidder should indicate GST rates as applicable separately under each of the head in the same Rate sheet, which will be paid extra based on tax invoice to the extent applicable. The GST will be applicable on total basic rate of each item (Inclusive of packing forwarding, freight & insurance).

## **21. Ranking of Bids:**

**Line items are inseparable. Evaluation will be done for all the line items together.**

The comparison of the responsive tenders shall be on total outgo on Least Cost Net of Credit Basis (LCNC), for the procurement to be paid to the supplier or service provider, including all elements of costs, duties, levies, freight, insurance etc. excluding GST (where ITC is available). Therefore, it should normally be on the basis of CIF/ FOR destination basis, duly delivered, commissioned, as the case may be.

## **22. Loading Criteria:**

- i. Varied payment terms quoted by indigenous bidders as compared to the terms stated in the tender document shall be normalized by adopting the Prime Lending Rate of State Bank of India plus 2% thereon on the amount (s) at variation and / or for the period (in no. of days) at variation and LIBOR / EURIBOR rates plus 2 % or 6% whichever is higher in case of foreign bidders.
- ii. Contingency charges, if technically accepted (Guarantee extension charges, delivery extension charges, re-preservation charges, extra man-days charges etc.) as applicable should be added to decide L-1. For the additional delivery period sought by the bidder over the stipulated date of delivery/completion of tender, 0.50% per completed week will be loaded to the quoted price.
- iii. Deviations in respect of the period of Warranty / Guaranty shall be loaded to the quoted price @ 0.25% per month or part thereof. This does not arise if the bidder quotes additional price for the differential period.

## **23. Purchase Preference to Micro and Small Enterprises(MSEs):**

Micro and Small Enterprises (MSEs) registered under Udyam Registration or as directed by government are eligible to avail the benefits under the policy. This Policy is meant for procurement of only goods produced and services rendered by MSEs. Traders/Distributors/Sole Agents/Works Contract are excluded from the purview of the policy. MDL has right to place order on MSE Manufacturer and MSE Service Provider meeting following criteria:

- a) In tender, participating Micro and Small Enterprises (MSE) quoting price within price band of L1+15 (fifteen) per cent shall also be allowed to supply a portion of requirement by bringing down their price to L1 price in a situation where L1 price is from someone other than a MSE and such MSE shall be allowed to supply up to 25(twenty-five) per cent of total tendered value. The 25(twenty-five) per cent quantity is to be distributed proportionately among these bidders, in case there are more than one MSEs within such price band.
- b) Within this 25% (Twenty Five Percent) quantity, a purchase preference of four (4) per cent is reserved for MSEs owned by Scheduled Caste (SC)/ Scheduled Tribe (ST) entrepreneurs and three (3) percent is reserved for MSEs owned by women entrepreneur (if they participate in the tender process and match the L1 price). However, in event of failure of such MSEs to participate in tender process or meet tender requirements and L1 price, four percent sub-target for procurement earmarked for MSEs owned by SC/ST entrepreneurs and three (3) percent earmarked to women entrepreneur will be met from other MSEs. . MSEs would be treated as owned by SC/ ST entrepreneurs:
  - i) In case of proprietary MSE, proprietor(s) shall be SC /ST;
  - ii) In case of partnership MSE, the SC/ ST partners shall be holding at least 51% (fifty-one percent) shares in the unit;
  - iii) In case of Private Limited Companies, at least 51% (fifty-one percent) share shall be held by SC/ ST promoters.

- c) If subcontract is given to MSEs, it will be considered as procurement from MSEs.
- d) In case of tender item cannot be split or divided, etc. the MSE quoting a price within the band L1+15% may be awarded for full/ complete supply of total tendered value to MSE, considering the spirit of the Policy for enhancing Govt. Procurement from MSEs.
- e) In respect of items reserved for MSE-Manufacturers, extant guidelines shall be followed. Presently Circular No. S.O. 581(E) dated 23.03.2012 is applicable. The latest list may be seen from the website of the MSME Ministry.

#### **24. Purchase Preference to Make in India 2017:**

The Government of India has issued revised Public Procurement (Preference to Make in India) order 2017 on 16th Sep 2020 as part of its policy to encourage "Make in India" and promote manufacturing and production of goods and services in India with a view to enhancing income and employment. Subject to the provisions of this order and to any specific instructions issued by Nodal Ministry or in pursuance of this order, Purchase Preference shall be given to local suppliers in all the procurements undertaken by MDL in the manner specified below.

##### **Aspects of 'Preference to Make in India':**

- a) "Local content" means the amount of value added in India which shall be the total value of item (goods, services or works or their combination) under procurement (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent. Different definition of Local Content may be specified by the Nodal Ministry for items assigned to them, which will prevail over above.

Note: The local content can be increased by vendors through partnerships, cooperation with local companies, establishing production units in India or Joint Ventures (JV) with Indian suppliers, increasing the participation of local employees in services and training them.

- b) "Class-I Local Supplier" means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-I local supplier' under this Order.
- c) "Class-II Local Supplier" means a supplier or service provider, whose goods, services or works offered for procurement, meets the minimum local content as prescribed for 'Class-II local supplier' but less than that prescribed for 'Class-I local supplier' under this Order.
- d) "Non-Local Supplier" means a supplier or service provider, whose goods, services or works offered for procurement, has local content less than that prescribed for 'Class-II local supplier' under this Order.
- e) "L1" means the lowest tender or lowest bid or lowest quotation received in a tender, bidding process or other procurement solicitation as adjudged in the evaluation process as per the tender or other procurement solicitation.
- f) "Margin of Purchase Preference" means the maximum extent to which the price quoted by a "Class-I Local Supplier" may be above the L1 for the purpose of purchase preference. The margin of purchase preference shall be 20% which is to be indicated in tender.

Note: Price/s of all Class I local supplier/s in a tender is more than 20% of L1's price no purchase preference shall be applicable.

- g) "Nodal Ministry" means the Ministry or Department identified pursuant to the said Order in respect of a particular item of goods or services or works.
- h) "Procuring entity" means a Ministry or department or attached or subordinate office of or autonomous body controlled by, the Government of India and includes Government companies as defined in the Companies Act.

Note: Mazagon Dock Shipbuilders Limited (MDL) shall be a procuring entity.

- i) "Works" means all works as per Rule 130 of GFR-2017 and will also include "turnkey works", Engineering, Procurement and Construction (EPC) contracts.
- j) "Services" includes System Integrator (SI) contracts among other services.
- k) **Eligibility of Suppliers to bid in a tender**
- i) In procurement of all goods, services or works in respect of which the Nodal Ministry / Department has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Order, shall be eligible to bid irrespective of purchase value.
- ii) Both 'Class-I local supplier' and 'Class-II local supplier' shall be eligible to bid in procurements not covered above para (i) and undertaken by procuring entities, except when Global tender enquiry has been issued. In global tender enquiries (GTE), 'Non-local suppliers' shall also be eligible to bid along with 'Class-I local suppliers' and 'Class-II local suppliers'. In procurement of all goods, services or works, not covered above para (i), and with estimated value of purchases less than INR 200 Crore, in accordance with Rule 161(iv) of GFR, 2017, Global tender enquiry (GTE) shall not be issued except with the approval of competent authority as designated by Department of Expenditure. For the cases pertaining to MoD, Defence Secretary will be the competent authority to approve issue of GTE up to INR 200 Crore based on adequate justification as per MoF DoE PP Division ID Note No F.20/36/2020-PPD dtd 28.10.2020.
- l) **Special Conditions in GTE Procurements: Agency Commission:**  
The amount of Agency Commission, (normally not exceeding five percent) payable to the Indian Agent should not be more than what is specified in the Agency agreement (a certified copy should be submitted along with the bid) between the bidder and the Indian Agent. The Indian Agent will be required to submit a certificate along with their Agency Commission bill, confirming that the amount claimed as Agency Commission in the bill has been spent/will be spent, strictly to render services to the foreign Principal, in terms of the Agency Agreement. The Purchaser or their authorized agencies and/or any other authority of the Government of India shall have rights to examine the books of the Indian Agent and defects or misrepresentations in respect of the afore indicated confirmation coming to light during such examinations will make the foreign Principal (i.e. the Contractor) and their Indian Agent liable to be banned/suspended from having business dealings with the Purchaser, following laid down procedures for such banning/suspension of business dealings.
- m) DPIIT vide OM No. P-45021/102/2019-BE-II Part (1) (E-50310) dated 04 Mar 2021 has clarified that bidders offering imported products will fall under the category on Non-local suppliers and they cannot claim themselves as Class-I local suppliers / Class-II local suppliers by claiming the services such as transportation, insurance, installation, commissioning, training and after sales service support like AMC / CMC, etc. as local value addition. Hence, bidders offering imported products will be treated as Non-local suppliers.

## 25. Purchase preference:

- a) Purchase preference shall be given to only "Class-I Local Supplier" (Class II Local Supplier are not eligible for purchase preference) in procurements undertaken in the manner specified in the succeeding sub-paras:
- b) The Class-I local suppliers, under PPP-MII Order, participating in any government tender, may or may not be MSEs, as defined under the MSME Act. Similarly, MSEs participating in any government tender, may or may not be Class-I local suppliers. Suppliers may be categorised in following four broad categories for consideration or applicability of purchase preference:

Category	Terminology
Supplier is both MSE & Class- I local supplier	MSE Class-I local supplier
Supplier is MSE but not Class- I local supplier	MSE but non-Class-I local supplier

Supplier is not MSE but is Class-I local supplier	Non-MSE but Class-I local supplier
Supplier is neither MSE nor Class-I local	Non-MSE non-Class-I local supplier

- c) In the procurement covered by para 23 (K) (i) above (Para 3(a) of PPP-MII Order, 2017) for which Nodal Ministry has notified sufficient local capacity and competition, only Class-I local suppliers are eligible to bid irrespective of purchase value. Hence, Class-II local suppliers or Non-local suppliers, including MSEs which are Class-II local suppliers/ Non-local suppliers, are not eligible to bid. Purchase preference shall be accorded as under:
- i) L-1 is "MSE Class-I local supplier": 100% of the tendered quantity shall be awarded to L-1.
  - ii) L-1 is "Non-MSE but Class-I local supplier"(Divisible in nature): Purchase preference shall be given to MSEs as per PPP-MSE Order. Balance quantity be awarded to the L-1 bidder.
  - iii) L-1 is "Non-MSE but Class-I local supplier" (Non- Divisible in nature): Purchase preference shall be given to lowest quoting MSE Class-I local supplier as per PPPMSE Order. If lowest quoting MSE Class-I local supplier does not accept the L-1 rates, the next higher eligible MSE Class-I local supplier is to be given purchase preference and so on. 100% of the tendered quantity shall be awarded to MSE Class-I local supplier accepting L-1 rates. If MSE Class-I local suppliers do not accept L- 1 rates, then contract shall be awarded to L-1
- d) In the procurement of goods and services reserved exclusively for procurement from MSEs as per PPP-MSE Order, non- MSEs are not eligible to bid for these items and Purchase preference shall be accorded as under:
- i) L-1 is "MSE Class-I local supplier": 100% of the tendered quantity shall be awarded to L-1
  - ii) L-1 is "MSE non-Class-I local supplier"(Divisible in nature): Purchase preference shall be given to MSE Class-I local supplier as per PPP-MII Order. Balance quantity be awarded to L-1 bidder.
  - iii) L-1 is "MSE non-Class-I local supplier" (Non-Divisible in nature): First opportunity shall be given to lowest quoting "MSE Class-I local supplier" for matching L-1 bidder as per PPP-MII Order for 100% of the tendered quantity and if lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher eligible "MSE Class- I local supplier" is to be given purchase preference and so on. If all "MSE Class-I local suppliers" decline to accept the L-1 rates, then contract shall be awarded to L-1 for 100% of the tendered quantity.
- e) In the procurement of goods or service which are covered in para 23 (K) (ii) above which are divisible in nature (Para 3A(b) of PPP-MII Order), both MSEs as well as Class-I local suppliers are eligible for purchase preference and the Purchase preference shall be accorded as under:
- i) L-1 is "MSE Class-I local supplier": 100% of the tendered quantity shall be awarded to L-1.
  - ii) L-1 is "Non-MSE but Class-I local supplier": Purchase preference shall be given to MSEs, if eligible, as per PPP-MSE Order. Balance quantity be awarded to L-1 bidder.
  - iii) L-1 is "MSE but non-Class-I local supplier": Purchase preference shall be given to Class-I local suppliers, if eligible, as per PPP-MII Order. Balance quantity be awarded to L-1 bidder.
  - iv) L-1 is "Non-MSE non-Class-I local supplier": Firstly, Purchase preference shall be given to MSEs as per PPPMSE Order. Thereafter, purchase preference is to be given to Class-I local suppliers for "50% of the tendered quantity minus quantity allotted to MSEs above" as per PPP- MII Order. For the balance quantity, contract be awarded to L-1 bidder. (Kindly refer to the illustrative example in the MoF, DoE OM at Enclosure-II).
- f) In the procurement of goods, services which are covered in para 23 (K) (ii) above and which are not divisible in nature, and in procurement of services where the bid is evaluated on price alone

(Items covered under Para 3A(c) of PPP-MII Order, 2017) and both MSEs as well as Class-I local suppliers are eligible for purchase preference Purchase preference shall be accorded as under:

- i) L-1 is "MSE Class-I local supplier": Contract shall be awarded to L-1.
- ii) L-1 is not "MSE Class-I local supplier" but the "MSE Class-I local supplier" falls within 15% margin of purchase preference. Purchase preference shall be given to lowest quoting "MSE Class-I local supplier". If lowest quoting "MSE Class-I local supplier" does not accept the L-1 rates, the next higher "MSE Class-I local supplier" falling within 15% margin of purchase preference is to be given purchase preference and so on. If all "MSE Class-I local supplier" do not accept L-1 rates, then (f)(iii) shall be followed.
- iii) If conditions mentioned in sub paras (f)(i) and (f)(ii) above are not met i.e. L1 is not "MSE Class-I local supplier" and "MSE Class-I local supplier" is not eligible to take benefit of purchase preference as per PPP-MSE Order or all "MSE Class-I local supplier" do not accept L-1 rates, the contract is to be awarded / purchase preference to be given in different possible scenarios as under:
  - a) L-1 is "MSE but non-Class-I local supplier" or "Non- MSE but Class-I local supplier": Contract be awarded to L-1.
  - b) L-1 is "Non-MSE non-Class-I local supplier": Firstly, purchase preference shall be given to eligible MSE as per PPP-MSE Order. If MSEs not eligible or does not accept then purchase preference to be given to eligible Class- I Local supplier as per PPPMII Order. If Class-I Local supplier is also not eligible or does not accept then contract be awarded to L-1.
- g) Items reserved for both MSEs and Class-I local suppliers: These items are reserved exclusively for purchase from MSEs as well as Class-I local suppliers. Hence, only "MSE Class-I local supplier" are eligible to bid for these items. Non-MSEs / Class-II local suppliers / Non-local suppliers cannot bid for these items. Hence the question of purchase preference does not arise.
- h) Non-local suppliers, including MSEs falling in the category of Non-local suppliers, shall be eligible to bid only against Global Tender Enquiry.

## **26. Minimum Local Content:**

- i) The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the 'local content' requirement is minimum 20%. However, Nodal Ministry / Department may prescribe only a higher percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier' / 'Class-II local supplier'. For the items, for which Nodal Ministry / Department has not prescribed higher minimum local content notification under the Order, it shall be 50% and 20% for 'Class-I local supplier' and 'Class-II local supplier' respectively.
- ii) The Nodal Ministry may keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing the higher minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

## **27. E-invoice:**

The vendors, whose aggregate turnover in any preceding financial year from FY 2017-18 onwards, exceeds INR 5 crore as per GST Act or as applicable from time to time, will have to issue an e-Invoice with a Quick Response (QR) code and Invoice Registration No.(IRN), It is important to note that MDL will not be entitled for Input Tax Credit (ITC)/GST on a vendor Invoice which is not compliant with the above e-Invoice notification. Wherever GST is applicable, payment will be released against e- Invoice, or Invoice accompanied with vendor's self-declaration that "we do not fall under the category of registered persons notified under Rule 48(4) of the Central GST Rules, 2017 and we are not required to comply with e-Invoicing provisions under GST Act, as our aggregate turnover in any preceding financial year from 2017-18 onwards has not exceeded INR 5 crore as per GST Act".

**28. Minimum Local Content:**

- iii) The 'local content' requirement to categorize a supplier as 'Class-I local supplier' is minimum 50%. For 'Class-II local supplier', the 'local content' requirement is minimum 20%. However, Nodal Ministry / Department may prescribe only a higher percentage of minimum local content requirement to categorize a supplier as 'Class-I local supplier' / 'Class-II local supplier'. For the items, for which Nodal Ministry / Department has not prescribed higher minimum local content notification under the Order, it shall be 50% and 20% for 'Class-I local supplier' and 'Class-II local supplier' respectively.
- iv) The Nodal Ministry may keep in view the domestic manufacturing / supply base and assess the available capacity and the extent of local competition while identifying items and prescribing the higher minimum local content or the manner of its calculation, with a view to avoiding cost increase from the operation of this Order.

**29. Reciprocity Clause:**

- i) Entities of countries which have been identified by the nodal Ministry / Department as not allowing Indian companies to participate in their Government procurement for any item related to that nodal Ministry shall not be allowed to participate in Government procurement in India for all items related to that nodal Ministry / Department, except for the list of items published by the Ministry / Department permitting their participation.
- ii) The term 'entity' of a country shall have the same meaning as under the FDI Policy of DPIIT as amended from time to time.

**30. Debarment of bidders / suppliers:**

- i) False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of GFR 2017 for which a bidder or its successors can be debarred for up to 2 years as per Rule 151(iii) of GFR 2017 along with such other actions as may be permissible under law.
- ii) A supplier who has been debarred by any procuring entity for violation of said Order shall not be eligible for preference under said Order for procurement by any other procuring entity for the duration of debarment. The debarment for such other procuring entities shall take effect prospectively from the date on which it comes to the notice of other procurement entities, in such a manner that ongoing procurements are not disrupted.

**31. Provisions of Official Secrets Act, 1923:**

Extract of provisions of the Official Secret Act as per the enclosure should be signed stamped and enclosed in the offer.

**32. Public Grievance Cell:**

A Public Grievance Cell headed by Shree R R Kumar (ED-Production), President, has been set up in the Company. Members of public having complaints or grievances are advised to contact him on Wednesday between 10.00 hours and 12.30 hours in his office on 3rd floor, west Block, MAZAGON DOCK SHIPBUILDERS LTD, Dock Yard Road, Mumbai 400010, INDIA or send their complaints / grievances to him in writing for redressal. His Telephone No. is 022 2378 2338, 2376 2106.

**33. Liquidated Damages:**

If the Seller/Service Provider fails to deliver any or all of the Goods/Services within the original/revoked delivery period(s) specified in the contract, the Buyer will be entitled to deduct/recover the Liquidated Damages for the delay, unless covered under Force Majeure conditions aforesaid, @ 0.5% of the contract value of delayed quantity per week or part of the week of delayed period as pre-estimated damages not exceeding 10% of the contract value of delayed quantity without any controversy/dispute of any sort whatsoever.

**34. Option Clause:**

MDL retains the right to increase/decrease the ordered quantity by up to 50 % at any time, till final delivery date (or the extended delivery date of the contract), by giving reasonable notice even though the quantity ordered initially has been supplied in full before the last date of the delivery period (or the extended delivery period).

**35. Land Border Clause:**

(Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017)

- i) MoF DoE vide OMs No 6/18/2019-PPD dated 23 Jul 2020 & 24 Jul 2020 and OM No F.7/10/2021/-PPD (1) dated 23.02.2023 has promulgated restrictions and procedure for buying from a bidder from a country which shares a land border with India under GFR Rule 144 (xi) on the grounds of Defence of India and National Security for information and compliance.
- ii) The Orders stipulate mandatory registration with competent authority and seeking certificate of compliance with this Order from the bidder from a country which shares a land border with India in the tender process. Exclusions from these restrictions have also been enlisted in the Order. The Competent authority for the purpose of registration under this Order shall be the Registration Committee constituted by the Department for Promotion of Industry and Internal Trade (DPIIT).
- iii) A bidder is permitted to procure raw material, components etc. from the vendors from countries which shares a land border with India. Such vendors will not be required to be registered with Competent Authority, as it is not regarded as "sub-contracting". However, if bidder has proposed to supply finished goods procured directly/ indirectly from the vendors from the countries sharing land border with India, such vendor will be required to be registered with the Competent Authority.
- iv) The bidder has to enclose filled signed and stamped certificate for "Declaration of Compliance on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017" as per the enclosure.

**36. Consignee details:**

Firm shall arrange dispatch of good by appropriate transport mode as per the order and consign the same to Onsite at M/s JSL Coating plant, Mundra.

**(Due to limitations in GEM, it is shown MDL as consignee in the bid which is to be ignored and above shall prevail.)**

**37. Cartel Formation/Pool Rates:**

- i) Pool/cartel formation is against the basic principle of competitive bidding and defeats the very purpose of an open and competitive tendering system. Such and similar tactics to avoid/control true competition in a tender leading to "Appreciable Adverse Effect on Competition" (AAEC) have been declared as an offence under the Competition Act, 2002, as amended by the Competition (Amendment) Act, 2007.
- ii) If this is found, suitable administrative actions can be resorted to, such as rejecting the offers, reporting the matter to trade associations, the Competition Commission or NSIC, etc., and requesting them, inter-alia, to take suitable strong actions against such firms. The purchaser may also debar the tenderers indulging in cartel formation/collusive bidding/bid rigging for a period of two years from participation in the tenders of the Purchaser.

**38. Inspection and Testing:**

- i. Receipt inspection will be done by MDL PRPP monitoring team of rank CM or above.
- ii. Material will be accepted on progressive arrival of material at onsite/fabricator premises, submission of material test certificate and test reports, verification by MDL End user (MDL PRPP Monitoring team)/TPI and acceptance by ONGC
- iii. Based on material acceptance report signed by MDL executive from MDL PRPP monitoring team of rank CM or above, GRN will be generated and accepted/rejected by store.
- iv. Inspection of the materials will be carried out as mentioned in the Scope of Work.

**Documents to be submitted for inspection:**

- i) Pre-despatch Third Party Inspection by any TPI who is the member of International Association for Classification Society (IACS). Vendor will arrange the inspection with intimation to MDL.
- ii) Charges for TPI shall be borne by the bidder.
- iii) COC from supplier

- iv) Material inspection certificate (Chemical and Physical) from NABL laboratory or 3.1 Mill test certificate
- v) Dimensional report
- vi) Warranty certificate

**39. Breach of Obligation Clause with respect to Bid Submitted:**

In case of breach of any obligation mentioned under, the bidder shall be disqualified / debarred from the bidding process for a period of one year from the date of notification,

- i) Bidder has withdrawn / modified / amended / impaired / derogated from the tender during the period of bid validity.
- ii) Bidder fails or refuses to execute the contract upon notification of acceptance of bid by MDL during the period of bid validity.

**40. Right to reject any or all bids:**

MDL reserves its right to accept or reject any or all bids, abandon / cancel the tender process, and issue another tender for the same or similar Goods/Services at any time before the award of the contract. It would have no liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for such action(s).

**41. Claims by firms:**

No claims by the firms will be entertained after 03 years from date of execution/completion of order.

**42. Cancellation / Foreclosure / Termination of order:**

Action for cancellation / foreclosure / termination of order shall be taken in any of the following conditions / circumstances.

- i) On the basis of Government Order.
- ii) Defaults / Breach on part of the contractor / Supplier / supplier in complying with agreed terms of order / contract.
- iii) Liquidation / Dissolution of the Firm or entity on whom the original order is placed.
- iv) Unreasonable delays in supply of ordered articles or services or documentation.
- v) Supplies made not meeting the ordered specifications.
- vi) Activities of any of the Proprietor / Partner being found to be Antisocial / Anti -National liable for penal action under Indian Penal Code or imposed with penalty of black listing / debarred by MDL, Owners, Govt. of India or any such authorities at any time during validity of the contract / order.
- vii) The Purchase Order not accepted by the vendor within the stipulated period.

When the contractor / Supplier is found to be liable for action under any of the above provisions, MDL may terminate or cancel the contract / order in part or full by written notice of default sent to the contractor / Supplier without prejudice to any other remedy invoking risk purchase clause and execution of work / order through other agencies.

**43. Conflict of Interest Among Bidders/ Agents:**

A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of MDL's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- (i) they have controlling partner (s) in common; or
- (ii) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- (iii) they have the same legal representative/agent for purposes of this bid; or

- (iv) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- (v) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
- (vi) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:
- (a) The principal manufacturer directly or through one Indian agent on his behalf; and
- (b) Indian/foreign agent on behalf of only one principal.
- (vii) Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
- (viii) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/similar line of business.

**Note: The undertaking by the bidders for above para (Conflict of Interest among Bidders/ Agents) to be submitted along with the bid.**

**44. Order Acceptance:**

Successful bidder shall acknowledge the receipt and communicate in writing their unconditional acceptance of order within 03 working days from the date of placement of the order. If nothing to the contrary is received within 03 working days from the date of placement of order, it shall be understood that the order has been accepted.

**Any other terms and conditions not mentioned above but mentioned in Scope of work at the enclosure will be applicable.**

**We look forward to receive your most competitive and reasonable offer against this tender.**

**For MAZAGON DOCK SHIPBUILDERS LIMITED**

**Shikha Pardhi, DM (C-EY) (Purchase Executive)  
Email: spardhi@mazdock.com  
Phone: 022 2376 2615**

**List of enclosures:**

1. Enclosure 1: Rate sheet
2. Enclosure 2: TEF Acceptance format
3. Enclosure 3: General Conditions of Contract (GCCs)
4. Enclosure 4: Acceptance format for General Conditions of Contract (GCCs)
5. Enclosure 5: Declaration of Compliance on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017
6. Enclosure 6: Declaration certificate for local content
7. Enclosure 7: Extract of provisions of the official secrets act, 1923

8. Enclosure 8: Performa Performance Bank Guarantee cum Security Deposit
9. Enclosure 9: Format for Integrity Pact
10. Enclosure 10: Format for warranty certificate
11. Enclosure 11: Deed of guarantee
12. Enclosure 12: Undertaking for Conflict of Interest among Bidders/ Agents
13. Enclosure 13: NEFT/RTGS format
14. Enclosure 14: Scope of Work

**Note: Bidders have to upload filled and signed enclosures along with the offers on their letterhead except for the bonds and the bank guarantees.**

**Enclosure-01**

**RATE SHEET PRESCRIBED FORMAT**

*(Please quote on your letter head only)*

**Note: Do not mention prices in part-1 technical bid.**

Sr.No	Material/Service description	Qty	Unit	Unit rate	Total value
550	Material Number: -350000000000080558 Material Details: - CS LSAW Pipe Outer Dia 16 inch (406.4mm) x Wall Thickness 15.9mm Material Specification API 5L X 60 (CS NON NACE)	864	M		

	Each pipe should be of length 11.7 mtrs to 12.5 mtrs (Average 12.1 mtrs)				
560	Material Number: -350000000000080537 Material Details: - CS LSAW Pipe Outer Dia 16.00 Inch (406.4mm) x Wall Thickness 17.5mm Material Specification API 5L GR. X -60 Each pipe should be of length 7.5 mtrs to 8.5 mtrs (Average 8.0 mtrs)	192	M		
Total Value					

**a. The seller has read, understood and accept the complete Scope of work.  
(Yes/No)**

Taxes and duties		
Tax head	Rate applicable	Percentage of total Amount on which the tax is applicable
GST		
Any other Taxes/Duties (Bidder to specify)		

Name: .....

Designation: .....

Date: .....

Bidders Company Seal .....

**Enclosure-2**

**TEF ACCEPTANCE FORMAT**

TEF CLAUSE No.	BIDDER'S REMARK	TEF CLAUSE No.	BIDDER'S REMARK	TEF CLAUSE No.	BIDDER'S REMARK
1.	ACC / DEV	2.	ACC / DEV	3.	ACC / DEV
4.	ACC / DEV	5.	ACC / DEV	6.	ACC / DEV
7.	ACC / DEV	8.	ACC / DEV	9.	ACC / DEV
10.	ACC / DEV	11.	ACC / DEV	12.	ACC / DEV
13.	ACC / DEV	14.	ACC / DEV	15.	ACC / DEV

16.	ACC / DEV	17.	ACC / DEV	18.	ACC / DEV
19.	ACC / DEV	20.	ACC / DEV	21.	ACC / DEV
22.	ACC / DEV	23.	ACC / DEV	24.	ACC / DEV
25.	ACC / DEV	26.	ACC / DEV	27.	ACC / DEV
28.	ACC / DEV	29.	ACC / DEV	30.	ACC / DEV
31.	ACC / DEV	32.	ACC / DEV	33.	ACC / DEV
34.	ACC / DEV	35.	ACC / DEV	36.	ACC / DEV
37.	ACC / DEV	38.	ACC / DEV	39.	ACC / DEV
40.	ACC / DEV	41.	ACC / DEV	42.	ACC / DEV
43.	ACC / DEV	44.	ACC / DEV		

**COMPANY'S NAME & ADDRESS:**


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SIGNATURE:

DATE:

NAME:

DESIGNATION:

BIDDER'S COMPANY SEAL:

**Note:**

1. Bidder confirms to have carefully read the Terms & Conditions enclosed only with this Tender Enquiry Form (TEF) prior to filling up this acceptance format.
2. Bidder confirms that this format has been **properly filled, signed and returned** along with our technical offer (Part-I) for considering the Bid.
3. Bidder confirms to have indicated **"ACC" for Accepted, "DEV" for Deviation** taken for each clause number in the above table.
4. In case of any deviations taken the bidder confirms to have attached **Separate Sheet** indicating all relevant details such as Number & Title / brief description of the Clause, **Reasons for Deviation and suggested alternative(s)**.
5. Clause numbers shown in the above format also includes the sub-clauses under these clauses. For example, Clause no. 8 means - Clause nos. 8-a (i) to (iv), b (i) to (xiii)

**Enclosure-3****GENERAL CONDITIONS OF CONTRACT (GCC)**

The word 'Purchaser' refers to MAZAGON DOCK SHIPBUILDERS LIMITED, (MDL), a Company within the meaning of Companies Act, 2013 and it includes its successors or assignees.

The word 'Bidder' (including the term 'tenderer', 'consultant' 'vendor' or 'service provider' in certain contexts) means any legal entity such as firm(s) of Proprietorship / Partnership Firm / Limited Liability Partnership / Private Limited / Limited company / Society registered under Society's Act / Statutory Bodies/ Consortium/ Joint Venture etc. participating in a procurement process.

The word 'Owner' means the person or authority with whom Mazagon Dock Shipbuilders Limited (Purchaser) has contracted to carry out work in relation to which orders are placed by the Purchaser on the Bidder/Supplier/Contractor under this contract for supply or manufacture of certain items and would include Department of Defence Production, Ministry of Defence, Government of India, the Indian Navy,

the Coast Guard and any other specified authority. Unless otherwise indicated specifically by the bidder / contractor in his bid, it shall be construed as his acceptance of all the conditions mentioned in this GCC.

## **1. TENETS OF INTERPRETATION**

Unless where the context requires otherwise, throughout the contract:

- (a) The heading of these conditions shall not affect the interpretation or construction thereof.
- (b) Writing or written includes matter either whole or in part, in digital communications, manuscript, typewritten, lithographed, cyclostyled, photographed, or printed under or over signature or seal or digitally acceptable authentication, as the case may be.
- (c) Words in the singular include the plural and vice-versa.
- (d) Words importing the masculine gender shall be taken to include other genders, and words importing persons shall include any company or association or body of individuals, whether incorporated or not.
- (e) Terms and expression not herein defined shall have the meanings assigned to them in the Contract Act, 1872 (as amended) or the Sale of Goods Act, 1930 (as amended) or the General Clauses Act, 1897 (as amended) or of INCOTERMS, (current edition published by the International Chamber of Commerce, Paris) as the case may be.
- (f) Any reference to 'Goods' shall be deemed to include the incidental Works/ Services also.
- (g) Any generic reference to GCC shall also imply a reference to TEF as well.
- (h) In case of conflict, provisions of TEF shall prevail over those in GCC.
- (i) Any reference to 'Contract' shall be deemed to include all other documents (inter-alia GCC, TEF).
- (j) Any reference to any legal Act, Government Policies or orders shall be deemed to include all amendments to such instruments, from time to time, till date.
- (k) Fall Clause shall be expressly applicable in the case of Rate Contract.

## **2. LANGUAGE OF CONTRACT**

Unless otherwise stipulated in TEF, the contract shall be written in the Official Language or English. All correspondence and other contract documents, which the parties exchange, shall also be written/ translated accordingly in that language. For purposes of interpretation of the contract, the English documents/ translation shall prevail.

## **3. GOVERNING LAWS AND JURISDICTION**

### **3.1 Governing Laws and Jurisdiction**

- (a) This Contract, its meaning and interpretation, and the relation between the Parties shall be governed by the Laws of India for the time being in force.
- (b) Irrespective of the place of delivery, or the place of performance or the place of payments under the contract, the contract shall be deemed to have been made at the place from which the Purchase Order/Contract/Letter of Intent has been issued. The courts of such a place shall alone have jurisdiction to decide any dispute arising out or in respect of the contract.

### **3.2 Changes in Laws and Regulations**

Unless otherwise stipulated in the contract, if after the last deadline for the bid submission (Techno-commercial), any law, regulation, ordinance, order or bye-law having the force of law is enacted, promulgated, abrogated, or changed in India (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/ or the contract Price, then such Delivery Date and/ or Contract Price shall be correspondingly increased or decreased, to the extent that the contractor has thereby been affected in the performance of any of its obligations under the contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable.

## **4. CONFIDENTIALITY, SECRECY AND IPR RIGHTS**

### **(a) IPR Rights**

All deliverables, outputs, plans, drawings, specifications, designs, reports, and other documents and software submitted by the contractor under this Contract shall become and remain the property of MDL and subject to laws of copyright and must not be shared with third parties or reproduced, whether in whole or part, without MDL's prior written consent. The contractor shall, not later than upon termination or expiration of this Contract, deliver all such documents and software to MDL, together

with a detailed inventory thereof. The contractor may retain a copy of such documents and software but shall not use it for any commercial purpose.

**(b) Confidentiality**

All documents, drawings, samples, data, associated correspondence or other information furnished by or on behalf of MDL to the contractor, in connection with the contract, whether such information has been furnished before, during or following completion or termination of the contract, are confidential and shall remain the property of MDL and shall not, without the prior written consent of MDL neither be divulged by the contractor to any third party, nor be used by him for any purpose other than the design, procurement, or other services and work required for the performance of this Contract. If advised by MDL, all copies of all such information in original shall be returned on completion of the contractor's performance and obligations under this contract.

**(c) Secrecy**

If the Contract declares the subject matter of this Contract as coming under the Official Secrets Act, 1923 or if the contract is marked as "Secret", the contractor shall take all reasonable steps necessary to ensure that all persons employed in any connection with the contract, have acknowledged their responsibilities and penalties for violations under the Official Secrets Act and any regulations framed thereunder.

**(d) Obligations of the contractor**

(i) Without MDL's prior written consent, the contractor shall not use the information mentioned above except for the sole purpose of performing this contract.

(ii) The contractor shall treat and mark all information as confidential (or Secret – as the case may) and shall not, without the written consent of MDL, divulge to any person other than the person(s) employed by the contractor in the performance of the contract. Further, any such disclosure to any such employed person shall be made in confidence and only so far as necessary for such performance for this contract.

(iii) Notwithstanding the above, the contractor may furnish to its holding company or its Subcontractor(s) such documents, data, and other information it receives from MDL to the extent required for performing the contract. In this event, the contractor shall obtain from such holding company/ Subcontractor(s) an undertaking of confidentiality (or secrecy – as the case may be) similar to that imposed on the contractor under the above clauses.

(iv) The obligation of the contractor under sub-clauses above, however, shall not apply to information that:

(aa) The contractor needs to share with the institution(s) participating in the financing of the contract;

(ab) now or hereafter is or enters the public domain through no fault of Contractor;

(ac) can be proven to have been possessed by the contractor at the time of disclosure and which was not previously obtained, directly or indirectly, from MDL; or

(ad) otherwise lawfully becomes available to the contractor from a third party that has no obligation of confidentiality.

(v) The above provisions shall not in any way modify any undertaking of confidentiality (or Secrecy – as the case may be) given by the contractor before the date of the contract in respect of the contract/ the Tender Document or any part thereof.

(vi) The provisions of this clause shall survive completion or termination for whatever reason of the contract.

## **5. PERMITS, APPROVALS AND LICENSES**

Whenever the supply of Goods and incidental Services requires that the contractor obtain permits, approvals, and licenses from local public authorities, it shall be the contractor's sole responsibility to obtain these and keep these current and valid. Such requirements may include but not be restricted to export licence or environmental clearance if required. If requested by the contractor, MDL shall make its best effort to assist the contractor in complying with such requirements in a timely and expeditious manner, without any dilution of the Contractor's responsibility in this regard.

## **6. TRANSFER OF TITLE OF GOODS**

(a) Unless otherwise stated in the contract, notwithstanding any inspection and approval by the Inspecting Officer on the contractor's premises, or any payments made to the contractor, property in the Goods (and resultant rights and liabilities) shall not pass on to MDL until the Goods have been received, inspected, and accepted by the consignee. The Goods and every constituent part thereof, whether in the possession or control of the contractor, his agents or servants or a carrier, or the joint possession of the contractor, his agents or servants and MDL, his agents, or servants, shall remain in

every respect at the risk of the contractor, until their actual delivery to a person stipulated in the contract, as the interim consignee for despatch to the consignee. The Contractor shall be responsible for all loss, destruction, damage, or deterioration of or to the Goods from any cause whatsoever while the Goods after approval by the Inspecting Officer are awaiting despatch or delivery or are in the course of transit from the contractor to the consignee or interim consignee, as the case may be. The Contractor shall alone be entitled and responsible for making claims against any carrier in respect of non-delivery, short delivery, mis-delivery, loss, destruction, damage, or deterioration of the Goods entrusted to such carrier by the contractor for transmission to the consignee or the interim consignee as the case may be.

(b) Provided that where, under the terms of the contract, the Goods are required to be delivered to an interim consignee for despatch to the consignee, the Goods shall be at MDL's risk after their delivery to the interim consignee.

## **7. EXTENSION OF DELIVERY PERIOD**

(a) If at any time during the currency of the contract, the contractor encounters conditions hindering timely delivery of the Goods and performance of incidental Works/ Services, he shall promptly inform MDL in writing about the same and its likely duration. He must make a request to MDL for an extension of the delivery schedule. On receiving the contractor's communication, MDL shall examine the situation and, at its discretion, may agree to extend the delivery schedule, with or without liquidated damages and with and without denial clause by issuing an amendment to the contract.

### **(b) Conditions for Extension of Delivery Period**

When the period of delivery is extended due to unexcused delay (Note: please ensure that unexcused delay is defined. Otherwise replace "unexcused delay" with the "delays attributable") by the contractor, the amendment extending the delivery period shall, inter alia, be subject to the following conditions:

#### **(i) Liquidated Damages**

MDL shall recover from the contractor, under the provisions of this clause, liquidated damages on the Goods and incidental Works/ Services, which the contractor has failed to deliver within the delivery period stipulated in the contract.

#### **(ii) Denial Clause**

(aa) No increases in price on account of any statutory increase in or fresh Imposition of GST, customs duty or on account of any other taxes/ duty/ cess/ levy), leviable in respect of the Goods and incidental Works/ Services stipulated in the said contract which takes place after the original delivery date, shall be admissible on such of the said Goods, as are delivered after the said date; and

(ab) Notwithstanding any stipulation in the contract for an increase in price on any other ground, including price variation clause or foreign exchange rate variation, or any other variation clause, no such increase after the original delivery date shall be admissible on such goods delivered after the said date.

(ac) Nevertheless, MDL shall be entitled to the benefit of any decrease in price on account of reduction in or remission of GST, customs duty or on account of any other Tax or duty or any other ground as stipulated in the price variation clause or foreign exchange rate variation or any other variation clause which takes place after the expiry of the original delivery date.

#### **(c) Liquidated damages**

If the contractor fails to deliver any or all of the Goods or fails to perform the incidental Works/ Services (e.g. installation, commissioning or operator training) within the time frame(s) incorporated in the contract, MDL shall, without prejudice to other rights and remedies available to MDL under the contract, deduct from the contract price, as agreed liquidated damages, but not as a penalty, a sum equivalent to the 1 % percent (excluding taxes) of the delivered price of the delayed Goods and/ or incidental Works/ Services for each week of delay or part thereof until actual delivery or performance, subject to a maximum deduction of the 10% of the delayed Goods' or incidental Works/ Services' contract price(s). Besides liquidated damages during such a delay, the denial clause shall also apply. Any failure or delay by any subcontractor, though their employment may have been sanctioned shall not be admitted as a ground for any extension of time or for exempting the contractor from liability for any such loss or damage as aforesaid.

## **8. DEFAULTS, BREACHES & TERMINATION OF CONTRACT**

Termination due to Breach, Default, and Insolvency

### **(a) Defaults and Breach of Contract**

In case the contractor undergoes insolvency or receivership; neglects or defaults, or expresses inability or disinclination to honour his obligations relating to the performance of the contract or ethical standards or any other obligation that substantively affects MDL's rights and benefits under the contract, it shall be treated as a breach of Contract. Such defaults shall include inter-alia:

**(i) Default in Performance and Obligations**

If the contractor fails to deliver any or all of the Goods or fails to perform any other contractual obligations (including Code of Integrity or obligation to maintain eligibility and Qualifications based on which contract was awarded) within the period stipulated in the contract or within any extension thereof granted by MDL.

**(ii) Insolvency**

If the contractor is wound up or ceases to otherwise trade or is unable to pay its debts as and when they fall due or is otherwise subject to any insolvency procedure.

(iii) If a receiver or similar official is appointed overall or any of the assets of the contractor or a petition is presented for its winding up or it entered into a composition with its creditors;

**(b) Notice for Default**

As soon as a breach of contract is noticed, a show-cause 'Notice of Default' shall be issued to the contractor, giving two weeks' notice, reserving the right to invoke contractual remedies. After such a show-cause notice, all payments to the contractor would be temporarily withheld to safeguard needed recoveries that may become due on invoking contractual remedies.

**(c) Terminations for Default**

(i) Notice for Termination for Default: In the event of unsatisfactory resolution of 'Notice of Default' within two weeks of its issue as per sub-clause above, MDL if so decided, shall by written Notice of Termination for Default sent to the contractor, terminate the contract in whole or in part, without compensation to the contractor.

(ii) Such termination shall not prejudice or affect the rights and remedies, including under sub-clause below, which have accrued and/ or shall accrue to MDL after that.

(iii) Unless otherwise instructed by MDL, the contractor shall continue to perform the contract to the extent not terminated. All warranty obligations, if any, shall continue to survive despite the termination.

**(d) Contractual Remedies for Breaches/Defaults or Termination for Default**

If there is an unsatisfactory resolution within this period, MDL shall take one; or more of the following contractual remedies.

(i) Temporary withhold payments due to the contractor till recoveries due to invocation of other contractual remedies are complete.

(ii) Call back any loaned property or advances of payment, if any, with the levy of interest at the prevailing rate (MIBID - Mumbai Interbank Bid Rate).

(iii) Recover liquidated damages and invoke denial clause for delays.

(iv) Encash and/ or Forfeit performance or other contractual securities.

(v) Prefer claims against insurances, if any.

(vi) Terminate contract for default, fully or partially including its right for Risk and- Cost Procurement as per following sub-clause.

**(vii) Risk and Cost Procurement**

In addition to termination for default, MDL shall be entitled, and it shall be lawful on his part, to procure Goods same to those terminated, with such terms and conditions and in such manner as it deems fit at the "Risk and Cost" of the contractor. Such 'Risk and Cost Procurement' must be initiated (viz. AIP/PR/Tender) within six months from the termination of Contract. The Contractor shall be liable for any loss which MDL may sustain on that account provided the procurement, or, if there is an agreement to procure, such agreement is made. The Contractor shall not be entitled to any gain on such procurement, and the manner and method of such procurement shall be in the entire discretion of MDL. (Note: deleted being contrary to law). (Note: No contractor would give security after the termination of the contract)

Note: Regarding the Goods which are not readily available in the market and where procurement difficulties are experienced, the period for making risk procurement shall be nine months instead of six months provided above.

(viii) Initiate legal proceedings in a for the recovery of the losses and damages, not addressable by the above means.

## 9. CLOSURE OF CONTRACT

The contract shall stand closed upon successful performance of all obligations by the firm, including completion of warranty obligations and final payment. If no claim is received within 03 years from last supplies/services, then no claim shall be entertained thereafter.

#### **10. COMMUNICATION AND LANGUAGE FOR DOCUMENTATION**

Any letter, facsimile message, e-mail intimation or notice sent to the Bidder/Supplier/ Contractor at the last known address mentioned in the offer / order shall be deemed to be valid communication for the purpose of the order/contract. Unless stated otherwise by the purchaser, Language for communication and all documentation shall be same, which the Purchaser has used, in the tender enquiry.

#### **11. PRESERVATION AND MAINTENANCE**

Should any material require any preservation till its final installation/fitment, the detailed procedure (Long term and short term) for the same as also the time of interval after which the state of preservation needs to be reviewed is to be stated by the Bidder/Supplier/Contractor.

Further the de-preservation prior to the material/equipment being commissioned and the maintenance procedure together with its periodicity is also to be indicated by the Bidder/ Supplier / Contractor.

#### **12. FREIGHT AND INSURANCE.**

##### **(a) For Indigenous Bidders**

Bidder shall quote for 'Door Delivery to Purchaser,' all charges towards door delivery viz. transport, Insurance charges etc. shall be borne by the Bidder /Supplier / Contractor.

##### **(b) For Foreign Bidders**

~~For overseas bidders, bidder shall agree for supplying the goods on CIF/CIP, Incoterm basis. The Bidder / Supplier / Contractor shall immediately on despatch of the items, inform all relevant details of despatch such as Order Number, Bill of Lading/AWB Number marked as Freight Paid, Insurance policy/document, number of packages, value of consignment, invoice number etc. as per contractual terms.~~

#### **13. DEMURRAGE**

Storage, and Demurrage, fines etc. charges will be payable by the Bidder / Supplier / Contractor for all shipments in case of improper documentation, wrong declarations, error in weight measurements, packing list, invoice, late receipt of documents etc. i.e. for reasons which are not attributable to the purchaser.

#### **14. CANCELLATION OF TENDER**

The Purchaser reserves the right to cancel/withdraw the tender in toto or part and or award the contract / order in full or part without assigning any reason whatsoever and without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the grounds for MDL action.

#### **15. PURCHASER'S PROPERTY.**

All property (such as materials, drawings, documents etc.) issued by the Purchaser or any other individual or firm on behalf of the Purchaser in connection with the contract shall remain confidential, being the property of the Purchaser and the Bidder/Supplier/Contractor shall undertake to return all such property so issued and will be responsible for any or all loss thereof and damage thereto resulting from whatever causes and shall reimburse the Purchaser the full amount of loss and damage.

On completion of work in any compartment / location of the purchaser's premises, the Bidder/Supplier/Contractor must ensure that the place is left in a reasonably clean state and all scrap is transferred to nearby scrap-bins.

#### **16. REJECTION OF MATERIALS**

If the Goods, or any portion thereof of the equipment found defective / rejected, the Supplier / Contractor shall collect the same from MDL's Stores, all incidental charges being borne by him (inclusive of Custom duty, if payable), within 30 days from the date of intimation to the Supplier / Contractor of such rejection. If not collected within 30 days, MDL shall recover storage charges @ 1 % per month maximum up to 5% of cost of rejected items. MDL reserves the right to dispose-off the

rejected items at the end of a total period of six months in any manner to the best advantage to MDL and recover consequential damages maximum up to order value.

#### **17. RECOVERY-ADJUSTMENT PROVISIONS**

Payment made under one order shall not be assigned or adjusted to any other order except to the extent agreed upon in writing by the Purchaser. During the currency of the contract, if any sum of money is payable by the Bidder / Supplier / Contractor the same shall be deducted from any sum then due or thereafter may become due to the Bidder / Supplier / Contractor under the contract or any other contract with the Purchaser.

#### **18. INDEMNIFICATION**

The Bidder / Supplier / Contractor, his employees, licences, agents or Sub-Supplier / Sub-contractor, while on site of the Purchaser for the purpose of this contract, indemnifies the Purchaser against direct damage and/or injury to the property and/or the person of the Purchaser or that of Purchaser's employees, agents, Sub- Contractors / Suppliers occurring and to the extent caused by the negligence of the Bidder / Supplier / Contractor, his employees, licensees, agents or Sub-contractor by making good such damages to the property, or compensating personal injury and the total liability for such damages or injury shall be as mutually discussed and agreed to.

#### **19. TRANSFER OF SUPPLIERS / CONTRACTOR'S RIGHTS**

The Bidder / Supplier / Contractor shall not either wholly or partly sell, transfer, assign or otherwise dispose of the rights, liabilities and obligations under the contract between him and the Purchaser without prior consent of the Purchaser in writing.

#### **20. SUBCONTRACT AND RIGHT OF PURCHASER**

The Bidder / Supplier / Contractor under no circumstances undertake or subcontract any work / contract from or to any other Sub-contractor without prior written approval of the Competent Authority of Purchaser. In the event it is found that such practice has been indulged in, the contract is liable to be terminated without notice and the Bidder / Supplier / Contractor is debarred all from future tender enquiries / work orders. However, in no circumstances a contractor is permitted to subcontract any part of the contract to the bidders who had quoted for the concerned tender.

#### **21. PATENT RIGHTS**

The Bidder / Supplier / Contractor shall hold harmless and keep the Purchaser indemnified against all claims arising as a result of infringement of any patent / copy rights on account of manufacture, sale or use of articles covered by the order.

#### **22. AGENTS/AGENCY COMMISSION**

The seller confirms and declares to the buyer that the seller is the original manufacturer or authorized distributor/stockiest of original manufacturer of the goods referred to in this contract and has not engaged any individual or firm, whether Indian or foreign whatsoever, to intercede, facilitate or in any way to recommended to the Buyer or any of its functionaries, whether officially or unofficially , to the award of the Contract / Purchase order to the Seller; nor has any amount been paid, promised or intended to be paid to any such individual or firm in respect of any such intercession, facilitation or recommendation. The Seller agrees that if it is established at any time to the satisfaction of the Buyer that the present declaration is in any way incorrect or if at a later stage it is discovered by the Buyer that the Seller has engaged any such individual/firm, and paid or intended to pay any amount, gift, reward , fees, commission or consideration to such person, party, firm or institution , whether before or after the signing of this Contract / Purchase order, the Seller will be liable to refund that amount to the Buyer. The seller will also be debarred from participation in any RFQ/Tender for new projects/program with Buyer for a minimum period of five years. The buyer will also have a right to consider cancellation of the Contract either wholly or in part, without any entitlement or compensation to the Seller who shall in such event be liable to refund all payments made by the buyer in terms of the Contract along with interest at the rate of 2% per annum or 6% whichever is higher above LIBOR (London Inter Bank Offer Rate) (for foreign vendors) and base rate of SBI plus 2% (for Indian Vendors). The Buyer will also have the right to recover any such amount from any contracts concluded earlier with Buyer.

#### **23. USE OF UNDUE INFLUENCE / CORRUPT PRACTICES**

The Bidder / Supplier / Contractor undertakes that he has not used corrupt practices or used any undue influence which is not admissible as per Indian law to obtain contract/order or in doing any business with the purchaser. If found that Bidder / Supplier / Contractor is involved in such wrong practices, then Purchaser is entitled to cancel the contract/s and all or any other contracts and then to recover from the Bidder / Supplier / Contractor the amounts of any loss arising from such contracts' cancellation, including but not limited to imposition of penal damages, forfeiture of Performance security, encashment of the Bank Guarantee and refund of the amounts paid by the Purchaser.

#### **24. IMMUNITY OF GOVERNMENT OF INDIA CLAUSE**

It is expressly understood and agreed by and between M/s. (Bidder / Supplier / Contractor) and Mazagon Dock Shipbuilders Limited, Dockyard Road, Mumbai – 400 010 (MDL) is entering into this Agreement solely on its own behalf and not on the behalf of any person or entity. In particular, it is expressly understood and agreed that the Government of India is not a party to this Agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed that MDL is an independent legal entity with power and authority to enter into contracts solely in its own behalf under the applicable of Laws of India and general principles of Contract Law. The (Bidder / Supplier / Contractor) expressly agrees, acknowledges and understands that MDL is not an agent, representative or delegate of the Government of India. It is further understood and agreed that the Government of India is not and shall not be liable for any acts, omissions and commissions, breaches or other wrongs arising out of the contract. Accordingly, (Bidder / Supplier / Contractor) hereby expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Government of India arising out of this contract and covenants not to sue Government of India in any manner, claim, cause of action or thing whatsoever arising of or under this Agreement.

#### **25. EXPORT LICENCE**

The export licenses that may be required for delivery of the various items/equipment to MDL shall be arranged by the Bidder / Supplier / Contractor from the concerned authorities in their country without any time and cost implications on the Purchaser.

#### **26. BANNED OR DE-LISTED CONTRACTORS / SUPPLIERS**

The Bidder / Supplier / Contractor declares that they being Proprietors / Directors / Partners have not been any time individually or collectively blacklisted or banned or de-listed by any Government or quasi Government agencies or PSUs. If a bidder's entities as stated above have been blacklisted or banned or de-listed by any Government or quasi Government agencies or PSUs, this fact must be clearly stated and it may not necessarily be a cause for disqualifying him.

#### **27. DUTY OF PERSONNEL OF SUPPLIER/CONTRACTOR**

MDL being a Defence Public Sector Undertaking, Bidder / Supplier / Contractor undertakes that their personnel deployed in connection with the entrusted work will not indulge in any activities other than the duties assigned to them.

#### **28. DISPUTE RESOLUTION MECHANISM AND ARBITRATION**

##### **(a) Dispute resolution mechanism(DRM)**

(i) Any dispute/differences between the parties arising out of and in connection with the contract shall be settled amicably by mutual negotiations at HoS/HoD level.

(ii) In case of non-settlement by (i) above, if at any time, before, during or after the contract period any unsettled claim, dispute or difference arose between the parties, upon or in relation to or in connection with or in any way touching or concerning this tender/agreement/order/contract, the same shall be referred to the concerned Functional Director. The Functional Director shall then nominate an Executive of the rank of General Manager whom he thinks fit and competent or a Committee of Executives who/which shall then scrutinise the claims/disputes that have been referred to the concerned functional Director and make efforts for amicable settlements by mutual discussions/negotiations.

(iii) In case no amicable settlement is arrived by (ii) above within a period of three months, then the contractor shall approach Public Grievance Cell and address the disputes as per the provisions made under the relevant clause of the contract.

(iv) In case the issues/disputes do not get settled within a period of six months from the date of submission of the dispute to the Grievance Cell, then the contractor may invoke Arbitration Clause of the contract.

**(b) Arbitration**

Unresolved disputes/differences, if any, shall then be settled by Arbitration. The Arbitration proceedings shall be conducted at Mumbai, India, in English Language, under the Arbitration and Conciliation Act, 1996 as amended from time to time and the rules thereunder. MDL prefers to have arbitration through Institutes such as Indian Council of Arbitration (ICA)/ICA-DR, Mumbai Centre for International Arbitration, International Chamber of Commerce (ICC), Singapore International Arbitration Centre (SIAC) with the mutual consent of the parties. In case of unresolved difference/dispute between the Purchaser and Supplier, being Central Public Sector Enterprises/Central Govt. departments, the disputes shall be resolved firstly through mutual discussion or through the empowered agencies of the Govt. or through arbitration by reference by either party to the department of Public Enterprises, as per extant guidelines. If disputes/differences remain unresolved/unexecuted, the same shall be referred first to the Cabinet Secretariat and then, if necessary to the PMO. Any changes to arbitration clause must be vetted by HOD (Legal) before incorporation in contract/PO.

**29. JURISDICTION OF COURTS**

All contracts shall be deemed to have been wholly made in Mumbai and all claims there under are payable in Mumbai City and it is the distinct condition of the order that no suit or action for the purpose of enforcing any claim in respect of the order shall be instituted in any Court other than that situated in Mumbai City, Maharashtra State, India i.e. courts in Mumbai shall alone have jurisdiction to decide upon any dispute arising out of or in respect of the contract.

**30. SAFETY**

The Contractor / Bidder must observe all safety precautions in connection with the work to be performed by him, his agents or labourers. In the event of any accident happening in our yard resulting in loss of lives or otherwise damaging any part of the property, the contractor shall be required to make good the loss to the Company and shall be responsible for all consequences that follow from the loss and / or injuries to the persons involved in such accidents. The standard of safety to be observed in the Company shall be decided by the Executive-in-Charge Safety, or any Executive appointed for the purpose before the commencement of work in the yard. It will be essential for contractor to ascertain the standard precautions which contractor is required to observe in discharging his work as per the standards prevalent in MDL. The decision of MDL in matters concerning Safety shall be final and binding on the contractor. The Contractor / Bidder shall be required to provide his workmen with Boiler Suits of any suitable colour other than blue or white, with the Name of the Contractor in prominent letters on the boiler suits along with personal protection gears like safety shoes, hand gloves etc. workmen of the Contractor / Bidder must wear throughout their working while in the premises of MDL. Contractor's workmen working without safety gears are to be disallowed for work.

**31. FORCE MAJEURE**

If at any time during the execution of the goods / service order, the performance in whole or in part by either Purchaser or and by the Bidder(s) / Supplier(s) / Contractor(s) is / are delayed by any reason of force majeure situations such as acts of civil war, civil commotion, sabotage, hostilities, war, fires, explosions, epidemics, natural calamities like floods, earthquakes, volcanoes, storms, acts of God and laws of respective governments or any other causes beyond the control of either parties, hereinafter referred to as "events", provided notice of the occurrence of such event/s is / are communicated by either party, to the other party within 21 days from the date of occurrence thereof, neither party shall by reason such events be entitled to terminate the contract nor shall either party have any claim for damages against the other in respect of such non-performance and or delay in performance of the contract / order. Executions on either side shall be resumed as soon as practicable after such event has come to an end or ceased to exist and the decision of Purchaser as to whether activities can resume or not, shall be conclusive and final. Occurrence of the events to be certified by Chamber of Commerce / Indian High Commission or Embassies / Government in that Country. The performance in whole or in part under the captioned tender / contract is prevented or delayed by reason of any such event for a period exceeding sixty days either party may at its option terminate the contract / further processing of the tender. The relative obligations of both the parties remain suspended during the actual period of force majeure. The Purchaser may extend the delivery schedule as mutually

agreed, on receipt of written communication from the Bidder / Supplier / Contractor regarding occurrence of 'Force Majeure' conditions, but not exceeding six months from the scheduled delivery date. If the 'Force Majeure' conditions extend beyond this period, the Purchaser shall have the right to cancel the order without any financial implication to the Purchaser or on terms mutually agreed to.

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**Enclosure-4**

**ACCEPTANCE FORM FOR GENERAL CONDITIONS OF CONTRACT (GCC)**

GCC CLAUSE No.	BIDDER'S REMARK	GCC CLAUSE No.	BIDDER'S REMARK	GCC CLAUSE No.	BIDDER'S REMARK
	ACC/DEV		ACC./ DEV		ACC/ DEV
1	ACC/DEV	2	ACC/DEV	3	ACC/DEV
4	ACC/DEV	5	ACC/DEV	6	ACC/DEV

7	ACC/DEV	8	ACC/DEV	9	ACC/DEV
10	ACC/DEV	11	ACC/DEV	12	ACC/DEV
13	ACC/DEV	14	ACC/DEV	15	ACC/DEV
16	ACC/DEV	17	ACC/DEV	18	ACC/DEV
19	ACC/DEV	20	ACC/DEV	21	ACC/DEV
22	ACC/DEV	23	ACC/DEV	24	ACC/DEV
25	ACC/DEV	26	ACC/DEV	27	ACC/DEV
28	ACC/DEV	29	ACC/DEV	30	ACC/DEV
31	ACC/DEV				

COMPANY'S NAME & ADDRESS:

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

SIGNATURE:

DATE:

NAME:

DESIGNATION:

BIDDER'S COMPANY SEAL:

NOTES:

1. Bidders should carefully read the General Terms & Conditions (GCC) of the Tender Enquiry prior to filling up this acceptance format.
2. This format should be properly filled, signed and returned by the bidder(s) along with their technical offer for considering their Bid.
3. Bidder(s) should indicate "ACC" for Accepted, "DEV" for Deviation Taken for each clause number in the above table.
4. Bidder(s) to attach Separate Sheet indicating all relevant details such as Number & description of the Clause, Reasons for Deviation and Alternative suggested for any deviations taken by them.
5. **Clause numbers shown in the above format also includes the sub-clauses under these clauses. For example, Clause no. '8' means – Clause nos.-8.1, 8.2, 8.3.**

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**Enclosure-5**

**Declaration of Compliance on Restrictions under Rule 144 (xi) of the General Financial Rules (GFRs), 2017**

**Restriction under rule 144( xi) of GFR**

- I. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turnkey projects) only if the bidder is registered with the Competent Authority. 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.

- II. '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.
- III. "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.

IV. The beneficial owner for the purpose of (iii) above will be as under:

1. 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 per cent. 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;
2. 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;
  3. 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;
  4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;
  5. 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.

- V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- VI. 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.
- VII. The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.
- VIII. If the bidder was validly registered at the time of acceptance I placement of order, registration shall not be a relevant consideration during contract execution.

**Note: Model certificate for the same is attached at the following page.**

**Model Certificate:**

**DECLARATION BY AUTHORISED SIGNATORY OF THE FIRM**

"I..... have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India. I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority.

I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

**AUTHORISED SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Seal / Stamp of Bidder**

**Model additional certificate by Bidders in the cases of specified TOT:**

**DECLARATION BY AUTHORISED SIGNATORY OF THE FIRM**

I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (TOT) arrangement I certify that this bidder does not have any TOT arrangement requiring registration with the competent authority.

OR

I have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (TOT) arrangement. I certify that this bidder has valid registration to participate in this procurement.

**AUTHORISED SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Seal / Stamp of Bidder**

**DECLARATION CERTIFICATE FOR LOCAL CONTENT**  
**(Tender value Less than Rs 10 Crores)**

This declaration must form part of all tenders & it contains general information and serves as a declaration form for all bidders. (Before completing this declaration, bidders must study the General Conditions, Definitions, Govt Directives applicable in respect of Local Content & prescribed tender conditions).

**LOCAL CONTENT DECLARATION BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

**IN RESPECT OF BID / TENDER No.** .....  
**ISSUED BY:** (Name of Firm):.....

NB: The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

I, the undersigned, ..... (full names),  
do hereby declare, in my capacity as .....  
of .....(name of bidder  
entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have read and understood the requirement of local content (LC) and same is specified as percentage calculated in accordance with the definition provided at clause 2 of revised Public Procurement (preference to Make in India) Order 2017.

"Local content" as per above order means the amount of value added in India which shall be the total value of items procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent."

(c) I have satisfied myself that the goods/services/works to be delivered in terms of the above-specified bid comply with the local content requirements as specified in the tender for 'Class-I Local Supplier' / 'Class-II Local Supplier', and as above.

(d) I understand that a bidder can seek benefit of either Public Procurement Policy for MSEs –Order 2012 or Public Procurement (preference to Make in India) Order 2017 and not both and once the option is declared / selected it is not permitted to be modified subsequently. Accordingly, I seek the benefit from the below declared purchase preference policy only.

i) I seek benefits against the following policy only (Select only one Option):

1) PPP MSE Order 2012  (applicable for MSE manufacturers)

2) PPP MII 2017  (applicable for Class I suppliers as well as MSE manufacturers)

(Note: If not declared / selected it shall be deemed that purchase preference benefit is sought under PPP MII 2017 policy. However, selection of both the options will be treated as ambiguous and will result in rejection of bid)

(e) The local content calculated using the definition given above are as under:

Tender Item Sr No	Local content calculated as above %	Location of local value addition (Location shall be the specified as name of city or district, etc. Location as name of country will be considered as ambiguous and such bids shall be rejected.)

Attach separate sheet duly signed if space is not sufficient

NB: Local content percentage shall be declared item wise or tender wise strictly as per the terms of the tender.

(f) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dtd 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. In case of contract being awarded, I undertake to retain the relevant documents for 7 years from date of execution.

(g) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020

SIGNATURE: \_\_\_\_\_

DATE: \_\_\_\_\_

Seal / Stamp of Bidder

**DECLARATION CERTIFICATE FOR LOCAL CONTENT**  
**(Tender value More than Rs 10 Crores)**

This declaration must form part of all tenders & it contains general information and serves as a declaration form for all bidders. (Before completing this declaration, bidders must study the General Conditions, Definitions, Govt Directives applicable in respect of Local Content & prescribed tender conditions).

**THE BIDDERS SHALL PROVIDE THIS CERTIFICATE FROM STATUTORY AUDITOR OR COST AUDITOR OF THE COMPANY (IN CASE OF COMPANIES) OR FROM A PRACTICING COST ACCOUNTANT OR PRACTICING CHARTED ACCOUNTANT (IN RESPECT OF SUPPLIER OTHER THAN COMPANIES) GIVING THE PERCENTAGE OF LOCAL CONTENT.**

**IN RESPECT OF BID / TENDER No.** .....  
**ISSUED BY: (Name of Firm):**.....

I, the undersigned, ..... (full names),  
do hereby declare, in my capacity as .....  
of .....(name of bidder  
entity), the following:

(a) The facts contained herein are within my own personal knowledge.

(b) I have read and understood the requirement of local content (LC) and same is specified as percentage calculated in accordance with the definition provided at clause 2 of revised Public Procurement (preference to Make in India) Order 2017.

“Local content” as per above order means the amount of value added in India which shall be the total value of items procured (excluding net domestic indirect taxes) minus the value of imported content in the item (including all customs duties) as a proportion of the total value in percent.”

(c) I have satisfied myself that the goods/services/works to be delivered in terms of the above-specified bid comply with the local content requirements as specified in the tender for 'Class-I Local Supplier' / 'Class-II Local Supplier', and as above.

(d) I understand that a bidder can seek benefit of either Public Procurement Policy for MSEs –Order 2012 or Public Procurement (preference to Make in India) Order 2017 and not both and once the option is declared / selected it is not permitted to be modified subsequently. Accordingly, I seek the benefit from the below declared purchase preference policy only.

i) I seek benefits against the following policy only (**Select only one Option**):

1) PPP MSE Order 2012  (applicable for MSE manufacturers)

2) PPP MII 2017  (applicable for Class I suppliers as well as MSE manufacturers)

(Note: If not declared / selected it shall be deemed that purchase preference benefit is sought under PPP MII 2017 policy. However, selection of both the options will be treated as ambiguous and will result in rejection of bid)

(e) The local content calculated using the definition given above are as under:

Tender Item Sr No	Local content calculated as above %	Location of local value addition (Location shall be the specified as name of city or district, etc. Location as name of country will be considered as ambiguous and such bids shall be rejected.)

Attach separate sheet duly signed if space is not sufficient

NB: Local content percentage shall be declared item wise or tender wise strictly as per the terms of the tender.

(f) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dtd 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. In case of contract being awarded, I undertake to retain the relevant documents for 7 years from date of execution.

(g) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Seal / Stamp of Bidder**

**ACTUAL LOCAL CONTENT CERTIFICATE**  
**(Tender value Less than Rs 10 Crores)**

Note 1: This certificate shall be submitted by the successful bidder post execution of the contract.

**LOCAL CONTENT DECLARATION (post execution of contract / PO) BY CHIEF FINANCIAL OFFICER OR OTHER LEGALLY RESPONSIBLE PERSON NOMINATED IN WRITING BY THE CHIEF EXECUTIVE OR SENIOR MEMBER/PERSON WITH MANAGEMENT RESPONSIBILITY (CORPORATION, PARTNERSHIP OR INDIVIDUAL)**

**IN RESPECT OF CONTRACT No./ PO No.....**  
**ISSUED BY: (Name of Firm):.....**

NB: The obligation to complete, duly sign and submit this declaration cannot be transferred to an external authorized representative, auditor or any other third party acting on behalf of the bidder.

I, the undersigned, ..... (full names),  
do hereby declare, in my capacity as .....  
of ..... (name of bidder entity),  
that:

- (a) The facts contained herein are within my own personal knowledge.  
(b) My/our company had declared the local content at the time of tender as under

Tender Item Sr No	Local content calculated as above %	Location of local value addition

- (c) My / our company has completed the above referred contract and the actual local content of the delivered item/s calculated using the definition in the declaration given at the time of Bid is as under:

Tender Item Sr No	Declared minimum Local content at the time of bidding (%)	Achieved Local content of delivered items (%)

NB: Local content percentage shall strictly be declared item wise or tender wise as was declared at the time of bid / tender.

- (d) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. I undertake to retain the relevant documents for 7 years from date of execution.

- (e) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020.

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Stamp / Seal of the company**

**ACTUAL LOCAL CONTENT CERTIFICATE**  
**(Tender value More than Rs 10 Crores)**

Note 1: This certificate shall be submitted by the successful bidder post execution of the contract.

**LOCAL CONTENT DECLARATION (post execution of contract / PO). THE SUPPLIER SHALL PROVIDE THIS CERTIFICATE FROM STATUTORY AUDITOR OR COST AUDITOR OF THE COMPANY (IN CASE OF COMPANIES) OR FROM A PRACTICING COST ACCOUNTANT OR PRACTICING CHARTED ACCOUNTANT (IN RESPECT OF SUPPLIER OTHER THAN COMPANIES) GIVING THE PERCENTAGE OF LOCAL CONTENT.**

**IN RESPECT OF CONTRACT No./ PO No.....**  
**ISSUED BY: (Name of Firm):.....**

I, the undersigned, ..... (full names),  
do hereby declare, in my capacity as .....  
of .....(name of bidder entity),  
that:

- (a) The facts contained herein are within my own personal knowledge.  
(b) My/our company had declared the local content at the time of tender as under

Tender Item Sr No	Local content calculated as above %	Location of local value addition

- (c) My / our company has completed the above referred contract and the actual local content of the delivered item/s calculated using the definition in the declaration given at the time of Bid is as under:

Tender Item Sr No	Declared minimum Local content at the time of bidding (%)	Achieved Local content of delivered items (%)

NB: Local content percentage shall strictly be declared item wise or tender wise as was declared at the time of bid / tender.

(d) I accept that the Procurement Authority / Institution / MDL / Nodal Ministry has the right to request that the local content be verified in terms of the requirements of revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020 and I shall furnish the document / information on demand. Failure on my part to furnish the data will be treated as false declaration as per PPP MII Order 2017. I undertake to retain the relevant documents for 7 years from date of execution.

(e) I understand that the submission of incorrect data, or data that are not verifiable as described in revised Public Procurement (preference to Make in India) Order 2017, may result in the Procurement Authority / Nodal Ministry / MDL imposing any or all of the remedies as provided for in Clause 9 of the Revised Public Procurement (preference to Make in India) Order 2017 dated 16.09.2020.

**SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Stamp / Seal of the company**

**EXTRACT OF PROVISIONS OF THE OFFICIAL SECRETS ACT, 1923****SECTION 2(B): "PROHIBITED PLACE"**

It is defined as the place of any work of Defence Dockyard and other so belonging or occupied and used for the purpose of building, repairing, making or storing any ammunitions of war.

For the purpose of the above definition, sketch includes any photograph or other mode of representing any place or thing.

**SECTION 3: "PENALTIES FOR SPYING"**

If any person unlawfully - approaches, inspects, passes over or is in the vicinity of any clear place; or make any sketches intended to be directly or indirectly useful to an enemy ; or c) Obtains collects records or communicates to any other person any secret official code.

Shall be liable for imprisonment of 14 years in case of Defence Installation.

**SECTION 4: "COMMUNICATION WITH FOREIGN AGENTS"**

If any person has been in communication with or attempted to communicate with foreign agents regarding the vital information of any "PROHIBITED PLACE" would be guilty of violating the provisions of this Act.

**SECTION 5: "WRONGFUL COMMUNICATION OF INFORMATION"**

If any person having in his possession or control any official document;

- a) Willfully communicates to any person, other than a person, who is authorised to communicate it.
- b) Used the information in his possession for the benefit of any foreign power.
- c) Retain in his possession when he has no power to retain it
- d) Fails to take reasonable care of it.

Shall be guilty of an offence under this Act.

**SECTION 6: "UNAUTHORISED USE OF UNIFORMS"**

If any person for the purpose of gaining admission or of assisting any other person to gain admission to a "PROHIBITED PLACE" wears uniforms without lawful authority shall be guilty of offence under this Section.

**SECTION 7: "INTERFERING WITH OFFICERS OF POLICE"**

No person in the vicinity of any "PROHIBITED PLACE" shall abstract any Police Officer engaged on guard, sentry or similar duty. If any people move in the provisions of this section, shall be punishable with imprisonment, which may extend up to 3 years.

**SECTION 8: "DUTY OF GIVING INFORMATION"**

It shall be duty of every person to give on demand to a superintendent of Police or any other Police Officer not below the rank of Inspector, any information in his power relating to an offence under this Act. If any person fails to give such information, shall be punishable with imprisonment to 3 years or fine or with both.

**SECTION 9: "INCITEMENT"**

Any person who attempts to commit or debate the commission of an offence under this Act shall be punishable with the same punishment and be liable to be proceeded against in the same manner as if he had committed such offence.

**SECTION 10: "PENALTY FOR HARBOURING SPIES"**

If any person whom he knows or has reasonable grounds for supposing to be person who is about to commit or who has committed offence under this Act shall be guilty of offence under this Section.

**SECTION 11: "SEARCH WARRANTS"**

If a presidency Magistrate, Magistrate First Class or Sub-Divisional magistrate is satisfied with the information that there is reasonable ground for suspecting that an offence under this Act has been or is about to be committed, he may grant search warrant to any Police Officer to enter at any time any premises to force to search premises or the places.

We accept and comply by the above clauses of EXTRACT OF PROVISIONS OF THE OFFICIAL SECRETS ACT, 1923.

Bidder's Signature.....

Bidder's Name.....

Company Seal.....

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**PROFORMA BANK GUARANTEE FOR PERFORMANCE SECURITY**

(On Non-Judicial stamp paper of value Rs. 500/- . However, the value of stamp paper to be confirmed from Legal Department, MDL.)

IN CONSIDERATION OF MAZAGON DOCK SHIPBUILDERS LIMITED, a company incorporated under the Companies Act 1956 and having its registered office at Dockyard Road, Mumbai 400010 (hereinafter referred to as the "the Purchaser" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) having placed an order on Messers ..... a partnership firm/sole proprietor business/a company registered under the Companies Act, 1956 having its office at .....(hereinafter called " the Contractor/ Supplier" which expression shall, unless it be repugnant or contrary to the subject or context thereof, be deemed to mean and include its successors and assigns) vide order No..... dated..... (hereinafter called "the order" which expression shall include any amendments/alterations to "the order" issued by "the Purchaser") for the supply , delivery at site, installation and commissioning of certain equipment, item/services/civil works etc. as stated in the said Order and the Purchaser having agreed with the Contractor/Supplier to accept a Bank Guarantee in lieu of Performance Security payable under the said order for the fulfillment and performance of the said order, We, ..... Bank having office at ..... (hereinafter referred to as "the Bank" which expression shall include its successors and assigns) hereby agree to pay to the Purchaser without any demur on first demand an amount not exceeding Rs..... (Rupees.....only) being 5% (10% in case of Capital Procurement) of the order value against any loss or damage, costs, charges and expenses caused to or suffered by the Purchaser by reason of non performance and non-fulfillment or for any breach on the part of the Contractor / Supplier of any of the terms and conditions of the said order.

2. We, ..... Bank further agree that the Purchaser shall be sole judge whether the said Contractor/Supplier has failed to perform or fulfil the said order in terms thereof or committed breach of any terms and conditions of the order and the extent of loss, damage, cost, charges and expenses suffered or incurred or would be suffered or incurred by the Purchaser on account thereof and we waive in the favour of the Purchaser all the rights and defences to which we as guarantors may be entitled to.

3. We, ..... Bank further agree that the amount demanded by the Purchaser as such shall be final and binding on the Bank as to the Bank 's liability to pay and the amount demanded and the Bank undertake to pay the Purchaser the amount so demanded on first demand and without any demur notwithstanding any dispute raised by the Contractor/Supplier or any suit or other legal proceedings including arbitration pending before any court, tribunal or arbitrator relating thereto, our liability under this guarantee being absolute and unconditional.

4. We, ..... Bank further agree with the Purchaser that the Purchaser shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said order/or to extend time of performance by the Supplier from time to time or to postpone for any time to time any of the powers exercisable by the Purchaser against the Contractor/ Supplier and to forbear to enforce any of the terms and conditions relating to the order and we shall not be relieved from our liability by reason of any such variation or extension being granted to the Contractor/ Supplier or for any forbearance, act or omission on the part of the Purchaser or any indulgence by the Purchaser to the Contractor/Supplier or by any such matter or things whatsoever which under the law relating to sureties would have the effect of relieving us.

5. We, ..... Bank further undertake not to revoke this guarantee during its currency except with the previous consent of the Purchaser in writing.

6. We, ..... Bank also agree that the Bank's liability under this guarantee shall not be affected by any change in the constitution of the Contractor / Supplier or dissolution or winding up of the business of the contractor/ supplier.

7. Notwithstanding anything contained herein above:

i) Our liability under this guarantee shall not exceed Rs.....

ii) This Bank Guarantee shall be valid upto and including .....; and

iii) 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 .....(validity + 4 weeks from the date of expiry of this guarantee).

8. This Guarantee shall be governed by Indian laws and the Courts at Mumbai, India shall have the exclusive jurisdiction.

IN WITNESS WHEREOF the Bank has executed this document on this.....day of.....

For ..... Bank

(by its constituted attorney)

(Signature of a person authorised to sign on behalf of "the Bank")

-----

**FORM OF WARRANTY CERTIFICATE**

In accordance with the Order N<sup>o</sup>..... Dated ..... placed by MAZAGON DOCK SHIPBUILDERS LIMITED on \_\_\_\_\_ (Name of firm)

\_\_\_\_\_ (Name of firm) certify that the following Items identified by the following references related to Submarine No:

Description of Item(s).....

Manufacturer's Serial Number (OR any other such ID No) of the Equipment / Item.....

Delivery Challan No. / ~~Bill of Lading~~ No & Date / Air Way Bill No & Date .....

Covered by \_\_\_\_\_ (Name of firm) Invoice No & Date..... are warranted according to the terms and conditions as specified in the order.

**The Date of issue of the certificate: DD/MM/YYYY**

**The Date of the end of validity of the guarantee: DD/MM/YYYY**

For and on behalf of

<b>Order reference Number</b>	
<b>Description of Material</b>	
<b>Corresponding to Invoice No &amp; Date</b>	

-----

***(to be executed on non-judicial stamp paper of requisite value as per place of execution in India)***

## **DEED OF GUARANTEE**

**THIS DEED OF GUARANTEE ("Deed")** made and executed at (\*) on this the \_\_\_\_\_ day of \_\_\_\_\_ 20 by: (\*), a (\*) existing under the laws of (\*) and having its registered at (\*) (hereinafter referred to as "**the Principal Manufacturer"/ "Original Equipment Manufacturer(OEM)"**), which expression shall unless it be repugnant to the subject or context thereof be deemed to include their respective heirs, executors, administrators and legal representatives) being the Party of the FIRST PART;

**IN FAVOUR OF MAZAGON DOCK SHIPBUILDERS LIMITED**, a company existing under the laws of India, having its registered office at Dockyard Road, Mazagon, Mumbai 400010, India (hereinafter referred to as the **(MDL)**, which expression, unless excluded by or in contradiction to the subject or context, shall mean and include its successors and assigns) being the Party of the OTHER PART;

**Whereas:**

A. MDL has floated a Tender Bearing Tender No. (\*) dated (\*) ("**Tender**"), wherein quotations were invited for supplying of (\*) ("**Goods&/or Services**") as stipulated in the Tender at locations as specified in the Tender.

B. The Principal Manufacturer /OEM has agreed to submit its bid through an authorised representative namely (\*) (hereinafter referred to as "**Authorised Representative**"), for the aforesaid Tender.

C. The Principal Manufacturer/OEM has represented that it has authorised the Authorised Representative to act on its behalf herein for submitting the bid and to act as an intermediary for supplying the Goods &/or Services to MDL as per the terms of the Tender, as mentioned herein this Deed.

D. The Tender Condition No. (\*) requires that the Principal Manufacturer furnishes a legally enforceable document, i.e. this Deed, for the purpose of ensuring smooth execution of the Contract if awarded to the Authorised Representative (pursuant to the Tender) and for assuring that all obligations as stated in the Contract will be fulfilled therein, including warranty and guarantee obligations contained in the Tender. It is further clarified that MDL shall award the contract and sign the relevant transaction documents ("**Transaction Documents**") with the Authorised Representative (in the event of its bid qualifying as per the criteria stipulated in the Tender).

E. Thus, the Principal Manufacturer/OEM has agreed to execute this Deed in favour of MDL.

**NOW THIS INDENTURE WITNESSETH THAT IN CONSIDERATION OF THE ABOVE PREMISES IT IS HEREBY COVENANTED AND AGREED (THE PRINCIPAL MANUFACTURER /OEM COVENANTING AND AGREEING JOINTLY AND SEVERALLY) AS FOLLOWS:**

1. As per Tender condition No. (\*), the Principal Manufacturer /OEM hereby, absolutely, irrevocably and unconditionally guarantees to MDL, the performance by the Principal Manufacturer /OEM of all of the obligations in/under the said Tender and Transaction Documents whether executed by the Principal Manufacturer /OEM directly or the Authorised Representative or both, to the satisfaction of MDL in the event of failure of the Authorised Representative or otherwise upon the occurrence of an event of default under the said Tender and/or Transaction Documents.

2. Any such demand made by MDL on the Principal Manufacturer /OEM shall be final, conclusive and binding notwithstanding any contractual arrangement, difference or any dispute between Principal Manufacturer /OEM and MDL and/or MDL and the Authorised Representative or any other legal proceedings, pending before any court, tribunal, arbitrator or any other authority. The Principal Manufacturer /OEM shall be bound by the terms and conditions of the Tender and/or Transaction Documents.

3. The Principal Manufacturer /OEM shall indemnify and hold harmless MDL from any claim made against MDL or any third party for injury, damage, loss or expenses attributable to the breach /non-performance of responsibilities by the Authorised Representative.
4. In order to give effect to the Guarantee herein contained MDL shall be entitled to act as if the Principal Manufacturer /OEM was originally liable to MDL for all the obligations of the Authorised Representative as mentioned in the Tender and/or Transaction Documents.
5. Notwithstanding MDL's rights herein or under the Tender and/or Transaction Documents, MDL shall have fullest liberty to call upon the Principal Manufacturer /OEM to perform the obligation of the Authorised Representative under the Tender and/or Transaction Documents and pay together with interest as well as the costs (including reasonable attorney costs) charges and expenses, and/or other money for the time being due to MDL in respect of the aforesaid.
6. The Guarantee herein contained shall not be determined or in any way prejudiced by any absorption of or by any amalgamation thereof of MDL but shall ensure and be available for and by the absorbing or amalgamated entity.
7. The Guarantee shall be irrevocable and enforceable against the Principal Manufacturer /OEMs notwithstanding any dispute between the Principal Manufacturer /OEM and the Authorised Representative.
8. The Principal Manufacturer /OEM hereby agrees that notwithstanding any variation made in the terms of the Transaction Documents, the Principal Manufacturer /OEM shall not be released or discharged of their obligation under this Guarantee provided that in the event of such variation the liability of the Principal Manufacturer /OEM shall notwithstanding anything herein contained be deemed to have accrued and the Principal Manufacturer /OEM shall be deemed to have become liable hereunder on the date or dates on which the Authorised Representative become liable to perform its obligations which became due under the said Transaction Documents.
9. The Guarantee hereby given is independent and distinct from any security that the MDL have taken or may take in any manner whatsoever whether it is by way of a performance guarantee or security Deposit as per provisions of the Tender and Transaction Documents.
10. The Principal Manufacturer /OEM shall pay all stamp duty, other duties, Taxes, fees, penalties or other charges payable on or in connection with the execution, issue, delivery, registration of this Deed, and any document, act and registration performed pursuant hereto, if and when the same has become payable according to the Applicable Law.
11. The Principal Manufacturer /OEM declares that the information and data furnished by it to MDL and the Authorised Representative pursuant to the Tender is true and correct.
12. This Deed shall be governed by and construed in all respects with the Indian laws and the parties hereto agree that any matter or issues arising hereunder or any dispute hereunder shall be subject to the jurisdiction of the competent Courts/Tribunals of the city of Mumbai in India.
13. This Deed may be executed in 2 (two) counterparts, each of which so executed will be deemed to be an original and such counterpart together will constitute one and the same Deed.

**IN WITNESS WHEREOF** the Principal Manufacturer /OEM (abovementioned) has executed these presents the day and year first hereinabove written.

Signed, Sealed and Delivered on behalf of

**By:**  
**Name: (\*)**

**Title: (\*)**

**Witness**

**1.**  
**2.**

-----

**Undertaking for Conflict of Interest Among Bidders/ Agents**

A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of MDL's interests. The bidder found to have a conflict of interest shall be disqualified. A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

- (i) they have controlling partner (s) in common; or
- (ii) they receive or have received any direct or indirect subsidy/ financial stake from any of them; or
- (iii) they have the same legal representative/agent for purposes of this bid; or
- (iv) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; or
- (v) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/ Assemblies from one bidding manufacturer in more than one bid.
- (vi) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorise only one agent/dealer. There can be only one bid from the following:
  - (aa) The principal manufacturer directly or through one Indian agent on his behalf; and
  - (ab) Indian/foreign agent on behalf of only one principal.
- (vii) Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid;
- (viii) In case of a holding company having more than one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/similar line of business.

**DECLARATION BY AUTHORISED SIGNATORY OF THE FIRM**

"I..... have read the above clause regarding Conflict of Interest Among Bidders/ Agents. I certify that this bidder fulfils all the requirements in this regard and does not have any conflict of interest"

**AUTHORISED SIGNATURE:** \_\_\_\_\_

**DATE:** \_\_\_\_\_

**Seal / Stamp of Bidder**

-----



Scope of work attached



**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07



**OIL AND NATURAL GAS CORPORATION LIMITED**

**TENDER NO. MR/ES/MM/PRPP/14/2023/ P851L23011**

**PART REPLACEMENT PIPELINE PROJECT (PRPP)**



00	10 Dec 2023	IFB			
<b>Revision No</b>	<b>Issue Date</b>	<b>Description</b>	<b>Prepared By</b>	<b>Reviewed By</b>	<b>Approved By</b>



**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07**



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ANNEXURE I  
ANNEXURE II





## PART REPLACEMENT PIPELINE PROJECT (PRPP)

RFQ FOR LSAW LINEPIPE  
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### 1. INTRODUCTION

#### PROJECT BACKGROUND

Oil and Natural Gas Corporation Limited is engaged in exploration and exploitation of hydrocarbon in Western Offshore field in the Arabian Sea on the continental shelf of Western India. The field is well developed with an extensive infrastructure of well head platforms, process platforms and pipelines. With the ageing of field, condition of some of its existing pipelines has deteriorated. Company is planning for part replacement of these pipelines.

Mazagon Dock Shipbuilders Limited, Mumbai, an ISO 9001: 2015 Company is one of the leading shipbuilding yard in India. The History of Mazagon Dock dates back to 1774, when a small dry dock was constructed in Mazagon. Over the years, MDL has earned a reputation for quality work and established a tradition of skilled and resourceful service to the shipping world in general and the Indian Navy & Coast Guard. It was incorporated as a Private Limited Company in 1934.

After its takeover by the Government in 1960, Mazagon Dock grew rapidly to become the premier war-shipbuilding yard in India, producing warships for the Navy and offshore structures for the Bombay High. It has grown from a single unit, small ship repair company, into a multi-unit and multi-product company, with significant rise in production, use of modern technology and sophistication of products. The company's current portfolio of designs spans a wide range of products for both domestic and overseas clients. Since 1960, MDL has built total 801 vessels including 27 warships, from advanced destroyers to missile boats and 7 submarines. MDL had also delivered cargo ships, passenger ships, supply vessels, multipurpose support vessel, water tankers, tugs, dredgers, fishing trawlers, barges & border out posts for various customers in India as well as abroad. MDL have also fabricated and delivered jackets, main decks of wellhead platforms, process platforms, jack-up rigs etc.

#### SCOPE OF DOCUMENT

This RFQ defines the scope of work of SAWL Line pipe Contractor involved in the Part Replacement Pipelines Project (PRPP).

### 2. PROJECT SCOPE

The scope of this project is to part replacement of submarine pipe lines (some pipelines from riser bottom bend to riser bottom bend) in Mumbai High and Neelam-Heera Asset's fields. Under this Contract about 45.4 km of subsea pipelines comprising of about 19 no. of segments are required to be replaced partially.



**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
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**PRPP PROJECT PIPELINE SCOPE SUMMARY**

Sr No	Field	Segment	Service	From KP	To KP	Total KP	Water Depth m	Free Span Nos	Crossing Nos	SPRU Nos	SPRU Class
1	MH North	NM-MNP	WF	0.1	2.4	2.3	80-85	2	6	2	#1500
2	MH South	IU-ICG	WF	0.2	2.2	2	80-90	2	2	2	#1500
3	MH South	SV-SHD	WF	0.9	2.9	2	70-75	2	1	2	#1500
4	MH North	N16-MNP	WF	Riser Bottom	3	3	70-75	3	8	2	#900
5	MH North	WI2-N3	WF	Riser Bottom	Riser Bottom	4	60-65	4	2	2	#900
6	MH South	SJ2-SA	WF	2.6	3.8	1.2	78-80	2	4	2	#1500
7	MH South	SQ-BHS	WF	Riser Bottom	2	2	70-80	2	5	2	#900
8	MH South	SF-BHS	WF	Riser Bottom	1	1	70-75	1	2	2	#1500
9	MH South	SB-SA	WF	2.5	3.5	1	74-80	1	4	2	#900
10	MH South	RS 8- ID	WF	Riser Bottom	Riser Bottom	4.3	74-78	4	6	2	#900
11	MH South	ZB-ICD	WF	Riser Bottom	2	2	75-80	2	1	2	#900
12	MH South	SE-MSP	WF	0.4	1.4	1	75-85	1	1	2	#900
13	MH North	MNW-N15	WI	Riser Bottom	Riser Bottom	6.6	64-72	7	35	2	#1500
14	MH North	N12-NS	WI	Riser Bottom	Riser Bottom	3	64-72	3	3	2	#1500
15	Heera	HSD-HRC	WF	0.5	2.5	2	48-52	2	2	2	#900
16	Heera	HSC-HRG	WF	0.6	2.6	2	50-60	2	1	2	#900
17	Heera	HS-HRG	WF	0.3	1.3	1	45-50	1	7	2	#1500
18	Heera	HE-HRG	WF	Riser Bottom	2	2	50-55	2	6	2	#1500
19	Heera	HRG-HX	WI	Riser Bottom	2	2	50-55	2	1	2	#1500



## PART REPLACEMENT PIPELINE PROJECT (PRPP)

RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07



### 3. SCOPE OF SUPPLY

Sr No	Segment	Pipe Outer Diameter		Wallthickness mm (HOLD)	Material Specification	Type	Line Pipe Required Qty		Design Pressure Kg/cm2	Design Temperature Degree C
		Inch	mm				Length (M)	Approx. No of pipes		
1	IU-ICG	16	406.4	15.9	API 5L X 60 (CS)	SAWL	2200	181	148	93
2	ZB-ICD	16	406.4	15.9	API 5L X 60 (CS)	SAWL	2200	181	93.7	93
3	HSD-HRC	16	406.4	15.9	API 5L X 60 (CS)	SAWL	2200	181	94.9	93
4	HSC-HRG	16	406.4	15.9	API 5L X 60 (CS)	SAWL	2200	181	93.8	83

**Note:**

1. Wall thickness and length will be finalised before PO Placement





**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07**



**4. INSPECTION TEST PLAN**

<b>Item: LONGITUDINAL SEAM SUBMERGED ARC WELDED LINEPIPE FOR SUBMARINE PIPELINES (NON-SOUR SERVICE)</b>					<b>INSPECTION CATEGORY: A</b>
<b>ONGC FUNCTIONAL SPEC: 2020C</b>					
Activity No	1. Inspection by ONGC or ONGC Appointed Certification Agency (CA)				
	2. Inspection by LSTK contractor's inspection agency (TPI)				
	3. Inspection by Vendor/ Sub-vendor				
	4. Certificates/ Data to be submitted by Vendor				
Stages of Inspection					
<b>GENERAL &amp; DOCUMENTS -FOR REVIEW /APPROVAL/INFORMATION</b>					
1	A	R	H	X	QUALITY PLAN
2	A	R	H	X	MANUFACTURING PROCEDURE SPECIFICATION
3	A	R	H	X	INSPECTION TESTING PLAN
4	R	R	H	X	TESTS / INSPECTION REPORTS BY VENDOR
5	R	R	H	X	MATERIAL TEST CERTIFICATES / COMPLIANCE CERTIFICATES
6	R	R	H	X	CALIBRATION CERTIFICATES / REPORTS OF TESTING EQUIPMENTS/NDT TECHNICIAN QUALIFICATION CERTIFICATES
7	R	R	H	X	WPS/PQR AND WPO'S
8	R	H	H	X	FINAL DOCUMENTATION , FDPT, MILL PRODUCTION REPORTS
9	R	R	H	X	PIPE MANUFACTURING DATA BOOK
<b>INSPECTION AND TESTING- FOR WITNESS/ RANDOM WITNESS</b>					
10	RW	W	H	X	MATERIAL IDENTIFICATION
11	RW	W	H	X	CALIBRATION OF EQUIPMENTS/ INSTRUMENTS
12	RW	W	H	X	FIRST DAY PRODUCTION SAMPLING AND TESTING FOR MECHANICAL & CHEMICAL TESTS
13	RW	W	H	X	PRODUCTION TEST SAMPLING AND TESTING FOR MECHANICAL, CHEMICAL & SUPPLEMENTARY TESTS
14	RW	W	H	X	PIPE END/ BEVEL & HYDROTESTING CHECK
15	RW	W	H	X	ALL DESTRUCTIVE AND NDT AS PER STANDARD & SUPPLEMENTARY REQUIREMENTS AS PER SPEC WITH ADDENDUM
16	RW	RW	H	X	PIPE END DEMAGNETISING
17	RW	W	H	X	FINAL DIMENSIONAL, VISUAL CHECK, WEIGHT CHECK, MARKING, DIE STAMPING AND BEVEL PROTECTORS ETC.
<b>IRN FOR ISSUE BY CA/TPI/CONTRACTOR IA</b>					
18	Is	R	-	-	ISSUE OF INSPECTION RELEASE NOTE AT VENDOR'S PLACE
<b>** OTHER REQUIREMENT**</b>					
19	RW	RW	H	X	CHECK PREPARATION FOR SHIPMENT

The Activities listed above are not exhaustive. Inspection of other activities shall be carried out as per requirement of the FS.

Legend & Notes : Explained Separately.

**5. APPLICABLE STANDARDS**

ONGC SPEC NO: 2020D Rev 2. Functional Specification For Longitudinal Submerged Arc Welded Line Pipe For Submarine Pipelines (Sour Service)

ONGC SPEC NO: 2022 Rev 1. Functional Specification For Hydrostatic Testing Of Submarine Pipeline



**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
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**6. LIST OF ATTACHMENTS**

- ANNEXURE I: VENDOR EVALUATION FORM
- ANNEXURE II: FUNCTIONAL SPECIFICATION





**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
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**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07**



**TECHNICAL QUESTIONNAIRE - FORM A**

The questionnaire shall be completely filled in and submitted along with vendor's bid to avoid further queries for proper evaluation of bid. If this is not complied with, vendor's bid is liable to be rejected. Vendor shall sign/date and affix his seal to the form.

**A) SCOPE OF SUPPLY**

Indicate answers by ✓ in the appropriate  **box**.

- I. Is the vendor in total agreement with his scope of supply as defined in the Material Requisition?  **YES**  **NO**  **NA**
- II. If NOT in total agreement, indicate in which of the following deviation is required:
- a Data Sheets  **YES**  **NO**  **NA**
- b Specification  **YES**  **NO**  **NA**
- c Vendor Data Requirement Schedule (VDRS)  **YES**  **NO**  **NA**
- d QA/QC requirements (Inspection & Testing requirements)  **YES**  **NO**  **NA**

If the answer is 'YES' for any of the above in A(II), exact deviation required shall be described in detail indicating the appropriate clause (s) in attached Form-B. If no deviation are indicated, then vendor to specify NIL in Form-B, and it will be assumed that all the requirement of the subject requisition shall be complied with no deviation whatsoever shall be accepted after the placements of order. Vendor shall submit filled in Form-B, duly signed & stamped.

- 1 Whether total system supply is in vendor's scope, are there any items vendor wishes to add to achieve total system completion in all respects?  
(If 'Yes' details to be given)  **YES**  **NO**  **NA**
- 2 Does bid include
- a. Commissioning spares  **YES**  **NO**  **NA**
- b. Maintenance / operational spares (2 years period)  **YES**  **NO**  **NA**
- c. Special tool & tackles  **YES**  **NO**  **NA**
- d. Construction spares & consumables  **YES**  **NO**  **NA**
- 3 Others:
- a. Are mounting accessories, if any, included in bid?  **YES**  **NO**  **NA**
- b. Are special installation procedures, if any, included in bid?  **YES**  **NO**  **NA**
- c. Is Supervision of installation in Vendor scope?  **YES**  **NO**  **NA**
- d. In installation in Vendor scope?  **YES**  **NO**  **NA**



**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
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e.	Is Supervision of commissioning in Vendor scope?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Is Commissioning in Vendor scope?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Does the bid include:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a.	Power requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Special Cable requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Special Calibration equipment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
(Extra charges, if any, for the above to be indicated in the bid)				
<b>B)</b>	<b>INSPECTION/CERTIFICATE</b>			
1	Has vendor indicated in bid detailed inspection procedure being carried out by him?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2	Have extra charge, if any for any special inspection to carried out (as specified in Requisition) indicated in bid ?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3	Can vendor furnish certificate from competent authorities as indicated below after order placement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SL. NO.	CERTIFICATION FOR	CODE NO.	NAME OF CERT. AUTHORITY	
a)	Explosion proof housing.			<input type="checkbox"/>
b)	Intrinsic. Safe			<input type="checkbox"/>
c)	Weather proof housing			<input type="checkbox"/>
d)	IBR approval			<input type="checkbox"/>
e)	Fire safe Valves			<input type="checkbox"/>
f)	Flames Retardant Cables			<input type="checkbox"/>
g)	Fire Resistant Cables			<input type="checkbox"/>
h)	Others (please specify)			<input type="checkbox"/>
<b>C) DOCUMENTATION (VENDOR OFFER)</b>				
Referring to Vendor Document Requirement Schedule (VDRS), does offer include the following documents at bid stage:				
1.	Cover sheet of the offer indicating Material Requisition document number, revision number, equipment/package description and Vendor's offer reference number with date & vendor details.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2.	Scope of supply sheet with sub-vendor list.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3.	List of documents attached with offer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4.	Vendor reference list for previous such installation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5.	Manufacturing/Delivery schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6.	Filled in Form-A "Technical Questionnaire", duly signed & stamped by vendor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7.	Filled in Form-B "Deviation List", duly signed & stamped by vendor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13.	Catalogue/Leaflets/Technical literature for the offers product.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14.	Filled in data sheet as per section -3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







**PART REPLACEMENT PIPELINE PROJECT (PRPP)**

**RFQ FOR LSAW LINEPIPE  
PRPP-RFQ-PL-07**



**ANNEXURE II  
FUNCTIONAL SPECIFICATION**



Offshore Design Section  
Engineering Services  
ISO – 9001:2008

Functional Specification  
for Longitudinal Submerged Arc  
Welded Line Pipe for  
Submarine Pipelines ( Sour  
Service)

Spec. No.	2020D
Rev. No.	2
Discipline	PIPELINE
Page: 1 OF 40	

**SPECIFICATION  
FOR  
LONGITUDINAL SUBMERGED ARC WELDED LINE PIPE  
FOR  
SUBMARINE PIPELINES  
(SOUR SERVICE)**

**OIL AND NATURAL GAS CORPORATION LTD.  
INDIA**

AVIN ASHOK EE(C)	R.P. PUROHIT CE(C&M)	ROHIT PANT DGM(M)	SANJAY NARAIN DGM(C&M)
RAJKAMAL GUPTA DGM(C&M)	BALMIKI SINGH DGM(C&M)	BRAHMPAL MALIK DGM(C&M)	K.P.VARGHESE DGM(C&M)
PREPARED BY			
A.K.MISHRA DGM (C&M)		D.R.KAMBLE GM (C&M)	
REVIEWED BY		APPROVED BY	
40	18.04.2016	2	
TOTAL NO. OF PAGES	DATE	REV.NO.	

	<b>Offshore Design Section</b> <b>Engineering Services</b> <b>ISO – 9001:2008</b>	<b>Functional Specification</b> <b>for Longitudinal Submerged Arc</b> <b>Welded Line Pipe for</b> <b>Submarine Pipelines ( Sour</b> <b>Service)</b>	<b>Spec. No.</b>	<b>2020D</b>
			<b>Rev. No.</b>	<b>2</b>
			<b>Discipline</b>	<b>PIPELINE</b>
			<b>Page: 2 OF 40</b>	

## 1. SCOPE

This specification establishes the minimum requirements for the materials, fabrication, inspection, testing and supply of Longitudinal Seam Submerged Arc Welded (LSAW) carbon steel line pipe to be used for submarine pipelines and risers transporting sour hydrocarbons. Line pipes furnished in accordance with this specification shall meet the requirements of **API Specification 5L, Forty-Fifth Edition and the supplementary requirements stated herein.**

All carbon steel pipes made according to this specification shall be PSL2. All material shall be suitable for sour service and shall be in accordance with NACE MR-01-75 / ISO 15156.

This specification covers LSAW line pipes of pipe sizes 406.4 mm (16 inches) thru 1219 mm (48 inches) OD and grades up to L450 (X-65). The Manufacturer shall have the license to use API monogram for manufacturing of **PSL2** pipes in accordance with the requirements of API Spec 5L, **Forty-Fifth Edition along with Annexure H and Annexure J.**

“COMPANY” means “Oil and Natural Gas Corporation Ltd.”, wherever used in this specification.

### NOTE

The sections, paragraphs contained herein have the same numbering as the sections and paragraphs of API 5L, in order to facilitate reference.

In this Specification, amendments to API 5L fall into the following Categories:

<b>ADD</b>	Where additions have been made to the API 5L clause or paragraph.
<b>AMEND</b>	Where the API 5L clause has been modified. Only the modified portions will be detailed in this Specification
<b>DELETE</b>	Where the complete clause or paragraph is to be disregarded.
<b>SUBSTITUTE</b>	Where the text has been substituted for the complete clause or paragraph in API5L.
<b>NEW</b>	Where a New Clause is Added.

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## 6 PIPE GRADE, STEEL GRADE AND DELIVERY CONDITION

### 6.1 Pipe Grade and Steel Grade

#### 6.1.2 ADD

Maximum pipe grade shall be up to Grade L450 (X65), where 450 represents the Yield Strength in MPa.

### 6.2 Delivery Condition

#### 6.2.2 ADD

The pipes shall be produced from plates which shall be quenched and tempered or Thermo mechanical rolled to impart uniformly fine ferritic grain structure to the finished steel. Acceptable pipe manufacturing routes are as follows:

Starting Material	Pipe Forming	Final Heat Treatment	Delivery Condition
Thermo-Mechanical Rolled plate or strip	Cold Forming	None, Unless Required due to degree of Cold Forming	M
QT Plate or Strip			Q

Temperature of furnace shall be controlled and recorded and such records shall be made available to the Company.

## 7 INFORMATION TO BE SUPPLIED BY THE PURCHASER

### 7.1 General Information

The purchase order shall include the following information:

#### SUBSTITUTE

S.no	Information to be provided as per API 5L	Information provided by the COMPANY to be incorporated in PO/PS.
a)	quantity(e.g. total mass or total length of pipe)	As per provisions of the Contract.
b)	PSL (1 or 2)	PSL2
c)	type of pipe (see Table 2)	SAWL
d)	reference to API 5L	API Spec 5L, Forty-Fifth Edition
e)	steel grade (see 6.1, H.4.1.1 or J.4.1.1, whichever is applicable)	H.4.1.1 shall be applicable
f)	outside diameter and wall thickness (see 9.11.1.2)	As per provisions of the Purchase Specification.

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g)	length and type of length (random or approximate) (see 9.11.1.3, 9.11.3.3 and Table 12)	Refer J.6.3 of API 5L Forty Fifth edition.
h)	confirmation of applicability of Individual annexes.	The applicable Annexes as shown in the following supplementary Table:

#### Applicable Annexures:

	Service
Annex B(Amended)-Manufacturing procedure qualification for PSL 2 pipe	Offshore and Sour Service both.
Annex C (Amended) - Treatment of surface imperfections and defects	Offshore and Sour Service both.
Annex D (Amended) – Repair Welding Procedure	Offshore and Sour Service both
Annex H (Amended) - PSL 2 Pipe ordered for Sour Service	Offshore and Sour Service both.
Annex J (Amended) - PSL 2 pipe ordered for offshore service	Offshore and Sour Service both.
Annex K (Amended) - Non-destructive inspection for pipe ordered for sour service and/or offshore service	Offshore and Sour Service both.

**Note:** In case of any contradiction between different clauses of this Specification, the most stringent clause shall prevail upon.

## 7.2 ADDITIONAL INFORMATION

### SUBSTITUTE

a)	<b>Items that are subject to mandatory agreement, if applicable:</b>	
<b>S.no.</b>	<b>Information to be provided as per API 5L</b>	<b>Information by the COMPANY to be incorporated in PO/PS.</b>
1	pipe designation for intermediate grades [see Table 1, footnote a)]	Not applicable
2	chemical composition for intermediate grades (see 9.2.1 and 9.2.2)	Not applicable
3	chemical composition for pipe with $t > 25.0$ mm (0.984 in) (see 9.2.3)	For Quenched and Tempered Delivery Condition, Chemical Composition of Pipes shall be as per Table H.1 of API 5L, 45 <sup>th</sup> Edition. For Thermo-mechanical rolled or

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		formed delivery condition, Chemical Composition of Pipes shall be as per Table H.1 of API 5L, 45 <sup>th</sup> Edition but the Carbon equivalent may be increased with 0.01.
4	carbon equivalent limits for PSL 2 pipe in Grade L415N or X60N (see Table 5)	Not Applicable
5	carbon equivalent limits for PSL 2 pipe in Grade L555Q or X80Q, L625Q or X90Q, and L690Q or X100Q (see Table 5),	Not applicable
6	carbon equivalent limits for PSL 2 SMLS pipe with $t > 20,0$ mm (0.787 in) [see Table 5, footnote a)],	Not applicable
7	diameter and out-of-roundness tolerances for pipe with $D > 1422$ mm (56.000 in) (see Table 10)	Not applicable
8	diameter and out-of-roundness tolerances for the ends of SMLS pipe with $t > 25,0$ mm (0.984 in) [see Table 10, footnote b)]	Not applicable
9	standard applicable to jointer welds (see A.1.2)	Not applicable. Jointers are not permitted.

<b>b)</b>	<b>Items that apply as prescribed, unless otherwise agreed:</b>	
<b>S.no.</b>	<b>Information to be provided as per API 5L</b>	<b>Information by the COMPANY to be incorporated in PO/PS.</b>
1	range of sizing ratio for cold-expanded pipe (see 8.9.2)	As per Sections 8.9.2 of API Spec 5L, Forty-Fifth Edition
2	equation for sizing ratio (see 8.9.3)	As per Sections 8.9.3 of API Spec 5L, Forty-Fifth Edition
3	chemical composition limits for PSL 1 pipe [see Table 4, footnotes c), e) and f)]	Not applicable.
4	chemical composition limits for PSL 2 pipe [see Table 5, footnotes c), e), f), g), h), i), k), and l)],	Applicable as per Table H.1 of API 5L 45 <sup>th</sup> edition. For applicable of Footnotes to Table H.1, refer Annex. H Sl.no.H2 (f) of this spec.
5	yield/tensile ratio for grades L625Q or X90Q, L690 or X100 and L830 or X120 [see Table 7, footnotes g and h or Table J.2, footnotes h and i],	Not applicable



6	estimation and reporting of Charpy shear area (see 9.8.2.3)	Not applicable
7	tolerances for random length pipe [see 9.11.3.3 a)]	Refer J.6.3 of API 5L 45 <sup>th</sup> edition.
8	type of thread compound (see 9.12.2.4)	Not applicable
9	type of end face (see 9.12.5.1 or 9.12.5.2)	As per Sections 9.12.5.1 or 9.12.5.2 of API Spec 5L, Forty-Fifth Edition
10	International Standard applicable to Charpy testing (see 10.2.3.3, 10.2.4.3, D.2.3.4.2 and D.2.3.4.3)	Charpy V- notch testing shall be done in accordance with ASTM A370.
11	product analysis method (see 10.2.4.1),	As per Section 10.2.4.1 of API Spec 5L, Forty-Fifth Edition
12	alternate method for diameter measurement for D ≥ 508 mm (20.000 in) (see 10.2.8.1),	As per Section 10.2.8.1 of API Spec 5L, Forty-Fifth Edition
13	jointer welding type (see A.1.1),	Not applicable
14	offset of longitudinal pipe weld seams at jointer welds (see A.2.4)	Not applicable
15	repairs in cold-expanded pipe (see C.4.2)	No repair of weld seam is permitted after cold expansion of pipes. Refer Section C.4.2, Annex C of this specification.
16	alternate IQI type (see E.4.3.1);	Not applicable.

<b>c)</b>	<b>Items that apply, if agreed:</b>	
<b>S.no.</b>	<b>Information to be provided as per API 5L</b>	<b>Information by ONGC to be incorporated in PO/PS.</b>
1	delivery condition (see 6.2 and Table 1)	Refer 6.2.2 of this specification.
2	supply of quenched and tempered PSL 1 Grade L245 or B SMLS pipe (see Table 1),	Not applicable.
3	supply of intermediate grades [see Table 2, footnote a)]	Not applicable.
4	supply of double-seam SAWL pipe [see Table 2, footnote c)]	Not applicable
5	alternative to specified seam heat treatment for PSL 1 pipe (see 8.8.1)	Not applicable.
6	supply of SAWH pipe with coil/plate end welds at the pipe ends (see 8.10.3),	Not applicable.
7	supply of jointers (see 8.11 and H.3.3.3)	Not applicable .Jointers are not permitted
8	CVN impact test temperature lower than 0°C (32°F) (see 9.8.2.1, 9.8.2.2 and 9.8.3)	CVN impact test temperature lower than 0°C (32°F) is not applicable.



9	CVN impact test of the pipe body of PSL 2 welded pipe with $D < 508$ mm (20.000 in) for shear fracture area (see 9.8.2.2 and Table 18)	Agreed. Applicable as per 9.8.2.2( Amended) of this Specification and Table J.6 of API 5L , 45 <sup>th</sup> Edition
10	CVN impact test of the longitudinal seam weld of PSL 2 HFW pipe (see 9.8.3 and Table 18)	Not applicable.
11	DWT test of the pipe body of PSL 2 welded pipe with $D \geq 508$ mm (20.000 in) (see 9.9.1 and Table 18)	Agreed. As per Section 9.9.1(Amended) of this specification and table 18 of API 5L, Forty fifth edition.
12	DWT test temperature lower than 0°C (32°F) (see 9.9.1)	DWT test temperature lower than 0°C (32°F) is not applicable
13	fraction jointers comprising 2 or 3 pieces for 12 m (40 ft) nominal or 24 m (80 ft) nominal, respectively [see 9.11.3.3.c), d), and e)],	Not applicable.
14	power-tight make-up of couplings (see 9.12.2.3 and 10.2.6.1)	Not applicable.
15	special bevel configuration (see 9.12.5.3)	Special bevel configuration, if required, shall be provided in Purchase order.
16	removal of outside weld bead at pipe ends of SAW or COW pipe [see 9.13.2.2 e)]	Applicable ; Refer 9.13.2.2(e) of this specification
17	weldability data or tests for PSL 2 pipe (see 9.15)	For X65 Grade Pipe only ( As per 9.15 of this specification)
18	type of inspection document for PSL 1 pipe (see 10.1.2.1)	Not applicable.
19	manufacturing information for PSL 1 pipe (see 10.1.2.2)	Not applicable.
20	alternative type of inspection document for PSL 2 pipe (see 10.1.3.1)	Refer 10.1.3.1 (Amended) of this Specification.
21	use of transverse test pieces for tensile tests of SMLS pipe, not cold-expanded [see Table 20, footnote c)]	Not applicable
22	use of the ring expansion test for transverse yield strength determinations [see 10.2.3.2, Table 19 note c), and Table 20 note d)],	Ring expansion test is not applicable.
23	use of an alternative to macrographic examination (see 10.2.5.2)	Not applicable
24	hardness test during production of EW and LW pipe (see 10.2.5.3)	Not applicable

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25	specific condition to be used for hydrostatic tests for threaded and coupled pipe (see 10.2.6.1)	Not applicable
26	alternate hydro test pressure (see Table 26),	Refer 10.2.6 of this specification. (Table 26 of API 5L is Not applicable.)
27	use of minimum permissible wall thickness to determine hydrostatic test pressure (see 10.2.6.7)	Applicable
28	specific method to be used for determining pipe diameter (see 10.2.8.1)	Clause 10.2.8.1 is Applicable. Further, Caliper / properly sized go-no-go gauges shall be used to verify that diameter and out of roundness at pipe ends for each pipe is within the required tolerances as per J.6.1 of API 5L.
29	use of inside diameter measurements to determine diameter and out-of-roundness for expanded pipe with $D \geq 219,1$ mm (8.625 in) and for non-expanded pipe [see 10.2.8.3 and Table 10, footnote c)].	Acceptable. Refer Cl. J.6.1 and Cl.10.2.8.3 of API 5L.
30	specific method to be used for determining other pipe dimensions (see 10.2.8.7)	Proposed methods shall be subject to COMPANY approval.
31	paint-stencilled markings for couplings (see 11.1.2)	Not applicable
32	additional markings specified by the purchaser (see 11.1.4)	For segregation of pipes additional markings/colour bands may be decided by the LSTK contractors.
33	specific surface or location for pipe markings [see 11.2.2 b) and 11.2.6 b)]	Refer 11.2.2(b) of API 5L 45 <sup>th</sup> edition & 11.2.6(b) of this specification
34	die-stamping or vibro-etching of pipe (see 11.2.3)	Only low stress die stamping shall be permitted on the pipe bevel face at the opposite end to pipe stencilled markings. The low stress marking shall be the unique pipe number only. Cold die stamping is not permitted on the pipe body. In case low stress die-stamping on bevel face is technically not feasible, alternate measures shall be made for providing unique pipe number for ensuring traceability of pipes.

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**Functional Specification  
for Longitudinal Submerged Arc  
Welded Line Pipe for  
Submarine Pipelines ( Sour  
Service)**

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35	alternative location for marking the pipe (see 11.2.4)	Marking shall be carried out at the pipe mill. Further, for pipes intended for subsequent coating, LSTK contractor shall submit the procedure for marking at coating yard ensuring the traceability of pipes.
36	alternative format for pipe length marking locations (see 11.2.6a),	Not applicable.
37	colour identification for pipe (see 11.2.7)	Applicable
38	multiple grade marking (see 11.4.1),	Not applicable.
39	temporary external coating (see 12.1.2)	Pipe shall be delivered with mill's standard temporary external coating throughout the external surface of pipe body to provide protection from rusting in storage and transit.
40	special coating (see 12.1.3)	Not applicable
41	lining (see 12.1.4),	Not applicable
42	manufacturing procedure qualification for PSL 2 pipe, in which case, Annex B shall apply (see B.2),	Applicable. Refer Annex B (Amended) of this specification.
43	radiographic inspection of SAW seam or coil/plate end seam (see Table E.1)	Required only for First Day Production Testing and repaired area as per Annex. B (Amended), Annex. C (Amended) and Annex. K ( Amended) of this Spec.
44	non-destructive inspection of PSL 1 SMLS pipe (see E.3.1.2),	Not applicable
45	NDT of EW seam welds after hydrotest [see E.3.1.3 b)],	Not applicable.
46	ultrasonic inspection of welded pipe for laminar imperfections at pipe ends (see E.3.2.3)	Required. Refer Annex. K ( Amended) of this Spec.
47	ultrasonic inspection of SMLS pipe for laminar imperfections at pipe ends (see E.3.3.2)	Not applicable
48	radiographic inspection in accordance with Clause E.4,	Required only for First Day Production Testing and repaired area as per Annex. B (Amended), Annex. C (Amended) and Annex. K( Amended)
49	use of both holes and notches in ultrasonic reference standard (see Table E.7),	Acceptable
50	alternative re-inspection technique for COW seams (see E.5.5.5)	Not applicable

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51	ultrasonic inspection for laminar imperfections in the pipe body of EW, SAW or COW pipe (see Clause E.8)	Required. Refer Annex.K (Amended) of this Spec.
52	ultrasonic inspection for laminar imperfections along the coil/plate edges or the weld seam of EW, SAW or COW pipe (see Clause E.9)	Required. Refer Annex. K(Amended) of this Spec.
53	supply of welded couplings on pipe with $D \geq 355,6$ mm (14.000 in) (see F.1.4)	Not applicable
54	application of Annex G to PSL 2 pipe where purchaser shall specify the toughness test temperature, the minimum energy for each test and the minimum average energy value required for the order (see G.2),	Not applicable
55	PSL 2 pipe for sour service, in which case, Annex H shall apply (see H.2),	Applicable. Refer Annex H (Amended) of this specification.
56	TFL pipe, in which case, Annex I shall apply (see I.2),	Not applicable
57	pipe for offshore service, in which case, Annex J shall apply (see J.2),	Applicable. Refer Annex J (Amended) of this specification
58	any other additional or more stringent requirements.	As included within this document.

## 8 MANUFACTURING

### 8.1 Process of Manufacture

#### ADD

This specification is applicable for Longitudinal submerged arc welded pipe only. Other types of pipes specified in Table 2 and pipe for intermediate grades (refer footnote a) of Table 2 are not applicable in this specification. The pipes shall be produced from plates/ skelp which shall be quenched and tempered or Thermomechanical-rolled to impart uniformly fine ferritic grain structure to the finished steel.

### 8.3 Starting Material

#### 8.3.2 AMEND

Pipes furnished to this specification shall be made to a clean steel practice using either basic-oxygen steel or electric arc furnace steel. Steel shall be vacuum degassed or alternative processes shall be applied. The material shall be treated for inclusion shape control to increase resistance to hydrogen-induced (blistering and stepwise) cracking. Steel shall be made by continuous casting only. Manufacturing procedure as mentioned in Annex B (Amended) of this specification shall be prepared and submitted to Company for approval prior to start of production.

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### 8.3.3 AMEND

The steel shall be fully killed and made with fine grain structure with a grain size of ASTM 7 or finer as per ASTM E 112.

### 8.9 Cold sizing and cold expansion

#### 8.9.1 DELETE

#### 8.9.2 ADD

The expansion shall be measured and recorded for one out of every 50 pipes.

### 8.11 Jointers

#### AMEND

Jointers shall not be permitted.

## 9. ACCEPTANCE CRITERIA

### 9.8 CVN Impact Test for PSL 2 Pipe

#### 9.8.1.3 AMEND

Tests shall be conducted at 0°C (32°F)

#### 9.8.2 Pipe Body Tests

##### 9.8.2.1 AMEND

The minimum average (of a set of three test pieces) and minimum individual absorbed energy for each pipe body test shall be as given in Table 8 (substituted), based upon full-size test pieces and a test temperature of 0 °C (32 °F). Test temperature lower than 0°C (32°F) is not applicable.

**TABLE 8 (SUBSTITUTED)**

API 5L Table-8 is substituted as under:

Grade	Min. Average	Min. Individual
X-42	29J	22J
X-46	32J	24J
X-52	36J	27J
X-56	39J	29J
X-60	41J	31J
X-65	43J	33J

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Note: The average impact values are determined by finding the mean of the values of each group of three specimens from each sample taken separately. The minimum impact value is determined by considering the values of the individual specimens from the sample.

#### **9.8.2.2 AMEND**

The minimum average (set of three test pieces) shear fracture area for each test shall be at least 85 %, based upon a test temperature of 0 °C (32 °F).

#### **9.8.3 Pipe weld and HAZ tests**

##### **AMEND**

The minimum average (of a set of three test pieces) absorbed energy for each weld and HAZ test shall be as given in Table 8 (substituted), based upon full-size test pieces and a test temperature of 0 °C (32 °F).

#### **9.9 DWT test for PSL 2 welded pipe**

##### **9.9.1 AMEND**

For each test (of a set of two test pieces), the average shear fracture area shall be  $\geq$  85 %, based upon a test temperature of 0 °C (32 °F).

##### **9.9.2 DELETE**

#### **9.10 Surface Conditions, Imperfections and Defects**

##### **9.10.1 General**

##### **9.10.1.2 ADD**

No cracks shall be permitted. Section of the pipe containing cracks shall be cut off as per the requirement of clause C.3(b) or entire pipe length shall be rejected as per the requirement of clause C.3.(c) of API 5L.

##### **9.10.1.3 AMEND**

The acceptance criteria for imperfections found by non-destructive inspection shall be in accordance with Annex K (amended) of this specification.

##### **9.10.2**

##### **(c) AMEND**

Undercuts that exceed the limits specified in item b) shall be classified as defects and shall be treated in accordance with API 5L para C.3 (b) or (c).

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#### 9.10.4 Laminations

##### ADD

Refer Annex K (Amended).

#### 9.10.5 Geometric Deviations

##### 9.10.5.2 AMEND

Depth of dent shall not exceed 2 mm and length in any direction shall not exceed half of the pipe diameter, provided this dent does not give rise to a hard spot at the internal surface exceeding 235 HV10. Disposition of dents shall be carried out in accordance with API 5L para C.3.b) or C.3.c) of Annex C. Dents on weld and HAZ are not acceptable.

#### 9.10.6 Hard Spots

##### SUBSTITUTE

Any hard spot larger than 50 mm (2.0 in) in any direction shall be classified as a defect if its hardness exceeds 235 HV10 based upon individual indentations. Sections of pipes where hardness is greater than the allowable value shall be cut off as per requirements of API 5L para C.3.b) or C.3.c) of Annex C.

#### 9.10.7 Other Surface Imperfections

##### SUBSTITUTE

Other surface imperfections found by visual inspection shall be investigated, classified and treated as follows:

- a. Imperfections that have a depth  $\leq 0.05t$  and do not encroach on the minimum permissible wall thickness shall be classified as acceptable imperfections and shall be treated in accordance with Clause C.1.
- b. Imperfections that have a depth  $> 0.05t$  and do not encroach on the minimum permissible wall thickness shall be classified as defects and shall be dressed – out by grinding in accordance with Clause C.2 ( Amended) or shall be treated in accordance with Clause C.3.
- c. Imperfections that encroach on the minimum permissible wall thickness shall be classified as defects and shall be treated in accordance with Clause C.3.(b) or C3(c).

#### 9.11 Dimensions, Mass and Tolerances

##### 9.11.3 Tolerances for Diameter, Wall Thickness, Length and Straightness

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## AMEND

Tables 10, 11 & 12 of API 5L shall not be applicable.

### 9.11.3.1 SUBSTITUTE

Tolerances for diameter and out-of-roundness shall be as per Table J.3 of API Specification 5L.

### 9.11.3.2 SUBSTITUTE

Wall thickness tolerance shall be as per J6.2 (Substituted) of this specification. Table 11 shall not be applicable.

### 9.11.3.3 SUBSTITUTE

**Refer J.6.3** of API 5L.

### 9.11.3.4 SUBSTITUTE

The tolerances for straightness shall be as per **J.6.4** of API Specification 5L.

## 9.12 Finish of Pipe ends

### 9.12.5 Plain ends

#### 9.12.5.1 & 9.12.5.2

#### ADD

Pipe ends shall be supplied with standard API bevel. However, in case of any specific requirement of bevel angle the same shall be provided in purchase order.

While removing the inside seam burrs at the pipe ends, care shall be taken neither to remove excess metal nor to form an inside cavity. Removal of excess metal beyond the minimum wall thickness as indicated in para 9.11.3.2 of this specification, shall be a cause for cutting and removal of defective section and rebeveling.

In case root face of bevel is less than specified, rebeveling shall be done and rectification shall not be made by filling or grinding.

## 9.13 Tolerances for the weld seam

### 9.13.1 Radial offset of strip/plate edges (SUBSTITUTE)

The inside and outside radial offsets of the strip/plate edges [see Figure 4 b)] shall not exceed the applicable value given in Table J.5.

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### 9.13.2.2 (e) ( Amend)

For a distance of at least 150 mm (6.0 in) from each pipe end, the outside weld bead shall be removed by grinding such that it does not extend above the adjacent pipe surface by more than 0.5 mm (0.020 in).

### 9.13.3 Misalignment of the weld beads

#### ADD

All pipes shall be checked for out-of-line weld bead and shall be measured and recorded at least 3 times per operating shift (12 hours maximum).

Checking of the weld seam misalignment shall also be carried out on metallographic examination specimen.

## 9.15 Weldability Test for PSL2 Pipe

#### Amend

FOR GRADE X-65 ONLY Manufacturer shall carry out a weldability test to establish that quality girth welding meeting various requirements mentioned in this specification can be achieved under simulated site conditions. This test shall be carried out using pipes from any of the first three heats with highest carbon equivalent for each wall thickness and each grade of steel specified in the purchase order. In case more than one mill is proposed to manufacture pipes, the weldability test shall be carried out for each mill.

Welding procedure shall comply with the requirements of DNV-OS-F101. Procedure for field weldability test shall be submitted by the manufacturer in line with DNV-OS-F101 and approved by purchaser prior to commencement of test.

Weldability test shall include all tests listed in DNV-OS-F101 aimed at establishing the weld quality/ properties as per this specification. The acceptance criteria shall be as per the requirements of this specification. In case of failure of any test results to comply the specification requirements, manufacturer shall revise the welding procedure adopted and carry out the tests again to comply the specification requirements. Manufacturer shall submit the test results to purchaser to comply specification requirements prior to shipment of pipes.

## 10. INSPECTION

### 10.1.3. Inspection documents for PSL 2 pipe

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### 10.1.3.1 AMEND

Inspection certificate shall be issued and validated as per “3.1C” in accordance with ISO 10474 : 1991.

### 10.1.3.2 SUBSTITUTE

The manufacturer shall provide production report including acceptance test certificates as mentioned in 13 of API Specification 5L (as applicable for LSAW pipe) in six copies, which shall include the results of all testing required as per this specification and performed on raw material and delivered pipes giving details of, but not limited to the following for each pipe length:

- COMPANY's Name and Order Number;
- SUPPLIER's Identification;
- Name and location of facilities used for pipe manufacturing, plate rolling and steelmaking
- Pipe specified outside diameter, specified wall thickness, pipe grade
- Type of pipe, Product Specification Level ( PSL ) and delivery condition;
- Steelmaking Process;
- Identification of Steel Type and Grade;
- Slab number, as applicable;
- chemical composition (heat and product),Certificates of Ladle and Product Analysis;
- CE<sub>IIW</sub> / Pcm for both Product and Ladle Analysis;
- Pipe Identification number, Heat number, Pipe length and Pipe weight
- Certified measurements for Dimensional measurements/ tolerance
- tensile test results and the type, size, location and orientation of the test pieces,Mechanical Test Certificates.
- Yield/Tensile Ratio (based on R<sub>t0.5</sub>);
- % Elongation of pipe;
- Charpy Impact Results;
- Hardness Tests;
- DWT test results;
- Heat Treatment Condition including review of records of furnace temperature(s);
- specified minimum hydrostatic test pressure and specified test duration, Hydrostatic Test Certificate, or statement;
- the method of non-destructive pipe body and weld inspection (radiological, ultrasonic, MPI and electromagnetic) used; and the type and size of reference indicator or image quality indicator used,NDT Procedures, NDT Records and Reports;
- Surface Inspection;
- Dimensional Control Checks;
- Manufacturing Procedure Specification and Qualification Tests;
- Macrographic and Metallographic records

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- HIC including photomicrographs ; Four Point Bend Test , Hardness test and CTOD test records;
- SSC ,HIC and Four Point Bend Test records and reports for Mill Qualification
- Information on production & shipping
- All other reports and results as required as per this specification
- NDT Operator Qualification Certificates;
- Inspection certificate issued and validated by Authorized representative of Purchaser, as per “3.1C” of ISO 10474 : 1991, in accordance with this specification.
- COMPANY Authorized representative’s Pipe Inspection and Release Note.

Such documents shall indicate pipe identification number, the origin of each individual test specimen etc. and shall be written in English only. International system of units (SI) shall be adopted. The certificates shall be valid only when signed by Company Representative. Only those pipes which have been certified by Company Representative shall be dispatched from the pipe mill.

Manufacturer shall also provide information on test failure / rejected heats etc.

## **10.2 Specific Inspection**

### **10.2.1 Inspection frequency**

#### **10.2.1.2 AMEND**

The inspection frequency shall be as given in Table 18 of API 5L , 45<sup>th</sup> Edition modified by Table H.3 of API 5L , 45<sup>th</sup> Edition and Table H.3 ( Amended) of this Specification and Table J.6 of API 5L , 45<sup>th</sup> Edition

### **10.2.2 Samples and test pieces for product analysis.**

#### **ADD**

Product analysis shall be carried out from finished pipes.

### **10.2.6 Hydrostatic Test**

#### **10.2.6.1 SUBSTITUTE**

The test pressure for all sizes and grades of pipes shall not be less than the maximum pressure calculated based on either of the criteria mentioned at 10.2.6.5 (amended) and 10.2.6.6 (amended) .The test pressure shall be held for a minimum period of 15 seconds for all sizes and grades of pipes.

#### **10.2.6.2 AMEND**

The Test pressure measuring device used for hydrostatic testing shall be calibrated with a Dead Weight tester and the record shall be maintained. Calibration records shall be

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furnished to Company Representative. The calibration shall be conducted at start of a run and after a hydrostatic burst/leak failure

#### **10.2.6.5 AMEND**

The required test pressure shall produce a hoop stress of at least 95% of the specified minimum yield strength for all the grades and sizes.

#### **10.2.6.6 AMEND**

In case, pressure testing involves end sealing ram, the required test pressure shall produce a hoop stress of at least 95% of the specified minimum yield strength for all the grades and size.

#### **10.2.7 Visual Inspection**

##### **10.2.7.1 AMEND**

Each pipe shall be visually inspected to detect surface defects, with an illuminance of at least 300 lx (28 fc). Such inspection shall be over the entire external surface and shall cover as much of the internal surface as is practical.

##### **10.2.7.2 DELETE**

##### **10.2.7.4 AMEND**

Maximum hardness in suspected hard spots shall be 235 HV10. Sections of pipes where hardness is greater than the allowable value shall be cut off as per requirements of API 5L para C.3.b) or C.3.c) of Annex C.

#### **10.2.8 Dimensional testing**

##### **10.2.8.1 ADD**

Further, Caliper / properly sized go-no-go gauges shall be used to verify that diameter and out of roundness at pipe ends for each pipe is within the required tolerances J.6.1 (Substituted) of this specification.

##### **10.2.8.5 AMEND**

The wall thickness at any location shall be within the tolerances specified in para 9.11.3.2 of this specification.

#### **10.2.10 Non-destructive inspection**

##### **SUBSTITUTE**

Non-destructive inspection shall be in accordance with Annex K (AMENDED).

#### **10.2.11 Reprocessing**

##### **SUBSTITUTE**

Reprocessing is not permitted.

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## 10.2.12 Retesting

### 10.2.12.1 Recheck Analysis SUBSTITUTE

If any parts of the full product analysis on any one of the fully analyzed pipes fail to meet the requirements of Table H.1 with foot notes thereof of API 5L 45<sup>Th</sup> Edition, either the whole heat shall stand rejected or each individual pipe shall be fully analyzed and all pipes failing to meet the requirements of Table H.1 with foot notes thereof API 5L , 45 th Edition shall be rejected.

### 10.2.12.2 To 10.2.12.8 Retests ADD

In case one of the test specimens fails to conform to the specified requirements, a retest on four additional pipes from the same test unit shall be made. If all re-tests give positive result, then the pipe, which gave the negative result, shall be rejected and the balance pipes of the test unit shall be accepted.

In case of negative result of one of the re-test specimens, the test unit may be rejected or each of the remaining lengths shall be tested individually. The pipes, which give results as per requirement of this specification, shall only be accepted.

## 11.2 Pipe markings

### 11.2.1 ADD

Marking shall be in English using SI units. Markings shall also include API monogram, purchase order number, item number, heat number, wall thickness (mm), pipe number, weight and grade. Weight marked shall be the actual weight of the pipe.

## 12. Coatings and thread protectors

### 12.1.2 AMEND

Pipe shall be delivered with mill's standard temporary external coating throughout the external surface of pipe body to provide protection from rusting in storage and transit.

### 12.3 Bevel Protectors (New)

Both pipe ends of all pipes shall be provided with metallic or high impact plastic bevel protectors as per Manufacturer's standard

## 13 Retention of Records

### ADD

In addition to the records indicated in clause 13, the manufacturer shall retain the records of all additional tests mentioned in this specification including the ultrasonic testing carried out on pipe as well as pipe ends.

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### ANNEXES OF API 5L

ANNEXURES	Service
Annex B (Amended) -Manufacturing procedure qualification for PSL 2 pipe	Offshore and Sour Service both.
Annex C (Amended) - Treatment of surface imperfections and defects	Offshore and Sour Service both.
Annex D (Amended) – Repair Welding Procedure	Offshore and Sour Service both
Annex H (Amended) - PSL 2 Pipe ordered for Sour Service	Offshore and Sour Service both.
Annex J (Amended) - PSL 2 pipe ordered for offshore service	Offshore and Sour Service both.
Annex K (Amended) - Non-destructive inspection for pipe ordered for sour service and/or offshore service	Offshore and Sour Service both.

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## **Annex B (AMENDED)**

### **Manufacturing Procedure Qualification for PSL 2 Pipe**

#### **B.3 CHARACTERISTICS OF THE MANUFACTURING PROCEDURE SPECIFICATION**

##### **SUBSTITUTE**

A Manufacturing Procedure Specification (MPS) outlining the successive steps and associated inspection procedures from steelmaking to finished line pipe shall be prepared and submitted to Purchaser for approval prior to start of production. Manufacture of pipes shall start only after the approval of Manufacturing Procedure. The approved Manufacturing Procedure shall be strictly followed in all phases of the production of pipes.

The Manufacturing Procedure shall as a minimum include the following information:

- Steel & Plate/Skelp maker and plant at which steel & Plate/ skelp is produced.
- Type of Furnace , Equipment and process description including steel making process with details of secondary refining process and continuous casting process, nominal weight of each heat, deoxidation practices and inclusion shape control practices.
- Target chemistry, range of intentionally added elements and those listed in API 5L along with their service Annex. H and J , limits on heat and product analysis to be placed on steel maker.
- Steelmaking and casting process control.
- Hydrogen control practices for slabs used to make plate/skelp
- Product identification and traceability practices;
- Product rework/retest/release controls for non-conformances to manufacturer's documented practices including grade intermixes/transitions and process/chemistry deviations;
- Centerline segregation controls and acceptance criteria, as applicable.
- name/location of pipe manufacturing facility.
- equipment and process description of pipe manufacturing facility;
- Plate/skelp rolling procedure indicating number of passes, their temperature and thickness reduction in each pass required by Controlled Rolling Procedure and the finishing temperature.
- Heat treatment procedure document established as per para 8.12.
- Ultrasonic testing of plates/skelp and pipes using automatic and manual equipment including details of equipment, techniques, scanning pattern, probe frequency, scanning sensitivity, reference standard for calibration, dynamic calibration procedure, method of marking defects and indicating loss of coupling, inspection and recording.
- NDT Procedures and Equipment Calibration
- Pipe making procedure including plate edge preparation, forming and any other special process proposed.

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- Welding Procedure Specification including the details of welding process, brand name, classification, size and grade of filler metal and flux, speed of welding, number of electrodes and polarity of each electrode, welding current and voltage for each wire, edge preparation, tack welding method and spacing of tack weld, details of seam tracking system for both inside and outside welding, method of checking the setup of the system, limits of internal and external weld reinforcement etc.
- Method of weld defect removal.
- Detailed methodology of cold expansion.
- Testing of chemical, mechanical and corrosion, macrographic and metallographic properties
- Ultrasonic testing of longitudinal weld seam of pipe using automatic equipment including details of equipment, scanning pattern, probe efficiency, scanning sensitivity, calibration of pipe, extent of weld length at each pipe ends not covered by probes, method of marking defect and indicating loss of coupling, inspection and records.
- Full details of radiographic testing equipment including radiographic film including radiography procedure.
- Dimensional tolerances, frequency of checking, measurement and record in a tabular form including details of instruments and equipment proposed.
- end cropping practices;
- Detail of technique proposed for measurement of weld bead misalignment, offset, end squareness and peaking at the welds.
- Hydrostatic testing including details of testing equipment, procedure and the relevant test pressure calculations including calibration/verification of equipment.
- Marking, storage and transit protection coating procedures
- product traceability practices from slab receipt to plate/coil delivery;
- product rework/retest/release controls for non-conformances to manufacturer's documented
- practices (including process, chemical/ mechanical, and dimensional deviations),
- Handling, storage, loading and shipment procedure.
- Production report formats.
- Complete details of computerized pipe tracking system.
- Project specific quality control plan

## **B.5 Manufacturing procedure qualification tests**

### **B.5.1 (Amend)**

#### **Mill Qualification Tests**

Mills shall be considered qualified only subsequent to successful completion of all the tests as mentioned at B.6 (**NEW**) "**Mill Qualification Tests**" of this specification. Requirement of **Mill Qualification Tests** mentioned at B6 (New) of this specification may be waived by mutual agreement between Company and the Manufacturer in case Manufacturer possess records of successful performance of these **Tests** on a previous supply of line pipes produced by the same method of manufacture, similar chemical

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composition and grade of steel and subjected to similar heat treatment provided such tests had been performed not earlier than two years prior to this enquiry. Such test certificates duly witnessed and approved by an internationally reputed independent Inspection Agency along with a description of the tests performed shall be furnished by the Manufacturer in case Manufacturer desires a waiver of these tests

#### **MPQT/ FIRST DAY PRODUCTION TESTS**

The MPS shall be qualified for each pipe nominal diameter either as a part of first day production or as a separate MPQT prior to full scale production. Two lengths of completely finished pipes (in case of only one heat on first day) or two lengths from the first two heats i.e. one pipe from each heat (in case of more than one heat on first day) of first day's production shall be selected at random for testing to verify that the manufacturing procedure results in the quality of pipes which are in complete compliance with this specification. The MPQT/ first day production tests shall be carried out on pipes as per requirement of para B.5.1 (Substituted) of this specification..

The MPQT/ first day's production tests shall be repeated upon any change in the manufacturing procedure as deemed necessary by Purchaser Representative

The Manufacturer shall submit to Purchaser a report giving the results of all tests mentioned below. The report shall be agreed and signed by Purchaser Representative, prior to start of regular production.

The various tests to be conducted on each pipe shall be as follows. The test method and acceptance values shall be as per this specification unless specified differently in this Annexure.

#### **a. Visual Examination**

All pipes shall be examined visually for dimensional tolerances and apparent surface defects in accordance with 9, 10 & 11 respectively of this specification.

#### **b. Ultrasonic Examination**

The weld seam of all pipes shall be examined ultrasonically by automatic ultrasonic equipment. All ultrasonic indications suggesting imperfections in the weld shall be carefully investigated against the corresponding points on the radiographs. If the ultrasonic indication cannot be fully explained from the radiograph, a cross section of the weld, at the location of the above-mentioned ultrasonic indication shall be made in such a way that the nature of the imperfection can definitely be established.

#### **c. Radiographic Examination**

The weld seam of all pipes shall be examined radiographically for the entire length.

#### **d. Mechanical Properties**

The mechanical properties of all pipes shall be tested and shall meet the requirements of this specification. Purchaser Representative will select the places in pipe from where the test specimen shall be removed.

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The following tests shall be conducted:

- i. Four (4) weld guided bend test specimen transverse to the longitudinal weld shall be removed. Of the four specimen, two specimen shall be used for the face bend test and two for the root bend test.
- ii. Tensile tests shall be conducted on:
  - Two (2) transverse base material specimen.
  - Two (2) transverse weld material specimen of the longitudinal weld.
  - Two (2) longitudinal base material specimen.
- iii. Six (6) weld cross-section specimen, three (3) from each end of pipe joint shall be taken for metallographic examination. Two of these shall be tested for hardness at room temperature after etching.
- iv. Fracture toughness testing specimen shall be extracted as follows:
  - Four sets of three transverse specimens each from base metal
  - One set of 3 transverse specimens with weld in middle
  - One set of 3 transverse specimens with HAZ in middle

The base metal specimen shall be tested at -10, 0, +10, 20°C for absorbed energy. The value of absorbed energy at the test temperature as per para 9.8 of this specification shall be used to evaluate the test. The sets of weld and HAZ specimen shall be tested for absorbed energy only at the same test temperature applicable as per para 9.8 of this specification.
- v. Twelve (12) DWTT specimen shall be removed from base metal in a transverse direction. The sets of 3 base metal specimen shall be tested at -10, 0, 10, +20°C for shear area. The value at the test temperature specified in para 9.9 of this specification shall be used to evaluate the test. Full transition curve shall be established for the heat.

#### **e. CTOD Test**

CTOD testing shall be carried out in accordance with the requirements of BS7448:1991.

Two sets of specimens with each set consisting of three specimens shall be taken transverse to the longitudinal weld with the notch in the weld metal and in HAZ.

Two sets of specimen with each set consisting of three specimens shall be taken from the base metal with one set in longitudinal direction and other set in transverse direction . The test shall be carried out at 0 °C.

Minimum acceptable critical CTOD value shall be 0.2 mm for BM (Base Metal) as well as WM (Weld Metal). Average CTOD values of BM, WM and HAZ shall be reported. In addition, all the data on fatigue pre-cracking front are required. (Crack length at the following positions i.e. both surfaces 25%, 50% and 75% of the specimen thickness, the minimum and the maximum angle between the crack and the plane of the notch).

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#### **f. Corrosion Tests**

- i) HIC test shall be carried out as per clause H.7.3.1.1 of API 5L & H4.3 of this specification.
- ii) Four point bend test shall be carried out as per clause H.7.3.2.1 of this specification & H.4.5 of API 5L.

**g.** In addition, all the remaining tests and inspections required to be conducted as per this specification shall be conducted on all the pipes selected for testing during first day production test.

#### **B.6 (NEW) Mill Qualification Test**

Prior to start of regular production, the following tests shall be carried out, in order to qualify the Mill for regular production of pipes.

#### **Sulphide Stress Cracking Test.**

Manufacturer shall carry out NACE standard tensile test (Method A) for Sulphide Stress Cracking Test in accordance with NACE standard TM-0177 ( Latest). The test shall be carried out at 60, 72, 80, 90 and 100% SMYS stress levels to produce a curve. Minimum stress for failure after 720 hours shall be at least 72% of SMYS.

#### **Hydrogen Induced Cracking Test.**

The HIC test shall be carried out in accordance with NACE standard TM-0284 ( Latest), “Test Method of Pipeline Steel for Resistance to Stepwise Cracking” and as specified in clause H.7.3.1.1 of API 5L The acceptance criteria for crack sensitivity ratio (CSR) shall be 1.00%.

#### **Four Point Bend Test**

Manufacturer shall carry out Four Point Bend Test using NACE solution as specified in clause H.7.3.2.1 of this specification. The acceptance criteria shall be that the specimen shall not have any SSC cracks when examined visually as well as with wet magnetic particle method.

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## Annex C (AMEND)

### C.2 Treatment of dressable surface defects

**C.2.3** Complete removal of defects shall be verified by local visual inspection and by suitable non-destructive inspection methods as per Annexure K (amended). To be acceptable, the wall thickness in the ground area shall be in accordance with 9.11.3.2 of this specification. Further, the sum of all ground areas shall not exceed 10% of total internal and external surface area of each pipe.

### C.4 Repair of defects by welding

**C.4.2 ADD** No repair of weld seam is permitted after cold expansion.

No repair of weld seam is permitted at pipe ends up to a length of 300 mm.

Repair welding shall be executed only after specific approval by Purchaser Representative for each repair. The defective part of the weld shall be clearly marked on the pipe so that the defect can be easily located and repaired. The repair welding shall be performed with a minimum of two passes.

Repair Welding on the pipe Body is not allowed. Defects in the pipe material such as laminations may be removed by cutting off the section of pipe containing these defects. The remaining defect-free section of the pipe will be acceptable provided its length is within the specified minimum length and the pipe ends are tested for laminations as per requirements of this specification.

No repair of a repaired weld is permitted.

#### C.4.6 AMENDED

After weld repair, the total area of the repair shall be ultrasonically and Radiographically inspected in accordance with Annex K and Annex. E respectively. Before expansion or hydrotest, the type of UT may be at the option of the pipe manufacturer but, after expansion or hydrotest, inspection shall be by manual UT. It would also be acceptable to carry out combined automatic and manual UT after expansion or hydrotest.

#### C.4.8 AMENDED

Pipe that has been repair welded shall be hydrostatically tested after repair welding in accordance with 10.2.6 of this specification.

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## **Annex D (Amended) – Repair Welding Procedure**

### **D.2.4 NDT of weld repair procedure qualification test**

#### **Amend**

Repaired welds shall be inspected by Ultrasonic and Radiographic inspection techniques.

#### **D.2.5 (New)**

Hardness test as specified in para H-7.3.3 & H.4.4 of this specification shall be included in the procedure qualification. The location of the hardness measurements is to be indicated taking into account the new HAZ of the repaired area.

#### **D.2.6 (New)**

Hydrogen Induced Cracking Test as specified in para H-7.3.1 & H.4.3 of this specification shall be included in the procedure qualification.

#### **D.2.7 (New)**

Four Point Bend Test as specified in para H-7.3.2 & H.4.5 of this specification shall be included in the procedure qualification.

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## Annex H (AMENDED)

### PSL 2 pipe ordered for sour service

#### H.2 Additional information to be supplied by the purchaser

##### Information Requirement

	Information sought as per API 5L	COMPANY's Requirement						
a)	steel casting method for strip or plate used for the manufacture of welded pipe (see H.3.3.2.1)	Strip or plate used for the manufacture of welded pipe shall be rolled from continuously (strand) cast or pressure cast slabs. The pipe shall be SAWL.						
b)	ultrasonic inspection of strip or plate for laminar imperfections (see H.3.3.2.4) for HFW pipes	Not Applicable						
c)	supply of helical-seam pipe containing coil/plate end welds (see H.3.3.2.5)	Not applicable						
d)	chemical composition for intermediate grades (see H.4.1.1)	Not applicable						
e)	chemical composition for pipe with $t > 25,0$ mm (0.984 in) (see H.4.1.2)	For Quenched and Tempered Delivery Condition, Chemical Composition of Pipes shall be as per Table H.1 of API 5L, 45 <sup>Th</sup> Edition. For Thermo-mechanical rolled or formed delivery condition, Chemical Composition of Pipes shall be as per Table H.1 of API 5L, 45 <sup>Th</sup> Edition but the Carbon equivalent may be increased with 0.01.						
f)	chemical composition limits [see Table H.1, footnotes c), d), e), f), i), j) and k)]	Chemical composition limits at footnotes of Table H.1 shall be as follows: <table border="1" style="margin-left: 20px;"> <tr> <td>Footnote</td> <td>Acceptable/ Not Acceptable</td> </tr> <tr> <td>c, d,f,i,j,k</td> <td>Acceptable</td> </tr> <tr> <td>e</td> <td>Not Acceptable</td> </tr> </table>	Footnote	Acceptable/ Not Acceptable	c, d,f,i,j,k	Acceptable	e	Not Acceptable
Footnote	Acceptable/ Not Acceptable							
c, d,f,i,j,k	Acceptable							
e	Not Acceptable							
g)	frequency of hardness testing of the longitudinal seam weld of HFW or SAW pipe (see Table H.3)	Refer para 10.2.1.2 of this specification.						
h)	SSC test for manufacturing procedure qualification (see Table H.3)	SSC test is required in accordance with Annex B (Amended) of this specification.						
i)	alternative HIC/SWC test methods and associated acceptance criteria (see H.7.3.1.3)	Acceptance criteria shall be as per H.4.3 of this specification.						



j)	photomicrographs of reportable HIC cracks (see H.7.3.1.4)	Photomicrographs of all the HIC test pieces shall be provided.
k)	alternative SSC test methods and associated acceptance criteria for manufacturing procedure qualification (see H.7.3.2.2)	SSC test is required in accordance with Annex B (Amended) of this specification. Alternate SSC test methods are not acceptable.
l)	deviation from hardness test (see H.7.3.3.2 and H.7.3.3.3);	Not applicable
m)	deviation from 4 hardness impressions [see H.7.3.3.2 c)];	Not applicable
n)	for pipe with $t \geq 5,0$ mm (0.197 in), ultrasonic inspection for laminar imperfections within extended length of 100 mm (4.0 in) at the pipe ends (see K.2.1.3)	Required
o)	supplementary end NDT lamination criteria (see K.2.1.3 and K.2.1.4);	Required
p)	magnetic particle inspection for laminar imperfections at each pipe end face/bevel (see K.2.1.4)	Required
q)	verification of lamination size/density (see K.3.2.2);	Applicable; refer K.5.2.1 (amended) of this specification
r)	increased coverage for ultrasonic thickness measurements for SMLS pipe (see K.3.3)	Not applicable
s)	application of one or more of the supplementary non-destructive inspection operations for SMLS pipe (see K.3.4)	Not applicable
t)	ultrasonic inspection of SMLS pipe for the detection of transverse imperfections (see K.3.4.1);	Not applicable
u)	full-body inspection of SMLS pipe the flux leakage method for the detection of longitudinal and transverse imperfections (see K.3.4.2);	Not applicable
v)	full-body inspection of SMLS pipe by the eddy current method (see K.3.4.3);	Not applicable
w)	full-body magnetic particle inspection of pipe (see K.3.4.4);	Not Applicable
x)	limitation of individual lamination size to 100 mm <sup>2</sup> (0.16 in <sup>2</sup> ) (see Table K.1)	Applicable
y)	acceptance level U <sub>2</sub> /U <sub>2H</sub> for nondestructive inspection of the weld seam of HFW pipe (see K.4.1)	Not Applicable
z)	alternate ISO 10893-10 HFW weld seam UT acceptance criteria [see K.4.1 b)];	Not Applicable



aa)	ultrasonic inspection of the pipe body of HFW pipe for laminar imperfections (see K.4.2)	Not Applicable
bb)	ultrasonic inspection of the strip/plate edges or areas adjacent to the weld for laminar imperfections (see K.4.3)	Not Applicable
cc)	non-destructive inspection of the pipe body of HFW pipe using the ultrasonic or flux leakage method (see K.4.4)	Not Applicable
dd)	use of fixed depth notches for equipment standardization [see K.5.1.1 c)]	Applicable
ee)	radiographic inspection of pipe ends (non-inspected ends) and repaired areas [see K.5.3 a)]	Refer K 5.3 of this specification
ff)	magnetic particle inspection of the weld seam at the pipe ends of SAW pipe (see K.5.4)	Not Applicable

### H.3 Manufacturing

#### H.3.1 Manufacturing procedure

##### **SUBSTITUTE**

All pipes shall be manufactured in accordance with a manufacturing procedure that has been qualified in accordance with Annex B (Amended)

#### H.3.3 Pipe manufacturing

##### H.3.3.3 Jointers

##### **SUBSTITUTE**

Jointers are not permitted

#### H.4.3 HIC/SWC TEST

##### **AMEND**

The acceptance criteria for crack sensitivity ratio (CSR) shall be 1.00%.

#### H.4.4 Hardness test

##### **SUBSTITUTE**

Vickers hardness tests as per ASTM E 384 shall be carried out on samples of pipes at locations indicated in Figure H.1 a) to establish that the hardness shall not exceed 235 HV<sub>10</sub> for the base material of pipe and 250HV<sub>10</sub> for Weld &



HAZ. Testing frequency shall be same as for tensile tests as specified in 10.2.1.2 of this specification. Modalities of retest shall be in accordance with 10.2.12 of this specification.

## H.7 Inspection

### H.7.1 Specific inspection

#### SUBSTITUTE

The frequency of inspection shall be as given in Table 18 of API 5L 45<sup>th</sup> Edition except as specifically modified in Table H.3 of API 5L 45<sup>th</sup> Edition and Table H.3 (Amended) of this specification.

**Table H.3 — Inspection frequency (Amended)**

Type of Inspection	Frequency of inspection
Product Analysis	Two pipes per heat of steel shall be analyzed for all elements listed in Table J.1 of API 5L, 45 <sup>th</sup> Edition. When more than 100 pipes are manufactured from one heat, additional product analysis for one pipe shall be carried out for every 100 pipes or less of the same heat.
hardness testing of the longitudinal-seam weld & HAZ of welded pipe with $D < 508$ mm (20.000 in)	Once per test unit of not more than 100 lengths of pipe with the same cold expansion ratio <sup>a</sup>
hardness testing of the longitudinal-seam weld & HAZ of welded pipe with $D < 508$ mm (20.000 in)	Once per test unit of not more than 50 lengths of pipe with the same cold expansion ratio <sup>a</sup>
Non-destructive inspection	In accordance with Annex K (Amended)
CTOD test for pipe of all Grades	As per Annex B (Amended) of this specification..
SSC test (mill qualification test)	Refer Annex B (Amended)
Four Point Bend Test	One test for each of the first three heats applied; thereafter, one test for each test unit of not more than ten heats of steel.
Mill Qualification and First Day Production Test	Mill Qualification, Manufacturing Procedure Qualification test (MPQT) / First Day Production Test As per Annex B (Amended) of this specification.

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### H.7.3 Test method

#### H.7.3.1 HIC/SWC test

##### H.7.3.1.1 SUBSTITUTE

The HIC test shall be carried out in accordance with NACE standard TM-0284, “Test Method for Pipeline Steels for Resistance to Stepwise Cracking”. Three specimens shall be taken from each test pipe (one across the weld, one 90° from the weld and one 180° from the weld) and shall be tested in the test solution A of NACE TM-0284 for 96 hours. The acceptance criteria for crack sensitivity ratio (CSR) shall be 1.00%. The HIC test shall be carried out on one pipe from each of the first three heats and then on one pipe from every ten subsequent heats. The selection of the specific sample heat shall be as per the decision of the Company Representative.

If one specimen fails to meet the acceptance criteria, three more specimens shall be taken from the same pipe for retests. If one of these fails, two additional pipes of the same heat shall be selected and from each of these two pipes three specimens shall be taken for retests. If one of these six specimens fails, the heat shall be rejected. If retest results are acceptable, only the pipes from which the earlier (failed) specimens were taken shall be rejected and all other pipes of the heat shall be accepted. Should a specimen fail to pass the retest, then Company Representative shall have the right to decide on the further testing to distinguish heats which can be accepted.

#### H.7.3.2 SSC test

##### H.7.3.2.1 SUBSTITUTE

SSC tests shall be performed in accordance with NACE TM0177 using test Solution A.

SSC test for mill qualification of 720 hrs test duration shall be in accordance with Annex B (Amended).

#### Four Point Bend Test

Four point bend test specimen preparation and size shall be as per ASTM G 39 except that thickness shall be minimum 5 mm. One set of three specimens from base metal and one set of three specimens from weld shall be machined from the middle of the pipe wall thickness. The specimen shall be machined transverse to the pipe axis. In case of specimen with weld, the specimen shall be taken with weld in the middle. The specimens shall be bent using Four point Loading jigs to reach a stress level of 72% SMYS and then immersed in NACE solution as per NACE standard TM-0177 for a period of 96 hours with the inner surface/ root in tension. Testing sequence shall be in accordance with NACE TM 0177. The acceptance criteria shall be that the specimen shall not have any SSC cracks when examined visually as well as with wet magnetic particle technique. Four point bend test shall be carried out on one pipe

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from each of the first three heats and then on one pipe from every ten subsequent heats. The selection of the specific sample heat out of every ten heats shall be as per the decision of Company's Representative.

If one specimen fails to meet the criteria, the retest and acceptance procedure shall be as mentioned in Clause H.7.3.1.1 above.

#### **H.7.3.2.2 DELETED**

#### **H.7.3.3 Hardness test**

##### **H.7.3.3.1 AMEND**

Hardness testing shall be performed using the Vickers test in accordance with ISO 6507-1 or ASTM E 384.

#### **H.7.5 HIC/SWC retests** **SUBSTITUTE**

The retest and acceptance procedure shall be as mentioned in Clause H.7.3.1.1 above

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## Annex J (AMENDED)

### PSL 2 pipe ordered for offshore service

#### J.2 Additional information to be supplied by the purchaser

##### Information Requirement

	<b>Information sought by API 5L</b>	<b>COMPANY's Requirement</b>
a)	steel casting method for strip or plate used for the manufacture of welded pipe (see J.3.3.2.1)	strip and plate used for the manufacture of welded pipe shall be rolled from continuously (strand) cast or pressure cast slabs.
b)	ultrasonic inspection of strip or plate for laminar imperfections (see J.3.3.2.4)	strip and plate shall be inspected ultrasonically for laminar imperfections or mechanical damage in accordance with annex K, either before or after cutting the strip or plate, or the completed pipe shall be subjected to full-body inspection, including ultrasonic inspection.
c)	supply of helical-seam pipe containing coil/plate end welds (see J.3.3.2.5)	Not applicable
d)	chemical composition for intermediate grades (see J.4.1.1)	Not applicable
e)	chemical composition for pipe with $t > 25,0$ mm (0.984 in) (see J.4.1.2)	Refer 7.2a (3) of this specification.
f)	carbon equivalent limit for steel Grade L555QO or X80QO, L625QO or X90QO, and L690QO or X100QO (see Table J.1);	Not applicable
g)	Chemical composition limits [see Table J.1, footnote d]	Applicable.
h)	Acceptance criteria for tensile properties if determined at other than room temperature (see J.4.2.2)	Not applicable
i)	for grades equal to or greater than Grade L555 or X80, a lower maximum tensile strength limit may be agreed [see Table J.2, footnote b)];	Not applicable
j)	Minimum average length other than 12,1 m (39.7 ft) and/or different range (see J.6.3)	Refer J.6.3 of API 5L 45 <sup>th</sup> Edition.
k)	Diameter and out-of-roundness tolerances for SMLS pipe with $t > 25.0$ mm (0.984 in) [see Table J.3, footnote b)]	Not Applicable



l)	Use of inside diameter to determine diameter and out-of-roundness tolerances for non-expanded pipe with $D \geq 219,1$ mm (8.625 in) [see Table J.3, footnote c)]	Acceptable
m)	hardness test of the pipe body seam weld and HAZ of EW and SAW pipe (see Table J.7);	Required
n)	hardness testing of pipe body for SMLS pipe (see Table J.7);	Not applicable
o)	CTOD testing (see J.8.2.2 and Table J.6);	Refer Annex B (Amended) of this specification.
p)	use of the ring expansion test for transverse yield strength determinations [see Table J.7, footnote c)];	Not applicable
q)	additional longitudinal tensile testing for deep-water pipelay [see Table J.7, footnote d)];	Not applicable
r)	deviation from hardness test [see J.8.3.2.2 c) and J.8.3.2.3];	Not applicable
s)	deviation from location of hardness test [J.8.3.2.2.c)];	Not applicable
t)	for pipe with $t \geq 5,0$ mm (0.197 in), ultrasonic inspection for laminar imperfections within extended length of 100 mm (4.0 in) at the pipe ends (see K.2.1.3);	Applicable
u)	supplementary end NDT lamination criteria (see K.2.1.3 and K.2.1.4);	Applicable
v)	magnetic particle inspection for laminar imperfections at each pipe end face/bevel (see K.2.1.4);	Applicable
w)	ultrasonic inspection to verify conformance with the applicable requirements given in Table K.1 (see K.3.2.2);	Applicable; refer K.5.2.1 (amended) of this specification.
x)	verification of lamination size/density (see K.3.2.2);	Applicable. refer K.5.2.1 (amended) of this specification.
y)	increased coverage for ultrasonic thickness measurements for SMLS pipe (see K.3.3);	Not applicable
z)	application of one or more of the supplementary non-destructive inspection operations for SMLS pipe (see K.3.4);	Not applicable
aa)	ultrasonic inspection of SMLS pipe for the detection of transverse imperfections (see K.3.4.1);	Not applicable
bb)	full-body inspection of SMLS pipe the flux leakage method for the detection of longitudinal and transverse imperfections (see K.3.4.2);	Not applicable

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cc)	full-body inspection of SMLS pipe by the eddy current method (see .3.4.3);	Not applicable
dd)	full-body magnetic particle inspection of pipe (see K.3.4.4);	Not applicable
ee)	Acceptance Level U2/U2H for non-destructive inspection of the weld seam of HFW pipe (see K.4.1);	Not applicable
ff)	alternate ISO 10893-10 HFW weld seam UT acceptance criteria [see K.4.1 b)];	Not applicable
gg)	ultrasonic inspection of the pipe body of HFW pipe for laminar imperfections (see K.4.2);	Not applicable
hh)	ultrasonic inspection of the strip/plate edges or areas adjacent to the weld for laminar imperfections (see K.4.3);	Not applicable
ii)	non-destructive inspection of the pipe body of HFW pipe using the ultrasonic or flux-leakage method (see K.4.4);	Not applicable
jj)	use of fixed-depth notches for equipment standardization [see K.5.1.1 c)];	Applicable
kk)	radiographic inspection of the pipe ends (non-inspected pipe ends) and repaired areas [see K.5.3 a)];	Applicable. Refer K.5.3 of this specification
ll)	magnetic particle inspection of the weld seam at the pipe ends of SAW pipe (see K.5.4).	Not Applicable
mm)	for grades L625QO or X90QO, and L690QO or X100QO, a lower $Rt_{0,5}/R_m$ (see Table J.2).	Not applicable

### J.3 Manufacturing

#### J.3.1 Manufacturing procedure

##### **SUBSTITUTE**

All pipes shall be manufactured in accordance with a manufacturing procedure that has been qualified in accordance with Annex B (Amended).

#### J.3.3 Pipe manufacturing

##### J.3.3.3 Jointers

##### **SUBSTITUTE**

Jointers are not permitted

#### J.4.2 Tensile properties

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#### **J.4.2.1 SUBSTITUTE**

The minimum Yield strength and minimum Tensile strength of finished pipes (after all heat treatment and sizing operations) shall conform to the requirements of Table-J.2 of API 5L. However, other requirements of Table-J.2 are not applicable.

The actual yield strength shall be as close as possible to the specified minimum yield strength but in no case it shall be more than 133% of the specified minimum yield strength.

The ratio between yield strength and ultimate tensile strength of finished pipes shall not be more than 0.90.

#### **J.4.2.2 DELETE**

#### **J.4.3 Hardness test**

##### **SUBSTITUTE**

Refer H.4.4 of this specification.

#### **J.6 Tolerances for diameter, wall thickness, length and straightness**

#### **J.6.2 SUBSTITUTE**

Wall thickness tolerance for all sizes shall be - 0.5 and +1.0 mm. Table J.4 shall not be applicable.

#### **J.8 Inspection**

#### **J.8.2 Samples and test pieces for mechanical and technological tests.**

#### **J.8.2.3 Samples for hardness tests**

##### **AMEND**

Refer H.7.2.4 of API 5L.

#### **J.8.3 Test method**

#### **J.8.3.1 CTOD Test**

##### **SUBSTITUTE**

CTOD testing shall be carried out in accordance with the requirements of BS7448:1991 Two sets of specimens with each set consisting of three specimens shall be taken transverse to the longitudinal weld with the notch in the weld metal and in HAZ.

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Two sets of specimen with each set consisting of three specimens shall be taken from the base metal with one set in longitudinal direction and other set in transverse direction. The test shall be carried out at 0°C.

Minimum acceptable critical CTOD value shall be 0.2 mm for BM (Base Metal) as well as WM (Weld Metal). Average CTOD values of BM, WM and HAZ shall be reported. In addition, all the data on fatigue pre-cracking front are required. (Crack length at the following positions i.e. both surfaces 25%, 50% and 75% of the specimen thickness, the minimum and the maximum angle between the crack and the plane of the notch).

### **J.8.3.2 Hardness test**

#### **J.8.3.2.1 AMEND**

**Refer H.7.3.3.1 of this specification.**

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## Annex K (AMENDED)

**Non-destructive inspection for pipe ordered for sour service and / or offshore service.**

### **K.1 Introduction ADD**

If during the controls carried out in the mill, defects are found to occur at a rate over or equal to 5% for a specific type of defect or defects are found after inspection/clearance by manufacturer, the Company's Representatives shall have the right to request that the quality control program be increased to an appropriate level and maintained until the defect causes are identified and eliminated. All the tests and inspections shall be carried out in the Mill at the Manufacturer's care and account.

For UT at least one level III qualified inspector shall be available at the mill for overall supervision. A level II inspector is required for shift supervision, manual weld inspection, and calibration of all systems (both manual and automated).

Location of NDT equipment in the manufacturer's facility shall be such that final inspection of weld seam of cold expanded pipe shall be performed after cold expansion and hydrotesting but may take place before cropping , beveling and end sizing.

#### **K2.1.3 (AMEND)**

Ultrasonic inspection with automated/semi-automated systems in accordance with ISO 10893-8 or by manual methods, as specified in Annex A of ISO 10893-8 shall be used to verify that 100mm wide zone at each pipe end is free of laminar defects.

#### **K2.1.4 (Amend)**

The end face/bevel at each pipe end shall be magnetic particle inspected for the detection of laminar imperfections in accordance with ISO 10893-5 or ASTM E709.

Laminar imperfections > 6.4 mm (0.25 in) in the circumferential direction shall be classified as defects.

Residual magnetism after MPI shall not exceed 20Gauss measured by Hall Effect Gauss Meter.

#### **K2.2.3 ( Amend)**

Repair by welding shall be in accordance with Clause C.4 of this specification.

### **K.5.2**

#### **Laminar imperfections in the pipe body and on the strip/plate edges**

##### **K.5.2.1 (AMEND)**

Entire strip/plate surface or 100% of the pipe body shall be ultrasonically inspected for the detection of laminar imperfections in accordance with ISO 10893-9.

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Acceptance criteria for laminar imperfections shall be as per table K.1 of API 5L 45<sup>th</sup> edition for the service condition “Sour, if agreed” for Pipe body and strip/plate surface. Such inspection shall be carried out in the pipe mill.

**K.5.2.2 (AMEND)**

100% of the strip/plate edges after cutting & beveling the strip/plate shall be inspected by ultrasonic testing for the detection of laminar imperfections in accordance with ISO 10893-9.

Acceptance criteria for laminar imperfections shall be as per table K.1 of API 5L 45<sup>th</sup> edition for the service condition “sour or offshore” for Strip/plate edges or areas adjacent to the weld seam with the amendment of “Minimum imperfection size considered” for length as 5mm.

The full circumference of both ends of each pipe after beveling shall be 100% ultrasonically tested for laminations, inclusions and cracks over circumferential bands of at least 100mm width.

Such inspection shall be carried out in the pipe mill.

**K.5.3 Non-destructive inspection of the weld seam at the pipe ends/repared areas (Amend)**

The length of weld seam at pipe ends that cannot be inspected by the automatic ultrasonic equipment and repaired areas of the weld seam (see Clause C.4 of this specification), shall be subjected to the following.

- a) For the detection of longitudinal imperfections, manual or semi-automatic ultrasonic inspection using the same inspection sensitivity and inspection parameters as is specified in K.5.1.1.
- b) For the detection of transverse imperfections, a manual/semi-automatic ultrasonic inspection using the same inspection sensitivity and parameters as is specified in K.5.1.1  
For manual ultrasonic inspection, the scanning speed shall be ≤ 150 mm/s (6 in/s).
- c) The repaired areas of the weld seam shall be inspected by Radiography as per clause E.4 in addition to UT (as given at a & b above) for detection of longitudinal and transverse imperfections.

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	<b>Offshore Design Section</b> <b>Engineering Services</b> <b>ISO – 9001:2008</b>	<b>Addendum to Functional</b> <b>Specification for Carbon</b> <b>Steel LSAW Line Pipe for</b> <b>Submarine Pipelines</b> <b>( Sour Service )</b>	<b>Spec. No.</b>	<b>2020D</b>
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**Addendum to**  
**Specification for**  
**Carbon Steel LSAW Line Pipe**  
**For**  
**Submarine Pipelines**  
**( Sour Service )**

**OIL AND NATURAL Gas CORPORATION LTD.**  
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### **AMENDMENTS**

**Specification No. :2020D Rev.2**

**Title : Functional Specification for Carbon Steel LSAW line Pipes for  
Submarine Pipelines ( Sour Service)**

Following Amendments shall be applicable:

**K.5.2.2 (Amend)<sup>1</sup>**

The Strip/ Plate edges shall be ultrasonically inspected over a width of 15mm for the detection of laminar imperfections in accordance with ISO 10893-9 to acceptance limits as given in table K.1 of API 5L 45<sup>th</sup> Edition for strip plate/ edges or areas adjacent to the weld seam.



Offshore Design Section  
Engineering Services  
ISO – 9001:2000

**ADDENDUM-2 TO FUNCTIONAL  
SPECIFICATION FOR  
LONGITUDINAL SUBMERGED  
ARC WELDED LINE PIPE FOR  
SUBMARINE PIPELINES (SOUR  
SERVICE)**

Spec. No.	ADDENDUM TO SPEC 2020 D, REV 2
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# ADDENDUM-2 TO FUNCTIONAL SPECIFICATION FOR LONGITUDINAL SUBMERGED ARC WELDED LINE PIPE FOR SUBMARINE PIPELINES (SOUR SERVICE)

Prepared By

CSR	RKP	SBD	TMK	SK	RP	NVP

Reviewed By	Approved By	Total No. of Pages	Date	Rev. No.
BPM	AKM	02	06.01.2021	0



**Offshore Design Section  
Engineering Services  
ISO – 9001:2000**

**ADDENDUM-2 TO FUNCTIONAL  
SPECIFICATION FOR  
LONGITUDINAL SUBMERGED  
ARC WELDED LINE PIPE FOR  
SUBMARINE PIPELINES (SOUR  
SERVICE)**

<b>Spec. No.</b>	ADDENDUM TO SPEC 2020 D, REV 2
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Sl. No.	Clause Reference, page no.	Existing provision in spec.	Modified Clause																										
1	8.3.2 Amend Page no. 10 of 40	<p>Pipes furnished to this specification shall be made to a clean steel practice using either basic-oxygen steel or electric arc furnace steel. Steel shall be vacuum degassed or alternative processes shall be applied. The material shall be treated for inclusion shape control to increase resistance to hydrogen-induced blistering and stepwise) cracking.</p> <p>Steel shall be made by continuous casting only.</p> <p>Manufacturing procedure as mentioned in Annex B (Amended) of this specification shall be prepared and submitted to Company for approval prior to start of production.</p>	<p>To be read as :</p> <p><i>Pipes furnished to this specification shall be made to a clean steel practice using either basic-oxygen steel or electric arc furnace steel. Steel shall be vacuum degassed or alternative processes shall be applied. The material shall be treated for inclusion shape control to increase resistance to hydrogen-induced (blistering and stepwise) Cracking</i></p> <p><i>Steel shall be made by continuous casting only.</i></p> <p><i>Steel shall be sampled for inclusion content as per ASTM E-45 and tested for Inclusion Content by JK-type inclusion ratings procedure using automatic image analysis in accordance with microscopic Method -A of ASTM E-45 and reported as per ASTM E-45.</i></p> <p><i>Maximum limit of inclusion severity level in steel, as per ASTM E-45 Standard, method A, shall be as under:</i></p> <table border="1"> <thead> <tr> <th rowspan="2">Inclusion Type</th> <th colspan="2">Type A (Sulphide)</th> <th colspan="2">Type B (Alumina)</th> <th colspan="2">Type C (Silicate)</th> <th colspan="2">Type D (Globular Oxide)</th> </tr> <tr> <th>Thin</th> <th>Heavy</th> <th>Thin</th> <th>Heavy</th> <th>Thin</th> <th>Heavy</th> <th>Thin</th> <th>Heavy</th> </tr> </thead> <tbody> <tr> <td>Severity Level</td> <td>1.5</td> <td>1.0</td> <td>1.5</td> <td>1.0</td> <td>1.5</td> <td>1.0</td> <td>1.5</td> <td>1.0</td> </tr> </tbody> </table> <p><i>Manufacturing procedure as mentioned in Annex B (Amended) of this specification shall be prepared and submitted to Company for approval prior to start of production.</i></p>	Inclusion Type	Type A (Sulphide)		Type B (Alumina)		Type C (Silicate)		Type D (Globular Oxide)		Thin	Heavy	Thin	Heavy	Thin	Heavy	Thin	Heavy	Severity Level	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0
Inclusion Type	Type A (Sulphide)		Type B (Alumina)		Type C (Silicate)		Type D (Globular Oxide)																						
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Severity Level	1.5	1.0	1.5	1.0	1.5	1.0	1.5	1.0																					

# FUNCTIONAL SPECIFICATION FOR HYDROSTATIC TESTING OF SUBMARINE PIPELINES

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## 1.0 SCOPE

- 1.1 This specification covers the minimum requirements for flushing, cleaning, gauging, hydrostatic testing and preservation of submarine pipelines transporting hydrocarbons in liquid or gaseous phase and injection water.
- 1.2 This specification shall be read in conjunction with the requirements of all specifications and documents included in the Contract.

## 2.0 REFERENCE CODES, STANDARDS AND SPECIFICATIONS

- 2.1 Reference has been made in this specification to the latest edition of the following codes, standards and specifications:

- |    |                     |   |  |
|----|---------------------|---|--|
| a. | ANSI B 31.8         | : | Gas Transmission and Distribution Piping Systems         |
| b. | ANSI B 31.4         | : | Pipeline Transportation Systems for Liquids and Slurries |
| c. | API RP 1110         | : | Pressure Testing of Liquid Petroleum Pipelines           |
| d. | ASME Sec VIII Div.2 | : | Rules for construction of pressure vessels               |
| e. | DNV 1981            | : | Rules for Submarine Pipeline systems                     |

- 2.2 In case of conflict between the requirements of this specification and that of the above referred codes, standards and specifications, the requirement of this specification shall govern.

## 3.0 GENERAL

- 3.1 Hydrostatic testing of submarine pipeline system shall commence only after completion of all installation works of pipelines, risers, crossings, burial/back-filling operations and remedial works, if any.
- 3.2 Hydrostatic testing shall be carried out on the entire pipeline i.e. from pig launcher to pig receiver. For incomplete pipelines, the test shall be done from stub end to the pig barrel on the originating platform.  
Where Pig launcher/receiver are not required or specified, the Contractor shall provide and install temporary launcher/receiver at the specified battery limits of the pipeline test section during the testing operations.
- 3.3 Laterals and Pipe Line End Manifolds (PLEMS) which are already pre- tested at the fabrication yard, shall also be tested again along with the submarine pipeline.
- 3.4 Contractor shall perform all works required for hydrostatic testing, only after obtaining prior written approval from Company Representative.

- 3.5 Contractor shall furnish all the required materials, supervision, labour, equipment, including pigs, testing, inspection, monitoring services necessary for the successful flushing, cleaning, gauging, filling, batching, logging, pressurization and hydrostatic testing of the pipeline system as specified herein in a manner satisfactory to the Company Representative.
- 3.6 Supervisors and personnel deployed by the Contractor for the hydrostatic operations shall have adequate experience of such operations.
- 3.7 In case of submarine pipelines from platform to shore, Contractor shall carry out filling operations from the offshore platform end.
- 3.8 In case any in-line full bore ball/full port check valves are installed in the pipeline, Contractor shall deploy divers and ensure that the ball valves are in open position and the flapper of the check valve is locked in open position prior to carrying out any pigging operations. Valves located on the lateral connections and PLEMS shall be kept in partially open position.
- 3.9 Subsequent to completing hydrostatic testing operations and acceptance by Company, Contractor shall open the flapper lock of the check valves and leave the check valve disc in normal operating position. In addition, the valves installed in lateral connections and PLEMS shall be kept in closed/open position as per the instructions of the Company Representative.

#### 4.0 EQUIPMENT AND INSTRUMENTATION

The Contractor shall furnish all necessary materials, equipment, instruments and consumables for performing the work. Materials and equipment shall be in good working conditions and include, but not be limited to the following:

- a) Pigs for filling, cleaning and gauging
- Bi directional cleaning pigs with spring loaded steel wire brushes to cover the entire internal surface of the pipe, along with magnetic flange attachment to pick-up ferrous debris in the line. Pigs shall be mounted with pinger transmitters to enable tracking.
  - Bi-directional batching/displacement pigs with at least four discs.
  - Bi-directional gauging pig with 12.7 mm thick aluminium gauging plate and polyurethane discs. The aluminium plate shall have radial incision at 45° intervals. Gauging plate diameter shall be determined as per the following formula:

$$d = D - 2t - (0.01 D + 0.4t + 5I)$$

Where;

- d = Gauging plate diameter
- D = Nominal outer diameter of pipe
- t = Nominal wall thickness of pipe

I = 0.2 t, maximum 5 mm

- Caliper pig capable of recording changes in internal pipe geometry, locating all girth welds and locating suspected faults, dents, wrinkles, buckles, out of roundness and flat spots. Caliper pig shall be capable of completing its survey in a single pass.

The Contractor shall provide sufficient number of pigs, including spares. Unless otherwise specified, all pigs shall be capable of negotiating a minimum bend radius of 5 times pipe diameter. In case any full port check valves are installed in the pipeline, Contractor shall ensure that the distance between the driving cups of the pigs are of sufficient length to prevent bypassing while passing through the full port check valve.

- b) Flooding/ Fill pumps: Filling pumps shall be capable of filling the pipeline at the volume rate required to maintain pig speeds as specified in section here in after. Suction piping and pump construction shall be such that the entry of air is prevented. Pump shall have minimum differential head 20% greater than the maximum head required and shall have a minimum flow rate of 400 m<sup>3</sup>/hr. If a single pump is used, a standby unit must be available.
- c) Pressure pump: Variable speed positive displacement pumps equipped with a stroke counter to pressurize the line with a known stroke and capable of exceeding the maximum test pressure by at least 20 bar.
- d) Two positive displacement meters to measure the volume of water used for filling the line. These meters shall be provided with a calibration certificate not older than one month.
- e) Portable tanks of sufficient size to provide a continuous supply of water to the pump during pressurizing.
- f) Bourdon pressure gauges of suitable pressure range and accuracy.
- g) Dead weight testers with an accuracy of 0.02 bar measuring in increments of 0.05 bar provided with a calibration certificate not older than one month.
- h) Two 48 hours recording pressure gauges having an accuracy of +/- 1% of the full scale value, with charts and ink gauges tested with dead weight tester prior to use. These shall be installed at the test heads.
- i) Two temperature recorders for the continuous recording of water temperature with a sensitivity of 0.1°C and a range of 0- 40°C.
- j) Thermocouples having an accuracy of + 0.2°C for measuring the temperature of the pipe wall. Thermocouples shall be attached on the external surface of the pipe after removal of external coating and shall be adequately protected.

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- k) Injection facilities to inject hydrotest chemicals into the test water in the required dosages.
- l) Voice radio communication set-up to monitor and control the operations continuously between the beginning and the end of the test section.
- m) Temporary scraper traps/test heads along with piping and valve arrangements to allow launching and receiving of pigs.

The test heads shall be designed in conformity with ASME specification Section VIII, Division 2 with particular reference to Appendices 4 and 5. The test heads shall have a nozzle on the top where a pressure relief valve and pressure gauge can be installed.

- n) Pinger transmitter for mounting on pigs along with pig detecting/tracking equipment.
- o) Nontoxic Fluorescent dye (Rhodamine B or equivalent) along with light source, detector electronics and power supplies. Fluorescent dye is required for locating leaks in the pipeline. The type and concentration of the dye shall be such that it is visible to divers during close visual inspection.

## 5.0 HYDROSTATIC TEST PROCEDURE MANUAL

Contractor shall prepare and submit for Company approval, copy of hydrostatic test procedure manual complying the requirements of this specification. This procedure manual shall be submitted at least eight weeks prior to start of hydrotesting operations. The procedure manual shall include the details of all materials, equipment and procedures etc. as given below:

- a) A diagram indicating all equipment, instruments, fitting, vents, valves, thermocouples, temporary connections, relevant elevations and ratings. The diagram shall also indicate injection locations and test water intake and discharge lines.
- b) Laboratory test results of the test water, estimated amount of test water including required dosages of oxygen scavenger, bactericide corrosion inhibitor and fluorescent dye; procedure for chemicals and dye injection and control of dosages.
- c) Filling and flushing procedures, including a complete description of all proposed equipment and instruments (including spares) their location and set-up.
- d) Direction of pigging for the filling, cleaning and gauging operation.
- e) The type and sequence of pigs and the pig tracking system for cleaning and removal of air pockets. Pig inspection procedures including procedure to be followed in case the gauging pig indicates damage.
- f) Procedure for thermal stabilization after filling.
- g) Pressure testing procedure including a complete description of all proposed equipment

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and instruments (including spares), their location and set-up and proposed system for observation and recording of data during the pressure test.

- h) Theoretical calculations for temperature corrections and entrapped air volume calculations.
- i) Procedure for hydrotest acceptance
- j) Procedure for detection/location and rectification of leaks.
- k) Formats for logging/recording the test data
- l) Safety precautions proposed during the test.

Upon approval by Company any change in the procedure shall be notified to Company whose approval in writing of all such changes shall be obtained prior to start of the hydrostatic testing operations.

## 6.0 PROCEDURES

- 6.1 All necessary equipment shall be set up and checked by the Contractor to ensure conformance with the Company approved hydrotest procedure so that the pipeline is ready for hydrotesting operations.
- 6.2 Contractor shall be fully responsible for checking dimensions of the proposed pigs against pig-trap dimensions to ensure that the pig receipt/retrieval sequence in the proposed procedure can be achieved. All pigs shall be inspected by the Company prior to their insertion into the launcher.
- 6.3 Water used for cleaning and hydrotesting of the pipeline shall be clean and free from impurities. Contractor shall conduct tests on samples of water prior to its use. The analysis shall determine oxygen concentration (dissolved oxygen), suspended, solids presence of microorganisms, biological growth etc.
- 6.4 The Contractor shall then start cleaning, filling and gauging operations. While filling the pipeline with water, Contractor shall provide a 0.150 mm screen filter, to prevent pumping mud and other foreign materials into the pipeline.

Air vents at test heads shall be kept closed at the start of filling to allow pressure to build up in front of the pig train. First filtered sea-water of volume equivalent to one percent of the length of the pipeline test section or 250 m whichever is more shall be introduced ahead of the first pig to ensure wetting, washing and rinsing away of foreign materials. This shall be followed by launching of first pig train consisting of four pigs in following sequence:

- a) Cleaning pig
- b) Batching/displacement pig
- c) Cleaning pig
- d) Gauging pig

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These pigs shall be separated by volumes of filtered sea-water equivalent to one percent of the length of the pipeline test section or 250 m whichever is more. The by-pass of the leading cleaning pig in the first pig-train shall be kept open to make up for water ahead of the pig running down to low-spots. The first pig-train shall be propelled forward by introducing filtered sea-water into the pipeline behind it and thereby filling the entire pipeline with filtered sea-water.

Pinger transmitter shall be installed on the leading and/or trailing pigs of each pig train. In addition, tracking equipment for these pinger transmitters shall also be provided by the Contractor.

- 6.5 The pig-train speed shall be maintained between 0.5 m/s and 1 m/s by suitable adjustment of vent valve provided on the receiving test head in order to minimize the amount of air by-passing the filling pig.
- 6.6 The progress of the pig-train shall be monitored continuously and the locations of the pigs in the first pig-train reported to the Company at regular intervals as and when requested to do so by the Company Representative.
- 6.7 Regular samples of sea-water leaving the pipeline system after receipt of pigs shall be analysed. The solid contents shall be measured and the results recorded. Cleaning is considered to be completed when the quantity of debris in the samples directly ahead of the last pig is less than one percent by volume.

In case higher solid contents are noted, additional pig trains consisting of pigs as mentioned in clause 6.4 shall be run until the pipeline is cleaned of debris. However the gauging pig mentioned in clause 6.4 shall be replaced with batching/displacement pig, in case of successful gauging pig run. In case the gauging pig run made previously was not acceptable to the Company, the last pig in this pig-train shall be a gauging pig equipped with a pinger transmitter. Subsequent pig runs shall have the same requirements as those established for the first pig-train run.

- 6.8 Subsequent to arrival of the pigs at the receiver, the pigs shall be removed by the Contractor in the presence of the Company Representative. Recovered pigs shall be carefully examined and details recorded. The gauging pig shall be carefully examined for any damage. A deformed, bent or severely nicked plate or damaged pig shall be evidence of gauging pig run failure and the same is not acceptable to Company. In such cases, the Contractor shall repair and rectify the line and repeat the gauging pig-run to the satisfaction and approval of Company Representative. Any obstructions and/or faults such as dents, buckles, flat spots etc. analysed and noted during the gauging pig-run shall be located and any necessary repair work shall be performed to rectify the same to the satisfaction of the Company.
- 6.9 After the pipeline is cleaned of debris and gauging pig has been run, a Caliper pig run shall be made. A Caliper pig shall be launched using treated water as mentioned in clause 6.11, in order to check possible out-of-roundness, locate suspected faults like dents, wrinkles and flat spots along the pipeline. The pig train in this run shall consist of one batching/displacement pig and one Caliper pig.

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The results of the Caliper pig run and interpretation of the data gathered by it shall be analysed by the Contractor to evaluate the internal status of the pipeline and shall be made available to the Company as soon as possible after that particular run has been completed.

Contractor shall furnish a detailed report to the Company giving results with interpretation/analysis of Caliper pig run to Company for information.

6.10 The quantities of sea-water, oxygen scavenger, bactericide, corrosion inhibitor and dye pumped into the pipeline section shall be measured and recorded at intervals decided in consultation with the Company Representative.

#### 6.11 Treatment of Hydrotest Water

The hydrotest water shall be treated with suggested dosages of hydrotest chemicals as mentioned below:

- Oxygen scavenger (Sodium/ammonium bisulphite) @ 100 mg/l on 100% basis
- Bactericide (Quaternary ammonium compound Quat 2c or equivalent) @ 100 mg/l as such
- Corrosion inhibitor (Polyphosphate) @ min. 15 mg/l as PO<sub>4</sub>

However the actual dosages of these chemicals shall be decided by the Contractor taking into account the quality of the test water indicated in clause 6.3 above the Manufacturer's recommendations. Company approval shall be obtained regarding the dosages prior to its injection into the test water. In addition, test water shall be charged with fluorescent dye "Rhodamine B or equivalent" to a concentration of 15 – 20 mg/l, before being put into the pipeline system. The use of other chemicals and dyes shall be subject to Company approval.

6.12 If any of the pigs are blocked at any location in the pipeline, the Contractor shall locate the position of the blocked pig and ascertain the cause of the blockage and report the results of his investigations to the Company. The Contractor shall then carry out remedial and/or repair work acceptable to Company, required to restore the pipeline system to a working condition satisfactory to the Company Representative. On completion of the repair work, the Contractor shall start-up the filling, cleaning and gauging of the pipeline system again with treated test water as described earlier.

6.13 Hydrotesting shall commence only after gauging pig run and Caliper pig run are satisfactory and accepted by Company Representative.

### 7.0 PRESSURE TEST

7.1 After the pipeline system has been cleaned, gauged and filled with treated sea-water and approval of the Company to commence hydrostatic pressure test has been obtained, the pressurization of the pipeline system may be commenced by the Contractor.

7.2 The Contractor shall observe the temperature of the pipeline till it equalizes to the surrounding sea water (thermal stabilization) regularly at every 4 hours intervals. For this

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purpose, thermocouples shall be installed on the pipeline at suitable locations.

### 7.3 Test Pressure

The minimum hydrostatic test pressure at any section of the pipeline system shall be 1.25 times the pipeline design pressure, unless a higher test pressure is specified elsewhere in the Contract.

### 7.4 Pressurization

The pressurization of the pipeline shall be commenced after thermal stabilization, at a constant rate not exceeding 2 bar/minute. One pressure recording gauge shall be installed in parallel with the dead weight tester that shall permit reading of at least 0.05 bar. Volume of Water added to the pipeline section shall be measured through a positive displacement meter and shall be recorded periodically throughout the pressurization as follows:

- Each 5 bar increment up to the 80% of test pressure as recorded by the dead weight tester.
- Each 2 bar increment between 80% to 90% of test pressure as recorded by the dead weight tester.
- Each 0.2 bar increments between 90% and full test pressure as recorded by the dead weight tester.

The pressurizing shall be cycled according to the following sequence:

- a. Pressurize to 50% of test pressure, hold pressure for 1 hour.
- b. Drop pressure to static head of test section at test head.
- c. Pressurize to test pressure.

In case, during the pressure hold period indicated above, a decrease in pressure is observed, the above operations shall not be repeated more than twice, after which the test section shall not be considered capable of test, until the Contractor has isolated and eliminated the cause for the lack of water tightness.

### 7.5 Air entrapment test

During the pressurization to full test pressure, one test shall be carried out for the calculation of air volume in the pipeline under test when the pressure is at 50% of the test pressure. Contractor shall take pressure and added volume readings and plot the same, on a suitable graph having a plot of theoretical added volume vs pressure [ $p = f(v)$ ] plot. The air content in the test section shall then be established. In case the air content exceeds 0.2% of the volume of the test section, the further pressurization shall be stopped. The pressure shall be released and the air in the test section vented off. If after successive trails of venting, the air content still remains at more than 0.2% of the volume of the test section, the Contractor shall pass additional batching/displacement pigs and refill the entire pipeline with treated sea-water as mentioned above to remove the air pockets. The procedure for establishing the air content

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shall be repeated till the air content in the test section does not exceed the allowable limit of 0.2% of the volume of the test section. In case the air content is within 0.2% of the test section, then the pressurizing can continue.

## 7.6 Testing

After air entrapment test has given acceptable results and the test section has been pressurized to the specified test pressure, the test pressure shall be held for a minimum period of 24 continuous hours, unless a higher holding period is specified elsewhere in the Contract. The injection pump shall be disconnected and all connections at the test heads shall be checked for leakage. The pressure recorders shall then be started with the charts in a real time orientation for continuous recording throughout the holding period.

During the pressure holding period the following measurements shall be recorded/reported:

- Every one hour pressure measurements from dead weight testers.
- Every two hours the ambient temperature and the pipe temperature at the thermocouples.

All data shall be recorded on appropriate forms attached to the hydrostatic test procedure manual.

## 8.0 ACCEPTANCE

8.1 The hydrostatic test shall be considered positive if test pressure has kept a constant value throughout the specified hold period, except for change due to temperature difference.

In case of temperature difference, the pressure change due to temperature change shall be calculated and algebraically added to the pressure value as read on the recorders. The pressure value thus adjusted shall be compared with the initial value and the test shall be considered as acceptable if the difference is  $\leq + 0.2\%$  of test pressure. In the event the test is unacceptable, the test period shall be extended by 24 hours.

8.2 If test section fails to maintain the specified test pressure after isolation, Contractor shall determine by search the location of leakage/failure and carry out the necessary repair/rectification measures by suitable methods approved by Company. After completion of repairs, the hydrostatic test shall be repeated in full, as per this specification.

8.3 The cost of repairs or replacements, followed by refilling and repressurising the line due to poor workmanship shall be borne by the Contractor. In the event of leaks or failures resulting from faulty Company furnished materials, Contractor shall be reimbursed for furnishing all labour, equipment, materials except those materials furnished by the Company, and transportation necessary to repair and repressurise the section of the pipeline to the pressure at the time of recognition of leak or line failure. Contractor shall be entitled for compensation as per the provisions of the Contract.

8.4 All work of reinstalling line pipe, to replace failures, shall be done in accordance with the

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relevant specifications included in the Contract.

- 8.5 Contractor shall stockpile all damaged and defective pipes to storage locations designated by the Company Representative. All cracks and splits resulting from failures shall be coated with an application of grease to preserve the characteristics of failures from corrosion. Joint of failed pipes shall be marked with paint, with a tag indicating failure details, date and location of failure and pressure at which failure occurred.

## 9.0 TERMINATION

After the positive results of testing and all the data have been gathered, the test shall be terminated upon written approval given by the Company Representative.

Rigid pipelines shall be slowly depressurized at a moderate and constant rate not exceeding 2 bar/ minute. In case of flexible pipelines, maximum depressurization rate shall be as per manufacturer's guidelines/ recommendations.

## 10.0 PRESERVATION OF PIPELINE

In case the pipeline is specified in the Contract to be preserved, and the hydrotest water is intended to be kept in the pipeline for more than 2 months (but not exceeding 12 months) as a preservation measure, the test water shall be dosed with the chemicals as mentioned below, instead of the chemicals and dosages mentioned at clause 6.11.

- Oxygen scavenger (Sodium/Ammonium bisulfite) @ 100 mg/1 on 100% basis.
- Bactericide (Alkyl Aryl Trimethyl ammonium chloride Quat 2C or equivalent @ 250 mg/1 as such)
- Corrosion inhibitor (Alkyl pyridinium chloride Quat CPC or equivalent) @ 250 mg/1 as such.

In case of preservation, the pipeline system under such circumstances shall be kept under a positive pressure of 0.5 kg/cm<sup>2</sup>. All valves isolating the pipeline system shall be kept closed.

## 11.0 TEST REPORT

A complete report signed by Contractor and the Company Representative shall be submitted upon completion of the hydrostatic testing operations for each test section.

The report shall contain as a minimum:

- Cleaning, flushing, filling and testing procedure used
- Schematic layout of cleaning, filling and testing facilities
- Instruments calibration certificates
- A profile of the pipeline that shows the test sites, all instrument and injection connections

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- Pipe filling logs and records
- Hydrotest chemicals specification, dosage, injection records
- Pig specifications
- Pig inspection records including photographs of the damages
- Records of gauging pig survey and photographs
- Records of Caliper pig survey and interpretation of results
- Pressurization and stabilization records
- Pressure and temperature recording charts with appropriate information inscribed thereon
- Dead weight tester logs and recordings
- Air volume calculations
- Pressure – temperature change calculations
- Environmental data
- Depressurization logs and records
- Records and photograph of all leaks/failure

## 12.0 PRECAUTIONS DURING THE TEST

In addition to all that has been expressly described in the procedures for carrying out the test, the following requirements shall also be complied with

- 12.1 During the hydrotest, no other activities shall be performed on or near the pipeline being tested.
- 12.2 Signs stating “PIPE UNDER TEST – KEEP OFF” shall be placed where the test head/scrapper traps are located. Such areas shall be suitably guarded throughout the duration of the test. In case pressurizing is done from the shore end, the entire operational area shall suitably be fenced to prevent entry of unauthorized personnel.
- 12.3 All personnel working on the hydrotest spread shall be instructed on the possible dangers connected with the high pressure test operations. During the testing, operations, no unauthorized personnel shall be allowed near by the test head location. Test cabin at shore shall be at least 10 m from the pipeline so that it is not affected by the pipeline failure.

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