

Tender Document

for

Procurement of

6", 3LPE Coated Seamless Line Pipes

for

Bhaskar Field

Tender No.: SunPetro/Bhaskar/6" Pipes/2023-24/SPPL-158



SUN PETROCHEMICALS PRIVATE LIMITED (SunPetro)
8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7,
Saki Vihar Road, Chandivali, Powai
Andheri (E), Mumbai – 400072, Maharashtra [INDIA]

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SECTION- 1

INVITATION TO BID (ITB)

Sun Petrochemicals Private Limited

COMMERCIAL & SUPPLY CHAIN MANAGEMENT

8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7,

Saki Vihar Road, Chandivali, Powai

Andheri (E), Mumbai – 400072, Maharashtra [INDIA]

CIN: U24219GJ1995PTC028519

Ref. No. SunPetro/Bhaskar/6" Pipes/2023-24/SPPL-158

Date: 24.01.2024

INVITATION TO BID [ITB]

Tender No.: SunPetro/Bhaskar/6" Pipes/2023-24/SPPL-158

Title: Procurement of 6", 3LPE Coated Seamless Line Pipes for Bhaskar Field.

Dear Sir / Madam

- 1.1 **Sun Petrochemicals Private Limited** (hereinafter referred to as **SunPetro / Company**) is pleased to invite you to submit the Bid for the subject tender in accordance with the requirements & details as stated in the Tender Document, under **TWO ENVELOPE SINGLE STAGE BIDDING SYSTEM**:

ENVELOPE-I: Technical & Un-Priced Commercial Bid

ENVELOPE-II: Priced Commercial Bid

Bidders are requested to read the instructions and requirements in the Tender Document carefully and accordingly to submit the Technical & Un-Priced Commercial and Priced Commercial Bid in as stated above and be send to the tendering office address. Bids should be complete in all respects, as per the requirements of the relevant SECTIONS & ANNEXURES.

1.1 **SALIENT FEATURES OF THE TENDER**

1]	Tender No.	SunPetro/Bhaskar/6" Pipes/2023-24/SPPL-158
2]	Title of Tender	Procurement of 6", 3LPE Coated Seamless Line Pipes for Bhaskar Field.
3]	Scope of Supply	Procurement of 168.3 mm (6"), OD Line pipe, 7.11 mm WT, API 5L Grade X-42, PSL2, 3LPE Coated Seamless Line Pipes for Bhaskar Field. Detailed Scope of Supply as per SECTION-4
4]	Tender Fee	Not Applicable
5]	Bid Security / Bid Bond	Bidders are required to furnish Bid Bond along with Technical & Un-priced-Commercial Bid in ENVELOPE-I in the format as attached herewith at ANNEXURE-2 drawn from a Nationalized/Scheduled bank as listed at ANNEXURE-9 for an amount as specified below: <u>Indian Bidder</u> : Indian Rupees : 4,00,000 <u>Foreign bidder</u> USD: 4,800 Note : 1] Bid Bond shall be acceptable in INR from Foreign bidders also 2] In lieu of bid bond bidder can also submit DD /Pay order. DD / Pay order shall be governed by Bid Bond terms and conditions. DD / Pay order to be issued in the name of " Sun Petrochemicals Private Limited "
6]	Bid Validity	120 days
7]	Bid Bond Validity	150 days
8]	Last Date & Time for seeking clarification by Bidder	Within 7 days from tender issuance date.
9]	Tender Closing Date & Time	14.02.2024 at 1500 hrs. IST

10]	Address Correspondence /Tendering Office	For HEAD –SUPPLY CHAIN MANAGEMENT (SCM) SUN PETROCHEMICALS PVT. LTD. (SunPetro) 8 th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] <i>e-mail</i> Dheeraj.Paroch@sunpetro.com
11]	Delivery Period	Within 8 Weeks from the date of LOI/LOA.
12]	Terms & Conditions of Contract	As per SECTION-3 of this tender Document
13]	Submission of Bid	Hard copies of Bids are to be submitted in duplicate i.e. two (2 copies each) of “Technical & Un-Priced Commercial Bid” and “Priced Commercial Bid” in the sealed envelopes to be submitted at “Tendering office” on or before Tender Closing Date & Time.
14]	Contract / Rate Validity Period	1 year from date of award with provision for extension for further period of 6 Months at same rates, terms and conditions. Rates shall remain valid during the Contract period.

NOTE:

Receiving the tender from company does not qualify the bidder automatically for their bid consideration. The bidders has to qualify tender terms & conditions including BEC described in the tender

1.2. Acknowledgement of Tender Document

Bidder(s) receiving this ‘Invitation To Bid’ are required to confirm in writing whether they intend to bid or not within two days from electronic issue of this document, stating the reasons if declining to bid in this instance. Bidders not conforming to this requirement risk being barred from future inquiries.

1.3. Pricing Strategy

Bidder is to quote strictly as per the ‘Price Schedule’ (SECTION-7) of this Tender document.

1.4 Evaluation Strategy

Evaluation of Bids for awarding will be based on the most advantageous offer to Sun Petro reflecting a combination of technical acceptance, qualification as per Bid Evaluation Criteria (BEC) as per SECTION-6 and Cost.

However, Company reserves the right to reject or accept, in whole or in part, any Bid; waive formalities in the bidding processor to negotiate Purchase terms with any individual bidder when such is deemed fit by Company to be in their best interest. Company will be under no obligation to provide reasons for accepting or rejecting any Bid.

1.5 Award Strategy

Single or Multiple Awards at SunPetro’s discretion.

1.6 Check List

Bidders should review and submit the check list (as per format at ANNEXURE-3) along with bid document. **(Technical & Un-Priced Commercial Bid).**

1.7 Submission of Bids

Your wax sealed bid, complete in every respect & strictly in accordance with the Terms & condition in the Tender Documents, are to be submitted through one waxed envelope containing both “Technical & Unpriced Commercial Bid and Priced Commercial Bid” as described above, at the reception of “Tendering Office” as detailed above, on or before Due date of Submission.

1.8 Bidders to note that Non-compliance with the bidding instructions, except as permitted in the Bid and/or late arrival of Bid shall result in Bid not being considered.

- 1.9** Only bids submitted by bidders who have been issued bid document by the Company shall be considered whereas unsolicited bid shall not be considered.

Further details are available in the Tender Document for the compliance.

Please acknowledge the receipt of the tender document per ANNEXURE-1 within 3 days from the date of this ITB.

We look forward to receive your bid complete in all respect on or before due date and time of bid submission.

Regards

Dheeraj Paroch

Head- SCM

Sun Petrochemicals Pvt. Limited

E-mail: Dheeraj.Paroch@sunpetro.com

SECTION – 2

INSTRUCTIONS TO BIDDERS

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INSTRUCTIONS TO BIDDERS

2.1 General Instructions

- 2.1.1 Bidders must review the General Conditions of the Contract (GCC) and Detailed Scope of Work /Supply and specifications as per Tender, besides Bid evaluation Criteria, Responsibility matrix, commercial aspect, Schedule of Rates /Bill of quantity and other information in the Tender document.
- 2.1.2 Bidders shall be deemed to have understood, and taken into account all the terms and conditions prescribed in the Tender Document. Any exceptions/deviations, including those pertaining to Clauses affecting prices must be clearly stated ONLY in the format provided in *Annexure#4*. However, in case no exceptions/deviations are made / taken by the bidder, Bidder must return the form marked "Not Applicable".
- 2.1.3 Bids from agent / agent's representatives will not be accepted, unless backed by valid Letter of Authorization from the bidder's Company.
- 2.1.4 Bids submitted by fax / email will summarily be rejected. Responsibility for the timely delivery of the Bid package before the Bid Due Date rests solely with the Bidder.
- 2.1.5 All prices and terms and conditions should be valid for entire period of Contract Period as well as extension period if any.
- 2.1.6 SunPetro may further place repeat order for any or all the material/services/equipment at the same rates, terms and conditions for the other fields and offices which SunPetro may acquire or associates in future.
- 2.1.7 The complete bid along with price Bid shall be duly signed and sealed by the Authorized Representative of the Bidder.

2.2 Joint Venture / Consortium Bidder's Bid

- a. In case of a joint venture / consortium bid, the members / partners of joint venture / consortium must meet the qualification criteria jointly as specified.
- b. The overall responsibility of the Contract Management shall be of Lead member / partner of Joint Venture / Consortium.
- c. In case of Joint venture / Consortium Bid, following additional requirement must also be satisfied:
 - i) Indian bidders whose proposal for technical collaboration / Joint Venture / consortium involves foreign equity participation / or payment of royalty and / or a lump-sum for technical know-how and wherever Govt. approval is necessary on their application submitted to SIA (Secretariat for Industrial Assistance), are required to submit:
 - A copy of Govt. approval, along with techno-commercial bid (if already granted).
 - OR
 - Furnish an undertaking to submit a copy of the required approval prior to the date of price bid opening.
 - ii) Bidders should submit a Memorandum of Understanding (MOU) / Agreement with their technical collaborator / joint venture / consortium partner (in case of Joint venture) clearly indicating their roles and responsibility under the scope of work.
 - iii) MOU / Agreement concluded by the bidder with technical collaborator / joint venture / Consortium partner (in case of joint venture), should also be addressed to Sun Petro, clearly stating that the MOU / Agreement is applicable to this tender and shall be binding on them for the entire currency of period of Contract / PO. Notwithstanding the roles and responsibilities of each partner defined in the MOU / Agreement, all the partners will be jointly and severally responsible for completion of job under this contract.
A statement to this effect shall be included in the authorization / nomination/ MOU / Agreement by all members / partners of JV / consortium.

2.3 Use of English Language

All correspondence, documentation and drawings shall be in the English Language.

2.4 Late Bids

Company reserves the Right to reject / accept the bid submitted after the deadline for submission of bids, prescribed by the Company.

2.5 Clarifications

Bidders must seek any clarifications with respect to the Tender Document after tender issue date and till the date mentioned in the schedule of tendering. Any clarifications required to be sent to the following email: Allan.Nunes@sunpetro.com with cc to Dheeraj.Paroch@sunpetro.com

2.6 Submission of Bids

2.6.1 A two-Envelope single stage International Complete Bidding (ICB) system, i.e. “Technical & Commercial Un-priced Bid” and “Commercial Priced Bid”, shall be followed.

2.6.2 Bids are to be submitted in duplicate i.e. two (2 copies each) of “Technical & Un-Priced Commercial Bid” and “Priced Commercial Bid” in the separate sealed envelopes as follows.

ENVELOPE-I: Technical & Un-Priced Commercial Bid

ENVELOPE-II: Priced Commercial Bid

2.6.3 The Technical & Un-Priced Commercial Bid shall contain all details but with the price column of the Price Schedule Format blanked out. However, a Tick mark (✓) shall be provided against each item of the Price Schedule Format to indicate that there is a quote against that item in the Commercial Priced Bid. The Priced Commercial Bid shall contain only prices duly filled in as per the price schedule format. Bids which Technical & -commercial Un-Priced Bid” is containing prices shall be rejected.

2.6.4 Each of the “Technical & Un-Priced Commercial Bid” and “Priced Commercial Bid” shall be properly identified as “Original Technical & Un -Priced Un-priced commercial Bid” & “Copy Technical & Un-Priced Commercial Bid” and “Original Priced Commercial Bid” & “Copy Priced Commercial Bid”.

2.6.5 The “Original Technical & Un-Priced Commercial Bid” along with one more “Copy of Technical & Un-Priced Commercial Bid” with price deleted commercial copy shall be submitted in a separate sealed envelope (ENVELOPE-I) by pasting “cut out slip as per **Annexure #5**”. The same procedure shall be adopted for submission of the “Original Priced Commercial Priced Bid” and “Copy of Priced Commercial Bid” in separate envelope (ENVELOPE-II) by pasting “cut out slip as per **Annexure #6**”. Each Bidder will submit two soft copies of complete signed and stamped “Technical & Un-Priced Commercial bid in the **Flash Drive, in PDF format** along with “**Technical & Un-Priced Commercial Bid**” in the sealed cover i.e. ENVELOPE-I. Also **Bid Security / Bid Bond** should be submitted in the ENVELOPE-I with “**Original Technical & Un-priced commercial Bid** “

2.6.6 The entire Bid i.e ENVELOPE –I and ENVELOPE –II should be then placed in a cloth-lined outer envelope duly sealed by pasting “cut out slip as per **Annexure #7**” and superscripted as prescribed.

2.6.7 The Bids shall be submitted to the following address:
Head – SCM & Commercial
SUN PETROCHEMICALS PRIVATE LIMITED (SunPetro)
8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7,
Saki Vihar Road, Chandivali, Powai
Andheri (E), Mumbai – 400072, Maharashtra [INDIA] .
Kind Attn: Dheeraj Paroch

2.6.8 The Technical & Un-priced Commercial Bid of the Bidder will be opened and evaluated first. If the offer is technically & commercially acceptable or acceptable alternatives to the minimum requirements specified in the Tender; and conforms to technical and commercial requirement or as may be decided by the Company, then the “Commercial Priced Bid” will be opened and evaluated.

2.6.9 In the Technical & Un-Priced Commercial Bid all the technical annexures should be submitted which would include compliance with Technical Specifications and all Price

information should be left blank. The Commercial part should be a comprehensive package which should include all Price information as well as “Technical” bid information.

- 2.6.10 Bidder will provide the Delivery Period / Mobilisation Period / Completion Period, as required in tender document from the date of NOA.

2.7 Validity Period

The Bids shall be valid for acceptance for a period of **One Hundred & twenty (120) days** from the Bid Due Date of submission. Company, however, reserves the right to seek extensions of the validity period as may be required. In the event of extension of the validity period of the Bid, all other terms and conditions including the provisions relating to Bank Guarantee shall also continue to be valid for the period of such extension.

2.8 Technical Proposal Requirement

The Bidder must adhere to the Technical Specification requirements as mentioned in the Tender.

2.9 Certificate & Inspection

At any time prior to supply / execution of the contract or during the course of delivery/completion and thereafter, Company shall have the right to access materials and Supplier shall assist in the verification of certificates & inspections. The Company shall exercise reasonable judgement in acceptance or rejection of such verifications, but Company reserves all the rights conforming to the requirements of the contract.

It will be the Bidder's responsibility to correct any deviations from specifications found by inspection prior to mobilization of equipment. This will be at the cost of the Bidder / contractor.

2.10 Commercial Proposal Requirements

2.10.1 Currency

Prices quoted shall be in Indian Rupee (INR) for Indian Bidders or United States Dollar (USD) or INR for Foreign Bidders. The foreign exchange rate shall be calculated on the date of bid closing date for evaluation of bids only, whereas the payment of invoices will be made based on the exchange rate as prevalent the previous day of the payment.

2.10.2 Price in Words & Figures

In case of discrepancy between words and figures, the advantage in favour of Company will apply.

2.11 Deadline for Submission of Bids

The due date mentioned in the “Invitation to Bid” (ITB) shall be deadline for submission of bids. In case of the unscheduled holiday in Mumbai, (India) being declared by Company on the prescribed closing day of the tender, the next working day will be treated as the scheduled prescribed day of closing of the tender.

2.12 Splitting of work

The Company shall have a Right to split the work /supply between two or more bidders at its sole discretion.

2.13 Payment Terms

Compensation to the Bidder shall be made as per the prices quoted and in accordance with terms of the payments as may be finalized with Bidder and stipulated in the LOI / Contract. Invoices shall be raised & un-disputed invoice / items shall be paid based on approved “Call out” orders for each Service. No payment will be due to the Contractor / Supplier prior to signing of the Contract.

2.14 Taxes, Duties and Approvals

- 2.14.1 The Bidders shall quote their prices inclusive of any or all taxes and duties that are applicable including transport, insurance on a CIF basis at the designated port of delivery or Site Location in India. Except GST (if applicable), the prices shall reflect delivery inclusive of all applicable fiscal charges including but not limited to taxes, fees, duties, cess, licenses, import duties, personal income tax, corporate tax, excise tax and similar rates and fees, freight, insurance, and similar expenses. GST, if applicable, shall be paid by the Company at actual.

- 2.14.2 Bidder shall consider in their bid and shall be responsible to obtain at its own cost, all required Permits / Consents / Essentiality Certificates (EC) to avail concessional / Nil duties & taxes applicable for the field, wherever applicable and required for the performance of the Bidder's obligations under the Contract, from the Government of India/ concerned State Governments, authorities or agencies or political sub-division thereof including any for exemption of custom duties (as per **Annexure #10**) and other duties on material / equipment imported into India. Company will provide reasonable assistance wherever required including obtaining all certificates including Essentiality Certificate for claiming Zero Custom Duty as applicable under PSC, but all expenses related to obtaining all such Permits, Consents etc. shall be to the Bidder's account.

2.15 Performance Bank guarantee

The Successful bidder shall furnish to Company, a Performance Bank Guarantee for 5% of the estimated Contract value within 15 days of issue of the LOI / LOA / Contract (whichever is earlier) in the format as given in **Annexure #8** from any of the nationalised or scheduled private banks as listed in the tender document **Annexure #9**. If the bidder does not submit the Performance Bank Guarantee as stipulated above, SunPetro reserves the Right to take appropriate measures to secure the interest of the Company and right to cancel the award of LOI without thereby holding / incurring any liability towards bidder for any work / material / services already done / provided by the bidder / supplier.

2.16 Change Orders & Rates:

- 2.16.1 Company shall have the right to make changes, including additions to or deletions from the quantities originally ordered or in the specifications. A checklist for post award of work is placed at **Annexure #11**. The quoted and finally negotiated rates shall be valid & firm from issue date of LOI/Award up to the completion of the contract.
- 2.16.2 Company will issue written orders to Bidder for any change or extra work, except in the event of an emergency which in the opinion of Company requires immediate attention, Company will also be entitled to issue oral orders to the Bidder for any work required by reason of such emergency. Company shall ensure that such oral orders shall be followed up with written communication.
- 2.16.3 All changes in quantities / specifications will be performed at a mutually agreed delivery Schedule in the Contract period and price of such works shall be finalised / derived in terms and rates elsewhere in the Contract documents.
- 2.16.4 For any additional goods/service , not specified herein, but needed for operations, the Bidder shall be required to provide, on agreed time, these additional goods & services, at agreed cost or actual costs + 5% handling fees.

2.17 Delivery Period

Time is essence of the Contract and Contractor shall Supply the tendered requirement diligently in accordance with the Bidder's **promised delivery dates as set forth in Delivery schedule or agreed for any additional work / services / Supplies**. In the event it becomes apparent that the delivery date cannot be met, the Contractor shall, at its own cost, take all necessary steps to expedite the process, failing which the provisions of Liquidated Damages as specified in the Contract shall be applicable. The Company may also terminate the LOI or Contract immediately invoking the available remedies for protecting the interest of the Company. Company will have the right to reject any bid not meeting the delivery schedule / Mobilization time.

2.18 Bid Bond

Bid Bond /EMD to be submitted along with ENVELOPE-1. The Bid Bond /EMD shall be returned to all unsuccessful bidders within one month after completion of tendering process (however , in case of the successful bidder , Bid Bond will be returned after submission of Performance Bond and failure to submit Performance Bond will lead to forfeiture of Bid bond).

2.19 Annexures

Please note that **all Annexures are placed at the end of this document**

SECTION-3

GENERAL CONDITIONS OF CONTRCT

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GENERAL CONDITIONS OF CONTRACT

3.1 DEFINITIONS AND INTERPRETATION

The following definitions and interpretation shall apply and shall have the meanings assigned to them in this Contract / PO except where the context otherwise requires:

- 3.1.1 "Affiliate" of a Party means any Person, whether directly or indirectly, controlling, controlled by, or under common control with, such Party or Person, as applicable. For the purposes of this definition, the term "control" means (i) direct or indirect ownership of more than fifty percent (50%) of the equity (or such lesser percentage which is the maximum allowed to be owned by a foreign corporation in a particular jurisdiction) having the power to vote on or direct the affairs of such Party or Person, as applicable, or (ii) the power to direct decisions of such Party or Person, as applicable, including the power to direct management and policies of such Party or Person, as applicable, whether by reason of ownership, by contract or otherwise. "Agreement" or "Contract" or "Contract Document" shall mean the instructions to the bidders mentioned in the tender document, the preamble, these contract definitions, General Contract Conditions, Special Contract Conditions, Schedule of Rates, Responsibility Matrix etc., Specifications, Scope of work, all the exhibits, annexures appendices, schedules etc. hereto along with any amendments agreed and issued subsequently.
- 3.1.2 "Agreement" or "Contract" or "LOA" or "Purchase Order" or "PO" shall mean the instructions to the bidders mentioned in the tender document, these PO definitions, General PO Conditions, Special PO Conditions, Schedule of Rates, Bill of Quantity (BOQ) Responsibility Matrix, Specifications, Scope of Supply (SOS), all the exhibits, annexures appendices, schedules etc. hereto along with any amendments agreed and issued subsequently.
- 3.1.3 "Applicable law" shall mean any Indian law, regulation, bylaws, rule, directive, ordinance, judicial or quasi-judicial decree, order or notification enacted, issued or modified by any Government Agency in India.
- 3.1.4 "Approved and Approval" shall mean approved or approval in writing by the Company.
- 3.1.5 "Purchase Price" shall mean the lump sum prices and/or rates of payment specified in Price Schedule in Section 7 and as may be indicated in the Price schedule, which SunPetro shall compensate, Supplier for the actual supplies made and accepted by SunPetro's Representative subject to any additions/deletions thereto which may be made through the application of relevant provisions of the PO.
- 3.1.6 "Area" shall mean various Exploration & Production Blocks and Fields as awarded to the Operator by Government of India and/or any other Block awarded to Company from time to time and as identified as "Area" or where company has participatory interest.
- 3.1.7 "Certificate of Release and Final Payment" is the certificate issued by to SunPetro as per the terms of Clauses mentioned herewith.
- 3.1.8 "Contractor/Supplier/Bidder" shall mean M/s. _____ and includes, its consortium partners, sub-Suppliers and vendors and the officers, directors, commissioners, employees, servants, representatives and agents of any of them as applicable.
- 3.1.9 "Contractor /Supplier Representative" shall mean the representative so appointed by the Supplier /Supplier and informed to SunPetro.
- 3.1.10 "Contractor's/ Supplier's Equipment" shall mean all the equipment(s), units etc. along with auxiliary, plant, machines, spares, facilities, miscellaneous materials /services and consumables etc., available with Supplier or its Principal in connection with the manufacturing and supply.

- 3.1.11 "Contractor's /Supplier's Personnel" shall mean each individual and / or the collective group of Supplier's employees, Supplier 's sub-Supplier s, and their respective employees, sub-Supplier's, licensees, invitees, agents and representatives, who are provided and/or utilized by Supplier for the supply.
- 3.1.12 "Commencement Date" shall mean the date when the supply will start.
- 3.1.13 "Completion Date" shall mean the time and date when the supply shall be completed by the Supplier.
- 3.1.14 "Company" means the Company or Operator which is a party to this PO, and any other party for whom Company is acting in executing this PO, including but not limited to, other members of the consortium owning an interest in the Block, their or their officers, directors, agents and employees.
- 3.1.15 "Company's Equipment" shall mean all equipment, appliances, tools, parts and supplies provided by Company and / or its associates.
- 3.1.16 "Company Group" shall mean the Company, its affiliates their Supplier s, sub-Supplier s and equipment vendors of any tier, its Co-venturers, their personnel, officers, directors, employees and agents but excluding Supplier /Supplier Group;
- 3.1.17 "PO", "Agreement", "Contract", "Letter of Award (LOA)" or "Purchase Order" (as per par 3.1.2 above)
- 3.1.18 "Daily Operation Report" shall mean the daily report submitted by the Supplier to SUNPETRO as per the requirements of PO.
- 3.1.19 "Days" shall indicate consecutive calendar days, it being understood that all dates and time periods referred to in the PO are expressed in terms of the Gregorian calendar. "Day" means a calendar day of twenty hours as referred to local time at the Site.
- 3.1.20 "Delivery Terms" as mentioned shall be subject to "INCOTERMS 2010" Edition or any update thereto except in so far as they are modified or varied by the terms of the Purchase Order and any variation thereto.
- 3.1.21 Deleted.
- 3.1.22 "Effective Date" shall be the date of issue of LOI / Purchase Order or as specified by Company.
- 3.1.23 "Entry permit" is an instrument issued by appropriate authority for movement of goods.
- 3.1.24 "Exhibits" are those documents attached hereto and form an integral part of this PO for all purposes and consisting of all the exhibits and annexures.
- 3.1.25 "GIPIP" shall mean specific guidelines in conformance with the Good international practices/norms and applicable standards / legislations and prevalent regulatory regime as specified by the Government of India.
- 3.1.26 "Good Oilfield Practices" means good international petroleum industry practices with such degree of diligence and prudence reasonably and ordinarily exercised by experienced parties engaged in a similar activity under similar circumstances and conditions.
- 3.1.27 "Government" shall mean Government of India or Government of State, or any political subdivision or administrative agency thereof, as the case may be, and/or their respective representatives having jurisdiction over the Work performed under this PO.

- 3.1.28 “Gross negligence” shall mean (i) the intentional failure to perform a manifest duty, in reckless disregard of or wanton indifference to the consequences to the life, health, safety or property of others; or (ii) any act or failure to act which, in addition to constituting negligence, was in reckless disregard of or wanton indifference to the consequences to the life, health, safety or property of others.
- 3.1.29 Interpretation
- a. Reference to "Section", "Para ", "Clause", "Article" and "Provision" shall have the same meaning.
 - b. The headings and sub-titles in these Conditions of PO are included solely for convenience and shall not be deemed to be part thereof and shall not affect the meaning or operation of the PO.
 - c. Words imparting the singular meaning only also include the plural and vice versa except where the context otherwise requires.
 - d. Any reference to statute, statutory provision or statutory instrument shall include any re-enactment or amendment thereof for the time being in force.
 - e. Reference to Applicable Laws shall also include amendments and extensions thereto.
- 3.1.30 “Letter of Intent“ or “LOI” or Letter of Award (LOA) shall mean intimation to Supplier by the Company for purchase.
- 3.1.31 “License” shall mean the license issued to Company by Supplier /Manufacturer.
- 3.1.32 Deleted.
- 3.1.33 “Operator” shall mean Sun Petrochemicals Private Limited (SunPetro) / Company.
- 3.1.34 “PSC” shall mean the production-sharing PO entered into between the Government of India and SunPetro consortium as its consortium.
- 3.1.35 “Project” shall mean the work and other related activities as may be indicated in the LOI/ PO.
- 3.1.36 “Purchase Order (PO)” a document through which company instructs the supplier to the Company in accordance with the Terms of the Purchase Order (PO) and in the form of which including but not limited to delivery.
- 3.1.37 “Services” shall mean the services to be provided by the Supplier /Suppliers under the PO as more particularly described in Scope of Work, to this PO and shall include such other services as may from time to time be agreed in writing between the Supplier and SunPetro.
- 3.1.38 “SunPetro “, “SUNPETRO” or “SPPL” shall mean SUN PETROCHEMICALS PRIVATE LIMITED.
- 3.1.39 “SunPetro’s Representative” or “Company Representative” shall mean the person or persons expressly designated in writing by Company, who shall be Company’s representative and shall be empowered to act, monitor and direct the performance of the Work required under this PO on behalf of Company.
- 3.1.40 “SunPetro Supply Item” shall mean a supply item, which is expressly identified in the PO as being for supply by SunPetro or its Suppliers.
- 3.1.41 “Sub-Suppliers” shall mean those persons or companies engaged by the Supplier / Supplier in connection with the Services / POs approved by SunPetro.
- 3.1.42 “SunPetro Designated Base” shall mean well site as informed by Company. However, the Supplier shall store/warehouse its equipment and materials at its own costs & risks.
- 3.1.43 "Performance Bank Guarantee" shall mean the unconditional, irrevocable bank guarantee required to be submitted by the Supplier to the Company in accordance with the terms of the PO and in the form of which bank guarantee is set forth in Annexure #8 hereof.

- 3.1.44 "Rates" or "Rate" shall mean the applicable rates of compensation to be paid to Supplier for work hereunder as set forth in the Price Schedule.
- 3.1.45 "Termination Date" shall mean the time of day and date when the Term defined in PO expires or when the PO is terminated by Company, in accordance with its terms, whichever occurs later.
- 3.1.46 "Third Party" shall mean a person /entity which are not included in Company or supplier.
- 3.1.47 "Well" shall mean either a Vertical or a Deviated Well or horizontal well.
- 3.1.48 Deleted.
- 3.1.49 "Well Locations" shall mean the locations of the Wells within the PO Area
- 3.1.50 "Willful Misconduct" means Intentional disregard of Good Oilfield Practice or proper conduct under the PO/ PO with knowledge that it is likely to result in any injury to any person or persons or loss or damage of property.
- 3.1.51 "Work" shall mean the Work provided by Supplier necessary for the supply on the Work Site / Work Location or base in accordance with the scope of the supply.
- 3.1.52 "Work Site / Work Location" shall mean the lands and waters and other places on, under, and any other lands, waters or places approved by the Company for the purposes of the PO together with any other places designated forming part of the Site.
- 3.2 DELIVERY SCHEDULE
- 3.2.1 Delivery Period
Time is essence of the Purchase Order. The supplier will supply the material as per schedule and date of delivery mentioned in the PO as per rate, terms and conditions in the PO.
- 3.2.2 Supply Programme
Supplier to comply with supply programme (Single supply or staggered supply, as specified in PO) as specified in Bill of Quantity /Price schedule Supplier shall use all reasonable care and attention to ensure all aspects of the requirements set forth in Company's supply programme.
- 3.3 DELIVERY INSTRUCTION
- 3.3.1 Supplier shall deliver the Goods strictly as described and set forth in the PO(s) issued by COMPANY as per delivery schedule.
- 3.3.2 Without prejudice to Supplier's obligation to deliver the Goods on the due Delivery Date, Supplier shall give COMPANY immediate notice in writing if any delay is foreseen, stating the reason and extent of such delay.
- 3.3.3 Unless otherwise specified, all Goods supplied shall be suitably and carefully packed and protected during transit but without limitation, against damage by moisture, erosion and corrosion. All bright and machined parts shall be coated with a good rust inhibitor. Supplier and his Suppliers shall observe all special instructions regarding packaging as may be given in the Purchase Order or PO issued thereto.
- 3.3.4 Unless otherwise specified in PO(s), Supplier shall observe the as specified at Section-9 "Packing, Marking, Documentation And Delivery Instructions".
- 3.3.5 Mode Of delivery
The mode of delivery shall be Air /marine /Rail/Road as specified in the PO.
- 3.4 INSPECTION & TESTING
The inspection and / Testing of materials shall be carried out by Company /Third Party/ Supplier as specified in the PO and as per details at Section-8.

3.5 PLACE OF DELIVERY

The Place of Delivery shall be Bhaskar Field in Gujarat or any other designated site as required by Company in Gujarat.

3.6 PERFORMANCE OF THE SUPPLIES

3.6.1 Conduct

The Services shall be performed by the supplier accordance with Best international petroleum industry practices. The Supplier shall be responsible for all interface issues, as required as per scope of supplies.

3.6.2 All correspondence from either party to the other party shall be addressed to its PO Person, unless provided otherwise in the PO .

3.6.3 Discipline

3.6.3.1 Supplier shall maintain at all times strict discipline and good order among its employees and sub-Supplier s and shall abide by and conform to all reasonable rules and regulations promulgated by Company governing the scope of supplies.

3.6.3.2 Supplier shall ensure that its employees and sub-Supplier s are qualified, experienced & trained and shall, comply with the all Conditions set forth in scope of supplies. Supplier agrees to all provisions set forth in this tender and further agrees that failure to comply with the requirements of scope of supplies shall constitute grounds for termination of this PO.

3.6.3.3 Company have the right to ask Supplier to change / replace its personnel for misbehaving / indiscipline during currency of PO. Supplier will replace person, within 5 working days without affecting the supply schedule.

3.6.4 Legal Requirements

Supplier shall apply for and obtain all necessary certifications, permits, licenses and authorizations for personnel, equipment and technology required in India, including any authorizations or licenses from any governmental body for use of Supplier's Personnel or technology in the Services or the export of such technology to India.

The Supplier shall indemnify the Company in case of his failure in meeting the statutory requirements as mentioned above. Submission of the above documents shall not relieve the Supplier of any liability to comply with the Applicable Laws.

3.7 TERMINATION /CANCELLATION OF PERCHASE ORDER

3.7.1 Unless otherwise provided, the PO shall terminate upon due date of delivery.

The Supplier shall be paid for the supplies which were successfully completed and accepted by Company Representative along with demobilization charges, if any.

A. Termination for Non- supply as per Supply Programme:

If the Supplier fails to timely supply the Materials acceptable to Company in accordance with the terms of the PO, it would amount to material breach and in such event, the Company shall have right to terminate the PO immediately upon expiry of delivery period as specified in PO, unless otherwise provided or agreed by the Company.

Consequences of Termination:

Upon termination of PO by Company under this sub-clause, the Supplier shall not be entitled to any payment whatsoever. The Supplier shall immediately refund any sum which the Company might have paid to the Supplier under this PO. Unless, otherwise provided in the PO, the Supplier shall compensate the Company for all losses, expenses etc. which the Company shall sustain on account of such breach by the Supplier. Company may revoke the PBG submitted by the Contractor.

B. Termination for events specified below:

Occurrence of any of events as specified below shall be construed as Event of Default. The Company shall inform the Supplier of the same by issuing a notice of default (hereinafter referred to as "Notice of Default"). If the Supplier, upon receipt of such notice, fails to remedy such default with Seven (7) days, then the Company shall have the right to terminate this PO forthwith. Event of default shall occur if the Supplier:

- a) Makes a general assignment for the benefit of its creditors; or
- b) Refuses or fails to supply goods or /and services to accomplish the supplies accordance with the Supply Programme and the PO; or
- c) Fails to make prompt payment to Sub-Suppliers / vendors for materials, equipment or labour; or
- d) Is in breach of Applicable Law; or
- e) Otherwise breaches the provisions of the PO or part thereof; or
- f) Suspends the supplies.

Consequences of Termination:

Upon termination of PO by Company under this sub-clause B, the Supplier shall be entitled to payment for the supplies successfully completed and accepted by the Company Representative till the date of Termination. Further, the Company shall be entitled, at its discretion, to take possession of the Work and finish the remaining Work on goods ordered, at the risk and cost of the supplier by whatever method Company deems just and expedient. Unless otherwise provided in the PO, the supplier shall compensate the Company for all losses, expenses etc. and additional expenses which the Company shall sustain, to get the supply executed, on account of such breach by the Supplier.

C. Termination in the event of Force Majeure:

In the event that a condition of Force Majeure exists at the Site for a period of fifteen (15) consecutive days, Company shall have the right to terminate this PO by giving two (2) days advance notice to supplier.

Consequences of Termination:

Upon termination of PO by Company under this sub-clause, the Supplier shall be entitled to payment for the supplies successfully completed and accepted by the Company Representative till the date of Termination. No Party shall be obligated to pay the other Party for losses (including consequential losses), expenses, damages etc. sustained on account of event of Force Majeure.

D. Termination for Convenience:

Company shall have a right to terminate the PO in whole or in part, at any time with fifteen (15) days prior written notice thereof to the Supplier. Upon any such termination the Supplier irrevocably agrees to waive any and all claims for damages, compensations, including loss of anticipated profits, on account thereof, and as the sole right and remedy of the Supplier, Company shall pay the Supplier in accordance with Price Schedule mentioned in the PO for the supplies executed by Supplier till the date of such termination.

E. Termination for non-performance or non-satisfactory performance:

The Supplier shall execute the supplies in accordance with GIIP and the terms and conditions of the PO. If the Supplier does not execute the supplies or any part thereof or its performance is non-satisfactory, then Company shall issue a notice ("Remedy Notice") to the Supplier to remedy such non-performance or non-satisfactory performance. Upon receipt of such Remedy Notice, the Supplier shall remedy such default within Seven (7) days. The Company may ask the Supplier to re-perform any of such supplies, at sole risk and cost of Supplier. In the event, the Supplier fails to remedy such default within the specified period or the performance of the Supplier is non-satisfactory repeatedly; the Company shall have a right to terminate the PO immediately without any further notice.

Consequences of Termination:

Upon termination of PO by Company under this sub-clause, the supplier shall be entitled to payment for the work successfully completed and certified by the Company Representative till the date of Termination. Further, the Company shall be entitled to take possession of the Work and finish the Work at the risk and cost of the Supplier by whatever method Company deems just and expedient. Unless otherwise provided in the PO, the Supplier shall compensate the Company for all losses, expenses etc. the additional expenses which the Company shall sustain on account of such breach by the Supplier. Company may also can revoke the PBG submitted by the Supplier.

3.7.2 Upon receipt of Notice of Termination, the Supplier shall, unless a notice directs otherwise:

- a) Immediately discontinue the work from that date and to the extent specified in the notice;
- b) Place no further orders or agreements for materials, equipment, services or facilities except as may be necessary for the completion of such portion of the work which is directed to be continued;
- c) Do only such work as may be necessary to preserve and protect Work already in progress and protect materials, facilities and equipment on the work site or in transit thereto.

3.7.3 Payment upon Termination to be confirmed:

If the unpaid balance of the PO Price exceeds the cost incurred by the Company on finishing the work as provided in the PO, such excess shall be paid to Supplier upon completion of the Work. If the unpaid balance of the PO Price is lower than the cost incurred by the Company on finishing the work as provided in the PO, the Supplier shall promptly pay the difference to the Company upon receipt from the Company of the certificate certifying the amount of such difference. Obligations arising under this article shall survive the termination of the PO.

3.8 HEALTH, SAFETY & ENVIRONMENT

During bid evaluation stage, Supplier may also be evaluated on HSE. HSE evaluation shall be based on Supplier's response to the bid. Company may also conduct pre-order HSE audit of Supplier to assess their HSE capability.

3.9 SETTLEMENT OF DISPUTE/ ARBITRATION

3.9.1 The Company and the Supplier undertake that all disputes, differences or questions at any time between the parties as to the construction to this PO or as to any matter or thing arising out of it or in any way connected therewith ("Disputes") shall be resolved between the parties in good faith by having the discussion between the Purchase Manager level and if required may be taken up to the SCM -Head level to resolve the issues/disputes in the interest of the work and at least three attempts shall be made by the both the parties in this direction.

3.9.2 In the event the disputes arising out of / connected with this PO, which cannot be amicably resolved by Arbitration. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996, (including any statutory modifications or re-enactments thereof) and rules there under excluding any laws, opinions, or regulations that would require application of the laws of any other jurisdiction). The Arbitral Tribunal shall consist of three arbitrators. The Party raising the Dispute shall give a Notice to that effect to the other party and shall nominate the first Arbitrator in such Notice. The other Party shall respond to such Notice within 30 days of receipt thereof and nominate the Second Arbitrator. The two arbitrators so nominated shall appoint the third arbitrator within 30 days of appointment of the Second arbitrator. The Third Arbitrator so appointed shall be the Presiding Arbitrator. The arbitrators to be appointed shall be retired Judges of any of the High Courts or Supreme Court of India. Unless otherwise agreed in writing, the arbitration shall be held at Mumbai, India.

3.9.3 It is also a term of the PO that the Supplier shall not stop the supplies under this PO and the supplies shall continue as expected regardless of whether the arbitration proceeding have commenced or not. Notwithstanding any disagreement, dispute, protest, request for or pendency of arbitration or court proceedings relating directly or indirectly to the supplies, at all times, Supplier shall proceed with the supplies in accordance with the determinations, instructions and clarifications of Company in accordance with the terms and conditions of this PO. If the Supplier fails to proceed with the supplies, Supplier shall be considered to be in default and shall be held liable for direct, indirect and consequential costs and expenses arising from such default. During the period Supplier is proceeding with the supplies, Supplier shall be paid the undisputed portion of his claims which are due under the PO.

3.9.4 The right to arbitrate disputes and claims under this PO shall survive the termination or invalidity of this PO or any term hereof.

3.9.5 Any award rendered by the arbitrators shall be final and binding upon the parties. Any judgment upon such award may be entered in any court having jurisdiction or application may be made to such court for a judicial confirmation of such award and judgment or order of enforcement, as the case may be.

3.10 ENTIRE AGREEMENT/ WAIVERS

3.10.1 This PO sets forth the entire agreement between Company and Supplier which shall supersede all previous communication/ agreements either oral or written. No terms, conditions, understandings or agreements purporting to modify or vary the terms of the PO (whether written or oral) of the parties made prior to the date of this PO shall apply except where Company and Supplier have expressly varied the same in writing under the terms of this PO.

3.10.2 None of the provisions of this PO shall be considered waived by Company unless Company gives such waiver in writing. No such waiver shall be of any past or future default, breach or modification of any terms, provisions or conditions of this PO unless expressly set forth in such waiver.

3.10.3 None of the following shall release Supplier from any of the warranties or obligations of this PO or be deemed a waiver of any right or remedies as to any prior or subsequent default in accordance with the PO:

- i) Failure by Company to insist upon strict performance of any terms or conditions of this PO,
- ii) Failure or delay to exercise any rights or remedies provided herein or by law,
- iii) Failure to properly notify Supplier in the event of breach, except for any breach which according to provisions of PO has to be notified,
- iv) Acceptance of or payment for any Service or review of any design, or
- v) Warranty on the Equipment if sold to Company by the Supplier will continue up to the expiry of the warranty period even if the PO is expired or terminated.

3.11 LIQUIDATED DAMAGES

3.11.1 If Supplier for any reason other than Force Majeure, fails to timely supply (fit for purpose) as per the time schedule mentioned in the PO or the extended date Company may without prejudice to any other right or remedy available to the Company, shall have a right to seek payment from the Supplier as ascertained and agreed liquidated damages, and not by way of penalty, two percent (2%) per week for each delayed delivery of independent item or delay in completion of supply of complete assembly or any item of group which required together up to a maximum of Ten percent (10%) of total PO / Contract value..

The payment of liquidated damages pursuant to this section shall not affect the rights of Company as per PO or Applicable laws including the following rights:

- a. Terminate the Supplier or a portion or part of the Work thereof at any time during the term of the PO and/or,
- b. Recover damages resulting from Supplier 's breach of any of the provisions hereof from any kind of dues and/or,
- c. Get the supplies by any other Supplier at the risk and cost of the Supplier and/or,

- d. Invoke bank guarantee or any other security provided by the Supplier and/or,
By way of abundant caution, it is clarified that in addition to recovering liquidated damages, Company may exercise any one or more of its rights mentioned above as per the PO and the Applicable Law.
- 3.11.2 The Parties agree that the liquidated damages indicated hereinabove are genuine pre-estimate of the minimum loss/ damage which COMPANY can suffer on account of delay/ breach on the part of the Supplier and the said amount shall be payable without any requirement of proof of the actual loss or damage caused by such delay/ breach.
- 3.11.3 Where Company is required to wait for any reason for a Supplier's Equipment and/or personnel which is not made available on the site as per the schedule, in addition to liquidated damages payable by the Supplier.
- 3.11.4 By way of abundant caution it is clarified that during this period of delay, Supplier will not be eligible for any payment, whatsoever.
- 3.12 **NOTICES**
All notices and other communications provided for in this PO shall be in writing and shall be delivered at the addresses for notices given in the PO. A party may notify the other from time to time of changes in the address for notices. E -mails and facsimile transmissions shall be held to have been received at the time of transmission report.
- 3.13 **APPLICABLE LAW**
All questions, disputes or differences arising under, out of or in connection with this PO and the relationship of the parties hereunder shall be governed by and interpreted in accordance with the laws of India (both procedural and substantive) and parties hereby agree to submit to the jurisdiction of the Courts in Mumbai / Mumbai, India.
- 3.14 **ACTS AND REGULATIONS, GUIDELINES**
The Mines Act, 1952, along with The Oil Mines Regulations, 1984 and all their amendments issued including requirements of Good International Petroleum Industry Practice (GIPIP) for all Supplies & Services are to be followed till completion of installation & commissioning.
- 3.15 **CONFIDENTIALITY**
- 3.15.1 "Confidential Information" shall be deemed to include all information including but not limited to any technical, commercial and financial information, improvement, inventions, know how, innovations, technology, trade secrets, professional secrets, copyrights and any other intellectual property, discoveries, ideas, concepts, papers, software in various stages of development, techniques, models, data, source code, object code, documentation, manuals, flow charts, research, process, procedures, functions, customer names and other information related to customers, price lists and pricing policies. However, the Parties hereto acknowledge that Confidential Information shall not include any information that:
 - a) is now or subsequently becomes publicly known or available without breach of this PO.
 - b) was previously in the possession of the Receiving Party without any obligation of confidentiality and which was not acquired from, provided, given, sold or otherwise disclosed (directly or indirectly) by the Disclosing Party not through this PO.
 - c) is required to be disclosed under any Applicable Law (subject however to the party who is required to disclose the information as such is providing reasonable notice of the same to the other party, prior to making any such disclosure).
- 3.15.2 The Supplier shall hold the information confidential and shall not divulge or disclose the information, or make the information available to any person or entity, other than its representatives and ensure that only such authorized Representatives who are expressly authorized by it to and whose duties require them to possess the Confidential Information shall have access to the Confidential Information on a need-to-know basis. In case of any breach of these terms or any act or omission by any of its authorized Representatives, then damages alone may not be an adequate remedy and that the remedies of injunction and specific performance or any other equitable relief may impose.

3.16 ASSIGNMENT

- 3.16.1 Supplier shall not assign or transfer the Purchase Order or any PO issued thereto nor any obligation or interest therein to any third party without the written consent of Company.
- 3.16.2 Company shall have the right to assign the Purchase Order or any PO issued thereto to any third Party after notifying Seller.

3.17 INVOICING AND PAYMENT

- 3.17.1 Invoices shall be itemized with a full break-up of the Supplies made and shall be complete with all back-up details, documentation, information, receipts, packing list, ocean bills of lading, certificate of origin, etc. and shall set forth the facts relating to all activities and transactions handled for Company's account and shall be verified and signed by an authorized signatory designated by the Supplier to show the basis for Supplier's application of the PO payments and the resultant value of the invoice.

- 3.17.2 Supplier shall invoice to Company for payments hereunder on Completion of Supplies. Unless and otherwise mentioned anywhere else in this PO, Company shall make payment, of the correct/ undisputed/Certified invoice supported with job sheet / field ticket/ any other relevant document, which is jointly signed by Company representative along with the Supplier representative, within Thirty (30) working days period after receipt of invoice unless the Company disputes the invoice or a part thereof. Prices negotiated and finalized shall be firm and binding for the agreed PO period. No interest shall be payable on delayed payments by the Company. Exchange Rate used for payment will be the average of SBI Selling and Buying rate prevailing one day prior to the date of release of payment.

The invoice should be submitted to Company only after having submitted the above documents at Mumbai, if applicable. The Supplier shall indemnify the Company at all times for the damages caused or losses incurred by the company due to non-compliance with the existing laws and regulations by the Supplier.

- 3.17.3 The settlement of any invoices shall not be deemed acceptance of the Services or any part thereof and shall not prejudice the right of Company to question the propriety of any such charge at any time thereafter. A written response to Company's claim for omission corrections or errors in charges and credits for Company's account shall be made by Supplier as soon as practicable and in no event later than sixty (60) days from the date of such claims.

- 3.17.4 Supplier shall support all invoices with any data and/or information reasonably requested by Company. Supplier agrees to retain all applicable documentation and records for a period of not less than Four (4) years from the end of the calendar year in which this PO terminates. Company or any party nominated by Company shall be entitled to audit and examine all documents and/or records necessary to verify the correctness of charges contained in any invoice. The payment of an invoice shall not preclude Company's right to audit any charge during said three-year period. Any discrepancies found in such audit shall be paid or reimbursed forthwith. Company shall have the right to reproduce any such documents which have been inspected.

Invoices shall be endorsed with the PO number and title and shall be submitted in tri-plicate with one original and two Copies (clearly marked "Original" or "Copy") once in each month and shall be forwarded to:

Head – SCM.

Sun Petrochemicals Private Limited
8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7,
Saki Vihar Road, Chandivali, Powai
Andheri (E), Mumbai – 400072, Maharashtra [INDIA] .

- 3.17.5 All payments to the Supplier under this PO shall be made in the currency quoted by them or Indian Rupees to the Indian Bidders or United States Dollars to the Foreign Bidders. The currency of price schedule shall not be allowed to be changed during the term of the PO.

3.17.6 The Supplier shall not claim any charges under any head during the period the equipment or tools are damaged, damaged beyond repair, un-operational, or declared dangerous for operation and cannot be operated / used for the said supplies. No payment shall be made for either the Standby rate, Stack Rate or under any other head till the tools / equipment are redressed, replaced or declared safe for operation & fit for purpose. No payment for either standby rate or operational rate shall be made for the personnel associated with the operation of the said tools/equipment.

3.17.7 **Audit**

The Company and its authorized representatives shall have access to, and the right to audit and obtain copies of any of Supplier 's and its sub-Supplier s' or agents' documents of whatsoever nature (except the confidential information of pricing formulate of the Supplier) relating to or in connection with the performance of the Work, including books, vouchers, receipts, invoices, correspondence, government correspondence, POs, representations before statutory authorities, tribunals, courts and any other records. The Supplier will preserve and will cause its sub-Suppliers and agents to preserve all such records for a period of four (4) years from the end of the calendar year in which this PO terminates and will, upon written request, make them available to Company and its representatives. The Supplier shall provide photocopies of any documents within a reasonable period whenever demanded by the Company, Audits referred in this Clause will be made during Supplier's normal working hours. Any payment made by the Company shall not imply acceptance of liability on the part of the Company. Company shall have the right to notify Supplier of any matters arising in an audit which may necessitate making an adjustment; and such adjustment, whether by reimbursement to Company or otherwise, shall then promptly be made. Company shall also have the right to obtain assistance and statements from any of Supplier 's Personnel to the extent it deems necessary, and Supplier and its sub-Supplier s shall make such personnel available at their assigned locations if still under employment with Supplier or its sub-Suppliers.

3.18 **TAXES AND DUTIES**

3.18.1 **Taxes:**

All rates and the PO Price shall be inclusive of all concessional Taxes & duties and such other payments as may be payable under any Applicable Laws (except GST/IGST). Except as stated, Supplier shall bear all income, corporate, property, work PO taxes and all other taxes, duties, levies, surcharges, imports and similar taxes and duties duly levied or imposed on Supplier on account of the payments received by Supplier from Company for the Services as may be payable under the Applicable Laws and any amendments thereto. GST/IGST if applicable shall be charged over and above the quoted prices and shall be paid by Company along with the invoice on submission of proof.

Company shall withhold from the payments to Supplier such amounts as determined by the prevailing taxation laws in respect of Supplier's Services. Company shall deposit these tax withholdings at source with the Indian revenue authorities and provide Supplier all appropriate tax receipts and forms evidencing the deposit of these tax withholdings. Supplier shall be responsible for filing returns of income to Indian revenue authorities for payments made by the Company pursuant to this PO in accordance with the prevailing taxation laws.

3.18.2 **Personnel Taxes:**

All employment taxes and contributions imposed by any law, regulations or by trade unions with respect to or measured by the compensation, wages, salaries or other compensation paid to employees of the Supplier , including without limitation, taxes and contribution or unemployment compensation insurance, medical and health insurance, welfare funds, pensions and annuities and disability insurance shall be paid by Supplier . In the event that Supplier fails to do so and Company is liable to any interest or any penalty arising out of such personnel taxes, Company shall have the right to recover all such amounts from Supplier.

- 3.18.3 Custom Duty, Entry taxes, etc.:
Equipment, materials and supplies imported for use solely and exclusively on matters (inter alia) related to petroleum operations. Company and Supplier agree to cooperate and to use all reasonable endeavors to obtain any exemption to which Company and/or Supplier is entitled in accordance with such notifications. Supplier expressly agrees to furnish necessary documentation, bonds or undertakings to Government authorities and/ or to Company, which may be required for availing such concessional exemption. It is expressly understood that Supplier shall be required to re-export any of its Equipment (unless consumed during performance of Services) and left-over chemicals/additives imported under this PO to enable Company to avail exemption of custom duties. Supplier undertakes to re-export Equipment at the earliest but not later than within fifteen (15) days of completion or termination of Services and shall be solely responsible for all customs formalities for importation and exportation of Supplier s Equipment and materials at the port of entry or the port of exportation as the case may be.
- 3.18.4 Supplier shall protect, indemnify and hold harmless Company, its Co-ventures, their directors, officers, and employees from any and all claims or liability for incorrect or under valuation of tax payable on income excess profits, customs duties, royalty or other taxes assessed or levied by any government agency including any tax assessed or levied on account of property or equipment of Supplier , wages salaries or other benefits paid to Supplier s employees or employees of sub Supplier s, on Company its Co-ventures, their directors, officers and employees' including from any and all claims or on account of any payment made to or earned by Supplier.
- 3.18.5 Change in Law
- 3.18.5.1 In the event of any change or amendment of any Act or law, Rules or Regulations of Government of India or Public Body, which becomes effective after the effective date of this PO and which results in increased cost of the works under the PO though increased liability of taxes, (other than personnel and Corporate taxes), duties, the Supplier shall be indemnified for any such increased cost by the Company subject to the production of documentation proof provided the rates and all applicable taxes along with the tax rate, were clearly indicated at the time of Bid submission by Supplier.
- 3.18.5.2 Company shall not bear any liability in respect of (i) Personnel taxes on the employees of Supplier and the employees of all its sub-Supplier s etc. (ii) Corporate taxes in respect of the Supplier and its sub-Supplier s." (iii) Any taxes for which the Supplier or any or all of his sub-Supplier s are directly assessable i.e. Corporate taxes and Fringe benefit tax in respect of Supplier s and all of their sub-Suppliers, agents etc.
- 3.19 INSURANCE
- 3.19.1 For its risks and liabilities assumed hereunder, the Supplier shall, at its own expense procure and maintain as a minimum, the insurances set out in this Clause and ensure that they are in full force and effect throughout the life of the PO. All such insurances (including insurances provided by Sub-suppliers) other than Employers Liability Insurance/ Workmen's Compensation to the extent of the liabilities assumed by the Supplier under the PO.
- 3.19.2 The provisions of this Clause shall in no way limit the liability of the Supplier under the PO. All such insurances shall be placed with reputable and substantial insurers acceptable to the Company.
Suppliers Insurances shall be primary to, and receive no contribution from Company insurances. If the Supplier s neglects, fails, or refuses to obtain or maintain insurances required to be effected, or fails to provide certification etc., the Company has the right to procure and maintain policies at Supplier s risks and 5% more expense.

- 3.19.3 The Supplier shall be responsible for and shall save, indemnify, defend and hold harmless Company, Joint Venture partners of Company, the Government of India, their respective officers, directors employees, agents and other persons with whom Company may be associated (the Company) from and against all claims, losses, damages, costs (including legal costs) expenses and liabilities in respect of:
- a. loss of or damage to property of the Supplier whether owned, hired, leased or otherwise provided by the Supplier arising from or relating to the performance of the PO,
 - b. personal injury including death or disease to any person employed by the Supplier arising from or relating to the performance of the PO.
- 3.19.4 Prior to commencement of services/delivery hereunder or within 7 days of signing of PO, whichever is later, Supplier shall deliver to Company the following certificate(s):
- a. evidencing the issuance of insurance containing the coverage required herein and,
 - b. Providing that insurance shall not be cancelled or materially change without thirty (30) days prior written notice to the Company. Commencement or performance of services/work without delivering the certificates of insurance shall not constitute a waiver of Supplier's obligation to provide the required coverage.
- 3.19.5 General Conditions For Insurance:
- a. Supplier hereby waives its right of subrogation against the additional insured and shall cause its insurers to waive their rights of subrogation against the additional insured.
 - b. No form of Supplier liability self-insurance, including but not limited to insuring with a parent, subsidiary, or affiliate organisation, is acceptable or allowable under the terms of this PO, unless agreed to by Company prior to commencement of services hereunder.
 - c. Supplier assumes full responsibility for the insurance or self-insurance over his personnel, assets, machinery and equipment, including third party to be used in the performance of this PO. Therefore, except as otherwise provided herein, any damage or injury suffered due to a total or partial loss to such assets, machinery and equipment will be at Supplier's expense. Supplier must insure for full replacement value of any and all equipment used in performing the Work.
 - d. All exclusions and indemnities given under this PO shall apply irrespective of cause and notwithstanding the negligence, breach of duty (whether statutory or otherwise) or other failure of any nature of the indemnified party or any other entity or party and shall apply irrespective of any claim in tort, under PO or otherwise at law.
- 3.20 WARRANTY & SUPPLIER'S OBLIGATION
- 3.20.1 Supplier warrants that the Good will:
- 3.20.1.1 Conform to the specifications set forth in Purchase Order.
 - 3.20.1.2 Be free from all liens, claims, and encumbrances.
 - 3.20.1.3 Be free from failures or defects which may arise from defective design, materials or workmanship, or from any act or omission of Supplier and/or its Suppliers.
- 3.20.2 The warranty shall be valid for a period of 12 months after the Goods have been put into commercial operation, or 18 months after delivery of Goods, whichever occurs earlier.
- 3.20.3 The warranty period of the Goods shall be extended by any period(s) during which the Goods have been out of operation as a result of a defect covered by this warranty. New warranty periods equal to those specified in the preceding sub-clause shall apply to replaced Goods or parts thereof.

- 3.20.4 Company shall notify Supplier, as soon as possible, of any defect that have appeared in the Goods during the warranty period and shall give Supplier reasonable opportunity to inspect and remedy such defects. Company may direct Supplier to correct the design and repair or replace the defective Goods or components thereof, or if Supplier fails to promptly remedy the defects, Company itself may correct the design and repair or replace such Goods or components thereof. Correction of the design and repair or replacement by Supplier shall be without charge to Company. Further, Supplier shall reimburse Company for expenses which the latter may have incurred to correct the design or repair or replace such Goods or components thereof. In addition to the above remedies, Company shall have available to it all other remedies provided by law.
- 3.20.5 Freight and handling cost of returned Goods are for the account of Seller. Mode of transport shall be agreed between Supplier and Company. Supplier shall deliver replacement or repaired Goods on the same delivery terms applicable to the PO(s).
- 3.20.6 Supplier's liabilities in case of defects covered by the warranty shall be limited to the obligations referred to in this clause.
- 3.20.7 Should Supplier fail to comply with its warranties or undertakings set forth in this Purchase Order or should the Goods or any part thereof prove to be defective, deficient or otherwise inadequate and/or fail to meet the warranties as evidenced by proper tests made in accordance with the provisions of this Purchase Order and with the established procedures, Supplier shall, at its own cost and expense, promptly make all necessary corrections and changes to the Goods to meet the said warranties and undertakings.
- Supplier shall bear all costs and expenses of re-performance as aforesaid, including but not limited to:
- 3.20.7.1 Engineering;
- 3.20.7.2 Procuring, testing, inspecting, insuring, freighting and shipping of repaired or replacement Goods, or parts thereof, to the site;
- 3.20.7.3 Dismantling the affected Goods and reinstalling repaired or replacement Goods and/or parts thereof;
- 3.20.7.4 Testing or re-testing the whole or any part of the installations so affected. If Supplier fails to meet its warranty obligations or to perform work to rectify or remedy any defects or deficiencies in the Goods within a reasonable period of time after receipt of written notice from Company to do so, Company may perform work, replace or rectify Goods and/or parts thereof, or remedy the defects, or deficiencies or procure services of others to do so, Supplier shall bear all reasonable and documented costs incurred as a result thereof, and Company shall be entitled to deduct the whole or any cost so incurred from any monies due to Seller.
- 3.21 **FORCE MAJEURE**
- 3.21.1 "Force Majeure" shall mean any act which is insurmountable and outside the reasonable control of the parties Events of Force Majeure shall include, but shall not be limited to, acts of God, lightning, earthquake, flood, fire, explosion, major storm (hurricane, typhoon, cyclone, etc.) or tidal wave, act of war (declared or undeclared) or public enemy, riots (otherwise than amongst Supplier 's personnel), strike (excluding strikes, lockouts or other industrial disputes or action solely among employees of Supplier or its sub- Suppliers), act or omission of sovereign states or those purporting to represent sovereign states, blockade, embargo, quarantine, public disorder, sabotage or any other events beyond the control of the parties or either of them., Strikes shall only be considered as Force Majeure if they are officially declared/ accepted strikes. However, Force Majeure shall not include occurrences as follows:
- 3.21.1.1 Late delivery of materials caused by congestion at supplier's plant or elsewhere, an oversold condition of the market, inefficiencies, or similar occurrences.

- 3.21.1.2 Late performance by Supplier and/or a sub-Supplier caused by unavailability of equipment, supervisors or labor, inefficiencies or similar occurrences;
- 3.21.1.3 Mechanical breakdown of any item of Supplier 's or its Sub-Supplier 's equipment, plant or machinery; or
- 3.21.1.4 Delays due to ordinary storm, inclement weather, seasonal rains or monsoon; or
- 3.21.1.5 Non-conformance by Sub-Suppliers;
- 3.21.1.6 Financial distress of Supplier or any Sub-Supplier;
- 3.21.1.7 Failure to carry out operations in accordance with the instructions of the Company on account of any accident, breakdown or non-performance or unsatisfactory performance of the Rig or any rig equipment(s) or on account of any reason within the control of the Supplier.

Neither Party hereto shall be liable to the other, for the payment of money, for failure to perform any obligations hereunder when performance is hindered or prevented by Force Majeure. The affected party shall inform the other party immediately in writing (within 24 hours) of its inability to meet its obligations hereunder, specifying the cause of Force Majeure, and shall do all that is reasonably within its power to remove the Force Majeure conditions. Such party shall advise the other party when such Force Majeure ceases (within 24 hours of ceasing of Force Majeure) and shall resume performance of its obligations hereunder as soon as reasonably possible thereafter. No payment will be due to the Supplier between the commencement of Force Majeure and commencement of Normal operations by the affected party.

- 3.21.2 The affected party shall make every reasonable effort to. Should any act or acts of Force Majeure cause the suspension or artificial suspension of operations there under for all or part of the Work for a continuous period of more than seven (7) days, the parties shall meet and determine the appropriate measures to be taken. In the event that a condition of Force Majeure exists at the Site for a period of at least fifteen (15) consecutive days, Company shall have the right to terminate this PO by giving two (2) days advance notice to Supplier.

3.22 PATENTS, COPYRIGHTS AND TRADEMARKS

Supplier shall indemnify, defend and hold harmless COMPANY from any and all loss, liability, or expense by reason of any claim, demand or legal action based on actual or alleged infringement of any patent, copyright, software or trademark, resulting or arising in connection with the manufacture, sale, use or other disposition of the Goods.

3.23 LIENS

Supplier shall immediately pay and discharge any lien, claim or encumbrance, of any nature, (or shall provide security for payment thereof) attributable to Supplier

Supplier shall indemnify and hold Company harmless from and shall keep Company's equipment and property free and clear of all liens, claims, assessments, fines and levies incurred, created, caused or committed by Supplier. If Supplier fails to pay and discharge any such lien, claim or encumbrance, then Company may do so and charge Supplier for all costs, with an additional five per cent (5%) of such costs and expenses, be payable by Supplier and may be deducted and set off against any monies owed to Supplier by Company pursuant to the PO. Company shall have the right to retain out of any payment to be made to, or to be reimbursed to, Supplier, an amount sufficient to indemnify it completely against any such lien, claim, assessment, fine or levy exercised or made and all associated costs.

3.24 INDEMNITY AND LIABILITIES

- 3.24.1 Supplier's Material, Equipment, Services and Property

The Unit / equipment / services / tools (herein referred to as Equipment) to be deployed by the Supplier under the PO shall continue to remain Supplier 's property and shall always remain in the possession/ control of the Supplier with the exclusive right to use of such equipment by the Supplier for providing services under the PO. Supplier shall be responsible at all times, including time in storage, in transit, on the rig or at Company's well location, for damage to or destruction of Equipment and any other property of Supplier or any of its sub-Suppliers and their respective employees or agents, unless such loss, damage or destruction is caused by or contributed to by the Gross Negligence of Company Group.

3.24.2 Deleted.

3.24.2 Limitation of Liability

The total liability of the Supplier shall be limited to 100% of the Supplier value if no fault by Supplier. In case intentional damages, it would be 200% of the PO value. The Company shall indemnify and hold harmless the Supplier against all claims and liabilities in excess of the above limits, provided that aforesaid cap for limitation of liability shall not apply and the Supplier shall continue to remain responsible for all liabilities which arise on account of:

- Breach of Applicable Laws by the Supplier Group.
- Liability for payment or non-payment of taxes and other statutory duties/ fees of any nature.
- Liability for breach of Intellectual Property Rights of any person.
- Breach of Confidentiality obligations.
- Gross Negligence & Willful Misconduct.

3.24.3 Consequential Damage

Notwithstanding anything else contained herein to the contrary and subject to clause, neither party shall be liable to the other for indirect and consequential damage resulting from, or arising out of this PO including but not limited to, loss of profit, loss of revenue, anticipated profits, loss of business opportunity or business interruption, suffered by such Party or its Group and each Party shall defend, indemnify and hold the other party harmless in respect thereof.

3.24.4 Certain Restrictions on Indemnities:

Unless otherwise expressly admitted elsewhere herein the PO, no indemnity or hold harmless provision of this PO shall apply in favour of a Party who shall have caused loss or damage through Gross Negligence or Wilful Misconduct.

3.25 PERFORMANCE BANK GUARANTEE

3.25.1 Within twenty one (21) days of the issue of Letter of Intent/ award, the Supplier shall present to the Company a Performance Bond / Bank Guarantee (As per format in accordance to Annexure #8) in the form of an irrevocable, unconditional, payable on first demand by Company, divisible bank bond in the format of Annexure #8 issued by an approved bank. Failure to comply with this condition will constitute grounds for termination of the award/ PO.

3.25.2 The Performance Bank Guarantee shall be of 10% of Contract / LOA / PO value and shall be valid and be retained for Ninety (90) Days after the completion/termination of the PO / warranty period except where claims are outstanding there under or where previously drawn by the Company but not later than Thirty (30) days after the final settlement of such claims or Ninety (90) Days whichever is later If the Supplier does not submit the Performance Bank Guarantee as stipulated above, SunPetro reserves the right to cancel the award of LOI / LOA.

- 3.25.3 Company shall not be liable to pay any Bank Charges, Commissions or Interest on the amount of Performance Bank Guarantee. The performance bond provided by the Supplier is intended to operate as security for amounts (including damages where applicable) which becomes payable by the Supplier by virtue of this PO and are not intended to be used as a penalty. Without prejudice to its other rights under the PO or at law, Company shall be entitled to forfeit the performance bond, should the Supplier fail to perform the Services in accordance with the provisions of the PO or fail to comply with the provisions of this PO. The Performance Bank Guarantee shall remain at the entire disposal of Company as Security for the satisfactory commencement, performance and completion of the Scope of Work under the conditions of the PO / PO including recovery of amounts due to the Company from the Supplier arising out of this PO under whatever head.
- 3.25.4 Company reserve the right to invoke the performance bank guarantee for any of the following reasons including but without limitation to:
- Failure of Supplier to start/commence the work as per LOA/LOI/PO
 - If Supplier fails to performs as per the terms and conditions of the PO.
 - If Supplier fails to perform as per prescribed scope of work.
 - If Supplier fails to work in work man like manner.
 - If tools, machines, parts for the providing services are not fit for the performance of work.
 - For breach of PO.
- 3.25.5 SunPetro will accept the bank guarantee from all public sector banks in India or any of the banks listed in the Annexure #9.
- 3.26 **SEVERABILITY**
If any portion of this PO is determined to be illegal, invalid or unenforceable, for any reason, then, insofar as is practical and feasible, the remaining portions of this PO shall be deemed to be in full force and effect as if such invalid, illegal or unenforceable portions were not contained herein.
- 3.27 **NON-EXCLUSIVE PO**
This PO is non-exclusive and Company reserves the right to engage other Suppliers to perform similar or identical work. Supplier shall afford such other Suppliers adequate opportunity to carry out their agreements and shall accomplish the work in cooperation with those Suppliers and with Company.
- 3.28 **EXPORT CONTROLS**
SunPetro confirms that the Equipment or Services to be provided under this PO (Collectively 'Items') shall only be for use by it in India for the purpose of production of hydrocarbons. However, if for any reason whatsoever the end use or end user of these Items is required to be changed or if these items are to be taken for use in countries outside India to do any work associated with this PO, then SunPetro would request the Supplier to obtain consent from the concerned authority in the Supplier's Country. The Supplier shall obtain such consent at its sole risk and costs.
- 3.29 **SPECIAL CONDITION OF THE PO**
- 3.29.1 Contractor to supply material following relevant API class certification.
- 3.29.2 SunPetro reserves its right to carry out inspection by their own or through Third Party Inspector (TPI) during manufacturing or before dispatch.
- 3.29.3 **Contract / Rate Validity Period**
1 year from date of award with provision for extension for further period of 6 Months at same rates, terms and conditions. Rates shall remain valid during the Contract period.
The prices are valid for the contract period and the contract shall be valid for all the blocks of SunPetro in Gujarat or any other blocks which company may acquire.

SECTION-4 & 5

SCOPE OF SUPPLY (SOS) & TECHNICAL SPECIFICATIONS

SCOPE OF SUPPLY (SOS) & TECHNICAL SPECIFICATIONS

For laying pipeline in Bhaskar Field, it is proposed to procure pipes as follows:

A. Specifications:

1. OD of Pipe: 6-5/8" (168.3 mm)
2. Wall Thickness: 7.11 mm
3. Calculated ID : 154.08 mm
4. Material : API 5L Seamless , Grade X42, PSL-2, 3LPE coated Piggable pipes with Bevelled ends
5. Total Estimated Length of pipes required : 9,000 m

B. Detailed scope of supply & specifications is attached in the annexures:

1. API 5L pipes specifications
2. 3LPE coating specifications

**Specifications, Inspection, Manufacturing process & ITP
for
Supply of API 5L, Grade X42, PSL2 seamless pipes**

1. **Acceptable Manufacturers :**

Following manufacturers are acceptable for supply of specified pipes:

- i. M/s. Beneler AG
- ii. M/s. TPS Techni Tube
- iii. M/s. JFE Steel Corporation
- iv. M/s. Nippon Steel & Sumitomo Metal
- v. M/s. Arcelor Mittal Tubular Products Roman SA, Romania
- vi. M/s. BHEL, Trichy
- vii. M/s. KASCO
- viii. M/s. Maharashtra Seamless Ltd.,
- ix. M/s. Tubos Reunidos SA
- x. M/s. Vallourec and Mannesmann Tubes
- xi. M/s. Wyman Gordon Forgings
- xii. M/s. ISMT
- xiii. M/s. SAIL
- xiv. M/s. TISCO
- xv. M/s. Jindal Saw Limited

2. **SPECIFICATIONS OF THE PIPES:**

- a. PIPE : CS
- b. MANUFACTURING PROCESS : SEAMLESS
- c. MATERIAL SPECIFICATION : API 5L GRADE : X42, PSL2, Seamless , 3LPE coated
Piggable line pipes
- d. END FINISH : BEVEL END, END FINISH CONFORM TO ANSI B16.25
- e. DIMENSION STANDARD : ANSI B 36.10
- f. PIPE SIZE: OD of Pipe: 6-5/8" (168.3 mm)
- g. PIPE WALL THICKNESS : Wall Thickness: 7.11 mm
- h. Calculated ID : 154.08 mm
- i. Total Estimated Length of line pipes required: 9000 Meters

3.0 GENERAL

- 3.1 All pipes and their dimensions, tolerances, chemical composition, physical properties, heat treatment, hydro-test and other testing and marking requirements shall conform to the latest codes and standards specified in the material description. This section contains certain additional & special requirements.
- 3.2 The offered pipes to API 5L standards shall also meet requirements of Metric unit system of relevant code e.g. ASTM A312 shall also meet requirements of ASTM A312M and ASME B36.10 shall also meet requirements of ASME B36.10M.
- 3.3 Testing:
 - 3.3.1 Test reports shall be supplied for all mandatory tests as per the applicable material specification.
 - 3.3.2 Material test certificates (physical property, chemical composition & heat treatment report) shall also be furnished for the pipes supplied. For alloy steel pipes Mill test certificate containing above information shall be furnished.
 - 3.3.3 Pipes with a positive quality tolerance of maximum one random length shall be acceptable (no tolerance on negative side).
 - 3.3.4 PMI test: Positive material specification to be performed at vendors works on alloy steel pipes and clad pipes. The extent of PMI examination as follows: • 100% (for pipes procured from traders). • 2 random samples drawn from each size/ heat/ lot (for pipes procured directly

from Mills). Whenever any sample drawn to PMI test on the basis of percentage selection fails to meet specification requirements, 100% of items of lot shall be tested for PMI.

3.4 Manufacturing processes:

3.4.1 Steel made by acid Bessemer process shall not be acceptable.

3.5 Pipes shall be supplied in double random lengths of 7 to 14 meters.

3.6 Seamless pipes shall not have any circumferential seam joint in a random length.

3.9 Pipe shall be bevelled in accordance with ANSI B16.25 & dimensions as per ANSI B 36.10.

3.10 Carbon steel seamless pipes of size 2" & over shall be furnished hot finished. Seamless pipes cold-drawn from higher thickness pipes are not acceptable.

4.0 HYDROSTATIC TEST

- Irrespective of requirement specified in code all pipes shall be hydrostatically tested.
- The testing of pipes shall be as per API 5L.

4.1 Hydro-testing of pipes (at least one from each batch) shall be witnessed by TPI at vendor's shop.

4.2 Calculation to establish hydro-test pressure shall be performed by vendor in accordance with the standards. Checking of calculation and witnessing of hydro-testing shall be performed by TPI agency.

5.0 SCOPE OF INSPECTION BY THIRD PARTY INSPECTION AGENCY

5.1 The scope of inspection shall be read with item description, codes stipulated in purchase requisition, requirement of test and inspection as per this technical specification.

5.2 Test to be witnessed:

- i) Testing for physical properties.
- ii) Visual Inspection & Dimensional check
 - a) 10% random basis for each heat. Minimum one length in case of pipe is procured from manufacture.
 - b) 100% in case the pipe is procured from stockiest/ traders.
- iii) Hydrostatic test
 - a) 10% random basis for each heat. Minimum one length in case the pipe is procured from manufacture.
 - b) 100% in case the pipe is procured from stockiest / traders

5.3 Review of Documents

- i) Mill test certificate of raw materials.
- ii) Material identification reports.
- iii) Radiographs (if required).
- iv) Heat treatments (if required).
- v) Material composition .
- vi) Manufacturer's test certificate.
- vii) Hydro-test 100%
- viii) Supplementary test as required.

- ix) Manufacturer's test certificates for 100% visual & dimension check in case of manufacturer.
- 5.4 Third party inspection release note shall contain the information on test witnessed, documents reviewed, observations/ remarks, identifications, order status and date(s) of inspection. The original certificate shall be furnished with supply of material.
- 5.5 Third party inspector shall stamp each length of pipe based on the same performed by the manufacturer and shall mention the same in the inspection release note.
- 5.6 The inspection and test plan for traders and manufacturer is enclosed as Annexure-I & II.
- 6.0 SPECIAL REQUIREMENT
- 6.1 Applicable in case bidder is not the manufacturer of the quoted pipe.
 - 6.1.1 If trader (vendor) directly supplies the pipes, inspection at its go-down/ stockyard shall be carried out by TPI as per the requirements of this provision specified earlier & hereunder.
 - a) TPI shall check the source of pipes. TPI shall go ahead with inspection only after being satisfied with the certificate and the certificate should be the part of inspection release note issued by TPI.
 - b) Any reputed national or international inspection agency should have inspected at the works of the pipe manufacturer all those pipes that are presented to TPI for certification at trader's stockyard. TPI shall first ensure availability of original certificate, issued by the reputed national or international inspection agency in the name of first customer, and shall correlate the same with the stamp-marks that pipes shall bear.
 - c) TPI shall endorse on the original certificate, which shall form part of his inspection report. In case original certificate cannot be surrendered by trader, TPI shall endorse on a photocopy of the original certificate and enclose the same with his report.
 - d) Of each size of the finished pipe, the trader in presence of TPI shall draw one sample from each lot of 100 lengths (a lot shall consist of pipes of the same size and wall thickness and the identical heat of steel), and shall send to the TPI-approved test house for conduction of the following tests to the conformity of the relevant standard(s):
 - i. Tensile test – for all MOC
 - ii. Product analysis – for all MOC
 - iii. Flattening test or bend test – for all MOC .
 - e) TPI shall witness/ review the test-results and endorse the certificates of the test house towards the conformity of the results to the standard.
 - f) TPI shall thereafter stamp the pipes and issue inspection release note.
 - g) The trader shall bear the cost for samples, tests and other incidental expenses, and shall include all such costs in the quoted rates of the pipes.
 - h) The vendor shall be liable to furnish the Inspection Documents, in the specified form, along with the Dispatch Document without which the Purchaser shall not consider the material to have been delivered by the vendor. In other words, the material without proper inspection documents, shall not be considered delivered as per the interpretations of the contract, as the material cannot be used in execution even though they are physically available with the purchaser.
- 7.0 MARKING & DESPATCH
- 7.1 All pipes shall be marked in accordance with the applicable codes, standards & specifications.

- 7.2 Paint or Ink for marking shall not contain any harmful metal or metallic salts such as zinc, lead or copper which cause corrosive attack on heating.
- 7.3 Pipe shall be dry, clean and free from moisture, dirt, and loose foreign materials of any kind.
- 7.4 Pipes shall be protected from rust & corrosion.
- 7.5 Rust preventive shall be applied. These when used on machined surfaces to be welded shall be easily removable with a petroleum solvent and the same shall not be harmful to welding.
- 7.6 Both ends of the pipe shall be protected with the following material:
 - i. Plain end : Plastic cap ii. Bevel end : Wood, Metal or plastic cover
- 7.7 Pipes may be provided with plastic pushfit type end caps/ steel caps without belt wire.
- 7.8 All alloy materials tested by PMI shall be identified using either of the following methods by indicating "PMI OK"
 - a) Bar Code/ Hologram Sticker
 - b) A low stress stamp marking

Inspection & Test Plan:

General Notes:

1. This is an indicative inspection and test plan for pipes. However, vendor has to develop their own inspection & test plan that will includes all the above and special requirement specific to the pipes, if any, and submit the same for approval after P.O placement.

All the NDT/ Leak testing/ Heat treatment/ Special manufacturing procedures have to be specially approved or only previously approved procedures have to be used. In case of conflict between purchase specification, contract documents and QAP, more stringent conditions shall be applicable.

INDIAN OIL CORPORATION LTD.						INSPECTION AND TEST PLAN FOR PIPES (FOR MANUFACTURER)			SPECIFICATION		Rev.
											0
Applicable codes and specifications : ASTM/P.O Technical specification/ Pipe Specification Sheet									Scope of inspection		
Sl. No.	Stage	Component	Characteristics	Method of Check	Quantum of check	Reference Documents	Acceptance Norms	Records	Sub-Vendor	Vendor	TPI
1a	Raw material inspection	Bullet/ Mother hollow	Marking and correlation with TC	Review of records visual	100%	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		R	
1b	Raw material inspection	Bullet/ Mother hollow	Chemical composition	Spectro	One sample per heat	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		R	
1c	Raw material inspection	Bullet/ Mother hollow	Internal soundness	Macro-etching	One sample per heat	Internal standard	Internal standard	Inspection report		R	
2	Pipe rolling heating, Hot rolling Straightening	Pipe	Process controls	As per internal plan	As per QA	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Internal standard	Inspection report		W	
3	Heat treatment (if applicable)	Pipe	HT cycle (Time & temperature)	Furnace recorder	100%	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		W	R
4	Non destructive testing (if applicable)	Pipe	Surface & internal imperfections	UT, Eddy current, MPI or other specified	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report, General record		W	R
5	Destructive testing (Note special impact hardness)	Pipe	Chemical Mechanical properties	Chemical tensile flattening bend,	Each HT lot/ each heat no/ size	Purchase requisition/ ASTM-STD/ P.O Technical	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Lab report		W	H

	requirements for H ₂ service)			hardness impact		Specification					
6	Destructive Testing (For SS materials)	Pipe	Corrosion properties	IGC test	Highest thickness & highest carbon/ lot HT	Purchase requisition/ ASTM- STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Lab report		W	H
7	Hydrotesting	Pipe	Leak check	Visual	100% vendor random TPI by at by	Purchase requisition/ ASTM- STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report, Hydro- graph		W	H
8	Final inspection	Pipe	Surface condition, straightness, End finish Bevel angle, Root face. Outer dia, Thickness Length, End finish, Coating, marking Colour coding, End caps.	Visual dimensional	100%	Purchase requisition/ ASTM- STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		W	H
9	Weight checking	Pipe	Weight	Weight scale	100%	Purchase requisition/ ASTM- STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		W	
10	Final inspection	Pipe	PMI check	X-ray Florescence/ Spectrometer	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Purchase requisition/ ASTM- STD/ P.O Technical Specification	Purchase requisition/ ASTM-STD/ P.O Technical Specification	Inspection report		W	H

Legends: H- Hold(offer for witness & obtain clearance), W- Witness, R- Review, A- Approval, I- Information, X- submit PO-Purchase order, PR- Purchase Requisition

		INDIAN OIL CORPORATION LTD.		Inspection and test plan for pipes (for Traders)			Specification	Rev
								0
Applicable codes and specifications: ASTM/ P.O Technical Specification/ Pipe Specification Sheet				Specification/ Pipe			SCOPE OF INSPECTION	
B. Review of manufacturer material test certificates and TPI certificates issued to manufacturer.								
Sl. No.	Type	Characteristics	Quantum of check	Reference documents	Acceptance norms	Record	Trader	TPI (IOCL Representative)
1	Tensile test	Mechanical properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R
2	Product Analysis	Chemical Properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R
3	Flattening test or Bend test	Mechanical properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R
4	Hardness Test	Mechanical properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R
5	Impact test – for LTCS and H2 Service	Mechanical properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R
6	IGC Test – for SS only	Corrosion Properties	One sample from each lot of 100 length having same size, thickness, material & heat	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Testing results of TPI-approved test house	W	Sample drawing-W Test results-R

		INDIAN OIL CORPORATION LTD.	Inspection and test plan for pipes (for Traders)			Specification	Rev
						0	
Applicable codes and specifications: ASTM/ P.O Technical Specification/ Pipe Specification Sheet					SCOPE OF INSPECTION		
A. Review of manufacturer material test certificates and TPI certificates issued to manufacturer.							
Sl. No.	Type	Characteristics	Reference documents	Acceptance norms	Record	Trader	TPI (IOCL Representative)
1	Material testing	Chemical Composition	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse
2	Heat treatment (if applicable)	HT cycle (Time & temperature)	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse
3	Non destructive testing (if applicable)	Surface & internal imperfections	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse
4	Destructive Testing (Note special impact hardness requirements for H ₂ service)	Chemical & Mechanical properties	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse
5	Destructive testing (for SS materials)	Corrosion properties	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse
6	Final inspection	Hydro-testing surface condition, dimension checking straightness, End finish, PMI check	Purchase requisition/ ASTM-STD/P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	TPI certificates of materials at the manufacturer works	R	R & Endorse

Legend: H- Hold (Offer for witness & obtain clearance), W- Witness, R- Review, A- Approval, I- Information, X- Submit, PO- Purchase Order, PR- Purchase Requisition.

7	Inspection - for AS & SS only	PMI Check	To be carried out on every length of pipe	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Inspection Report	W	H
8	Final Inspection	Dimensional checking & Hydrotesting	100% for each type and size	Purchase Requisition/ ASTM-STD/ P.O Technical specification	Purchase requisition/ ASTM-STD/P.O Technical specification	Inspection Report	W	H
9	TPI Clearance	Stamping & Inspection release note	100%	---	---	Inspection Report	W	H

**STANDARD SPECIFICATION
FOR
3 LAYER POLYETHYLENE COATING (3LPE)
OF
LINE PIPES**

1. SCOPE

This specification covers the minimum requirements for plant-application of external anti-corrosion coating of pipes by using 'Three (3) Layer Side Extruded Polyethylene (3LPE)' conforming to ISO 21809 (Latest Edition) "Petroleum and natural gas industries — External coatings for buried and submerged pipeline transportation systems — Part 1: Polyolefin Coatings (3-layer PE and 3-Layer PP)" and the requirements of this specification.

Following acronyms have been used in the document:

API	American Petroleum Institute
APS	Application Procedure Specification
ASME	The American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
CD	Cathodic Disbondment/ Compact Disc
CSA	Canadian Standards Association
d	Days
DFT	Dry film thickness
DIN	Deutsches Institut für Normung
DNVGL	Det Norske Veritas & Germanischer Lloyd
DSC	Differential Scanning Calorimetry
EN	European Standards
ESCR	Environmental Stress Crack Resistance
FBE	Fusion Bonded Epoxy
h	Hours
HDPE	High density polyethylene
ISO	International Organization for Standardization
MFR	Mass Flow Rate
PE	Polyethylene
PP	Polypropylene
ppd	per pipe diameter
PQT	Procedure Qualification Tests
RO	Reverse Osmosis
SSPC	The Society for Protective Coatings
s	seconds
UV	Ultraviolet

2..0 REFERENCE DOCUMENTS

- 2..1 Reference has also been made to the latest edition (edition enforce at the time of issue of enquiry) of the following standards, codes and specifications. The edition in force at the time of floating the enquiry shall be termed as latest edition.

API RP 5L1 : Recommended practice for railroad transportation of line pipe
 API RP 5LT : Recommended practice for truck transportation of line pipe
 API RP 5LW : Recommended practice for transportation of line pipe on barges and marine vessels
 API Spec 5L : Specification for line pipe
 ASME B31.4 : Pipeline transportation systems for liquids and slurries
 ASME B31.8 : Gas transmission and distribution piping systems
 ASTM D149 : Standard Test Method of Dielectric Breakdown Voltage and Dielectric Strength of Solid Electrical Insulating Materials at Commercial Frequencies
 ASTM D257 : Standard Test Methods for DC Resistance or Conductance of Insulating Materials
 ASTM D790 : Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
 ASTM D1603 : Standard test method for carbon black content in olefin plastics

ASTM D1693 : Standard Test Method for Environmental Stress-Cracking of Ethylene Plastics
 ASTM D3895 : Standard Test Method for Oxidative-Induction Time of Polyolefin's by Differential Scanning Calorimetric
 ASTM D4940 : Standard Test Method for Conduct metric Analysis of Water Soluble Ionic Contamination of Blasting Abrasives
 CSA Z245.20 : Plant applied external coatings for steel pipe
 DIN 30670 : Polyethylene coatings on steel pipes and fittings - Requirements and testing
 DNVGL-RP-F102 : Pipeline field joint coating and field repair of line pipe coating
 DNVGL-RP-F 106 : Factory applied external pipeline coatings for corrosion control
 DIN VDE 0433-2 : Generation and measurement of high voltages; Specifications for voltage measurement by means of sphere gaps (one sphere earthed)
 EN 10204 : Metallic products - Types of inspection documents
 ISO 306 : Plastics - Thermoplastic materials - Determination of Vicat softening temperature (VST)
 ISO 572 : Plastics - Determination of tensile properties\
 Part 2 - Test conditions for molded and extruded plastics
 Part 3 - Test conditions for films and sheets
 ISO 868 : Plastics and ebonite - Determination of indentation hardness by means of a durometer (Shore hardness)
 ISO 1133 : Plastics - Determination of the melt mass-flow rate (MFR) and melt volume-flow rate (MVR) of thermoplastics
 ISO 1183 : Plastics - Methods for determining the density of non-cellular Plastics
 ISO 2808 : Paints and varnishes - Determination of film thickness
 ISO 3146 : Plastics - Determination of melting behavior (melting temperature or melting range) of semi- crystalline polymers by capillary tube and Polarizing-microscope methods
 ISO 8501 : Preparation of steel substrates before application of paints and related products — Visual assessment of surface cleanliness
 Part 1 - Rust grades and preparation grades of uncoated steel substrates and of steel substrates after overall removal of previous coatings
 ISO 8502 : Preparation of steel substrate before application of paints and related products - Tests for the assessment of surface cleanliness
 Part 3 - Assessment of dust on steel surfaces prepared for painting (pressure sensitive tape method)
 Part 9 - Field method for the conductometric determination of water soluble salts
 ISO 8503 : Preparation of steel substrates before application of paints and related products- Surface roughness characteristics of blast-cleaned steel Substrates
 Part 1 - Specifications and definitions for ISO surface profile comparators for the assessment of abrasive blast cleaned surfaces
 Part 2 - Method of grading of surface profile of abrasive blast cleaned steel - Comparator procedure
 Part 4 - Method for the calibration of ISO surface profile comparators and for the determination of surface profile -
 ISO 9001 : Quality Management Systems - Requirements
 ISO 9002 : Quality management systems -- Guidelines for the application of
 ISO 9001: 2015
 ISO 11124 : Preparation of steel substrates before application of paints and related products - Specifications for metallic blast-cleaning abrasives
 Part 1 - General introduction and classification
 Part 2 - Chilled-iron grit
 Part 3 - High-carbon cast-steel shot and grit
 Part 4 - Low-carbon cast-steel shot
 ISO 11357 : Plastics - Differential scanning calorimetry (DSC)
 ISO 15512 : Plastics - Determination of water content
 ISO 21809 : Petroleum and natural gas industries External coatings for buried or submerged pipelines transportation systems
 Part 2 - Fusion-bonded epoxy coatings
 Part 3 - Field joint coatings
 SSPC SP1 : Steel Structures Painting Council -Solvent Cleaning

- 2.2 The Applicator shall be familiar with the requirements of these documents and shall make them readily available at the coating plant to all persons concerned with carrying out the works specified in this specification.
- 2.3 In case of conflict between the requirements of this specification, ISO 21809 —1 and the codes, standards and specifications referred in clause 2.1 above, requirements of this specification shall govern.
- 3.0 COMPLIANCE
- 3.1 The Applicator shall be responsible for complying with all applicable requirements of ISO 21809-1: 2011 and this specification. The Company reserves the right to make necessary investigation and, in case of doubt, ask the applicator to conduct additional testing, batch sampling and manufacturing inspection in order to be satisfied of compliance by the applicator. Any materials/coating that does not comply with the requirements shall be rejected.

4.0 PLANT SCALE AND INSTALLATION

- 4.1 The Applicator shall size coating plant(s) after evaluating the scale of work and the time schedule required for the works. Coating plant(s), both new and existing, shall be installed into a yard whose geometry and dimensions are such as to allow the execution of a continuous work schedule. For this purpose, the Applicator shall ensure non-stop work execution owing to prohibitive adverse weather conditions and install requisite equipment and plant in roofed and adequately weather-protected areas.
- 4.2 Plant equipment, machinery and other facilities shall be in finest operating condition to at least meet the job requirements of quality and production. Worn out and improvised plants are not acceptable.
- 4.3 The epoxy spray booth shall be sized to accommodate the number of spray guns required for the application of required quantity of epoxy powder to be electrostatic ally sprayed on to the pipe to achieve specified thickness. Under no circumstances epoxy powder shall escape from the booth. This shall be clearly demonstrated by coating applicator during procedure qualification tests (PQT).
- 4.4 Plant shall have a powder storage room hermetically controlled with power back up for Air conditioning capable of storing the coating materials as per coating manufacturer's recommendations. Temperature and relative humidity shall be recorded continuously.
- 4.5 The powder system shall have an operational automatic fire suppressant system. Powder system shall have means to separate virgin and reclaimed powder.
- 4.6 Plant shall have pipe internal blow-out and debris collection system to remove loose scale, dirt and abrasive from the pipe interior.
- 4.7 The air used for the fluidization of epoxy powder shall be free from moisture. For this purpose dehumidifiers and /or air dryer, as necessary shall be provided along with necessary monitoring and control system. Fluidized bed shall have magnets adequate to remove iron and steel shaving contaminant from recycled powder.
- 4.8 The conductivity of RO water should be less than 35 micro-siemens and rinse water pressure shall be minimum 1000 psi.
- 4.9 The Applicator shall, at his own responsibility and cost, provide and prepare all necessary area for the storage of bare and coated pipe and all other materials, for coating yard, stock-piling and other temporary installation. For each area, Applicator shall provide necessary agreements, as required, with the land owner(s)/relevant Authorities, and, on work completion, to clean and pay settlement and claims for damages, as applicable.
- 4.10 The Applicator shall at its own responsibility and cost, provide for water supply, power supply and other utilities, consumables and obtain authorization regarding access roads and other permits required for the execution of works conforming to all the requirements of the governing Authorities.
- 4.11 The Applicator shall at its own expense provide a fully equipped laboratory and test facilities with adequate inventory to carry out tests required for the procedure qualification and regular production. Outside testing for qualification and regular production is not acceptable to Company.

- 4.12 The Applicator shall be fully responsible for adherence to all statutory regulations applicable for handling & disposal of the hazardous chemicals during the coating works and shall obtain all statutory approvals/ clearances from relevant Authorities including Pollution Control Board, as applicable for the coating plant(s).

5.0 REQUIREMENTS FOR QUALITY

- 5.1 The Applicator shall have established within his organization and, shall operate for the contract, a documented Quality System that ensures that the requirements of this specification are met in all respect. The Quality System shall be based upon ISO 9001/2 or equivalent.
- 5.2 The Applicator shall have established a Quality Assurance Group within its organization that shall be responsible for reviewing the Quality System and ensuring that it is implemented.
- 5.3 The Applicator shall submit the procedures that comprise the Quality System to the Company for agreement.
- 5.4 The Applicator's Quality System shall pay particular attention to the control of suppliers and sub-contractors and shall ensure that the requirements of this specification are satisfied by the suppliers and sub-contractors operating Quality system in their organization.
- 5.5 The Applicator shall, prior to the commencement of work, prepare and issue a Quality Plan for all of the activities required satisfying the requirements of this specification. The plan shall include any sub-contracted work, for which the sub-contractors Quality Plans shall be submitted. The plan shall be sufficiently detailed to indicate sequentially for each discipline the requisite quality control, inspection, testing and certification activities with reference to the relevant procedures and the acceptance standards.
- 5.6 The Applicator's Quality system and associated procedures may, with due notice, be subject to formal audits. The application of quality control by the Applicator will be monitored by the Company Representatives who will witness and accept the inspection, testing and associated work required by this specification.

6.0 COATING CLASSIFICATION

- 6.1 General
The three layer coating as per this specification shall belong to coating Class B of ISO 21809-1: 2011 and shall be suitable for design temperature range of (-) 40 °C to (+) 80 °C.
- 6.2 Coating thickness
Minimum overall thickness of finished coating shall be as per Table 1 below:

Table 1- Minimum thickness of finished coating

Pipe Size (Specified Outside Diameter)	Minimum Coating Thickness (mm)
$\leq 10 \frac{3}{4}"$ (273.1 mm)	2.5
$\geq 12 \frac{3}{4}"$ (323.9 mm) to $\leq 18"$ (457 mm)	2.8
$\geq 20"$ (508.0 mm) to $\leq 30"$ (762 mm)	3.0
$\geq 32"$ (813.0 mm)	3.3

All coating thickness readings must meet the minimum requirements. However, localized coating thickness of less than the permissible minimum thickness can be tolerated on the condition that it does not attain a total extent of more than 5 cm² per meter length of coated pipe, and the actual coating thickness does not drop more than 10% below the permissible minimum coating thickness at these locations.

7.0 MATERIALS

- 7.1 The three layer coating system shall comprise of a powder epoxy primer, copolymeric or grafted adhesive and a high density polyethylene (HDPE) topcoat. Coating materials shall be suitable for the service conditions and the pipe sizes involved.
- 7.2 Pipe

Details of line pipe such as specification, diameter, wall thickness, length, material, grade etc., on which coating is to be applied as per this specification, shall be as given in Purchase Order.

7.3 Coating Material

7.3.1 The coating materials i.e. epoxy powder, copolymeric or grafted adhesive and polyethylene compound shall have proven compatibility.

7.3.2 Applicator shall choose brand of epoxy powder and adhesive as per 'Annexure I' of this specification that will achieve the functional requirements and properties of coating system as specified in clause 7.3.1 and Table 5 of this specification.

7.4 Qualification of coating materials

7.4.1 The coating system and materials shall be pre-qualified and approved by Company in accordance with provisions of Annexure I of this specification. Applicator shall obtain prior approval from Company for the coating system and coating materials.

7.4.2 The coating materials manufacturer shall carry out tests for all properties specified in Table 2, Table 3 and Table 4 of this specification for each batch of epoxy, adhesive and polyethylene compound respectively. In addition, the manufacturer shall also furnish infrared scan for each batch of epoxy powder. The manufacturer shall issue Inspection Certificate 3.1B in accordance with EN 10204 for each batch of materials supplied to Applicator and same shall be submitted to Company for approval prior to their use.

7.4.3 Epoxy properties

Epoxy properties shall meet the properties listed in Table 2 below:

Table 2 — Epoxy properties

Sl. No.	Properties	Unit	Requirement	Test Method
Raw material				
1.	Density	g/l	Within +/- 0.05 of the manufacturer's specified nominal value	ISO 21809-1 Annex N
2.	Gel time at 205° C ± 3° C	s	Within 20% of the nominal value specified by the manufacturer	ISO 21809-1 Annex J
3.	Particle size	--	Within manufacturer's specification	ISO 21809-2 Annex A.6
4.	Moisture Content	% mass	≤ 0.5	ISO 21809-1 Annex K
5.	Minimum glass transition temperature (<i>T_o</i>)	° C	≥ 95 and within manufacturer's specification	ISO 21809-1 Annex D
6.	Infrared scan	% transmittance	As per manufacturer's specification	—

As — applied				
7.	Hot water adhesion 24 h @ 65 °C	--	Rating of 1 to 2	ISO 21809-2, Clause A.16

Table 2 — Epoxy properties

SI. No.	Properties	Unit	Requirement	Test Method
8.	Hot water adhesion 28 d @ 65 °C	--	Rating of 1 to 3	ISO 21809-2, Clause A.16
9.	Flexibility at 0 °C	--	No cracking, tears, disbondment or delamination at 2.0° ppd length	ISO 21809-2, Clause A.13
10.	Impact resistance at 0 °C	J	≥ 1.5	ISO 21809-2, Clause A.14

The colour of epoxy powder shall be colour approved by Company .

7.4.4 Adhesive material properties

Copolymeric or grafted adhesive material shall meet the properties listed in Table 3 below:

Table 3 — Copolymeric or grafted adhesive material properties

SI. No.	Properties	Unit	Requirement	Test Method
Raw material				
1.	Density	kg/m ³	≥ 930 and within manufacturer's specification	ISO 1183
2.	Melt flow rate	g/10 minutes	≥ 1.0 and within manufacturer's specification	ISO 1133
3.	Water Content	%	≤ 0.1	ISO 15512
As — applied				
4.	Elongation at break at 23 °C ± 2 °C	%	≥ 600	ISO 527-2
5.	Tensile yield strength at 23°C ± 2 °C	MPa	≥ 8	ISO 527-2
6.	Vicat softening temperature A/50 (9.8 N)	°C	≥ 100	ISO 306
7.	Flexural Modulus	MPa	≥ 450	ASTM D790

7.4.5 PE (top coat) material properties

The topcoat polyethylene used shall be a black readymade compound, fully stabilized against influence of ultraviolet radiation (i.e. sunlight), oxygen in air and heat (due to environmental temperature upto + 80°C). No visible change shall occur during exposure to

such environments up to at least a period of 8,500 hours. The Applicator shall submit certificate from Manufacturer in this regard.

PE material shall meet the properties listed in Table 4 below:

Table 4 — PE (top coat) material properties

SI. No.	Properties	Unit	Requirement	Test Method
Raw material				
1.	Density	g/cm ³	≥ 0.930	ISO 1183
2.	Melt flow rate	g/10 minutes	≥ 0.25 and within manufacturer's specification	ISO 1133
3.	Water content	%	≤ 0.05	ISO 15512
4.	Carbon black content	%	≥ 2	ASTM D1603
5.	Melting point	°C	≥ 120	ISO 3146
As — applied				
6.	Hardness	Shore D	≥ 55	ISO 868
7.	Elongation at break at 23°C ± 2 °C	%	≥ 600	ISO 527
8.	Tensile strength at 23°C ± 2 °C	MPa	≥ 17	ISO 527
9.	Vicat softening temperature A/50 (9.8 N)	°C	≥ 110	ISO 306
10.	Environmental Stress Cracking Resistance (ESCR) (50°C, F50, cond. B)	h	≥ 300	ASTM D1693
11.	Oxidative induction time (intercept in the tangent method) in oxygen at 220°C, Aluminium pan, no screen	minute	≥ 10	ISO 11357
12.	UV resistance and thermal ageing	%	AMFR ≤ 35	ISO 21809-1 Annex G
13.	Indentation (mass 2.5 kg)	mm	≤ 0.2 @ 20 °C ≤ 0.4 @ 80 °C	ISO 21809-1 Annex F

14.	Impact resistance	J/mm	≥ 7	ISO 21809-1 Annex E
15.	Volume Resistivity @ 23°C ± 2 °C	Ohm-cm	≥ 10 ¹⁶	ASTM D257
16.	Dielectric withstand, 1000 Volts/second rise @ 23°C 1 2°C	V/mm	≥ 30,000	ASTM D149

7.4.6 In addition to manufacturer's Certificate, the Applicator shall draw samples from each batch of epoxy, adhesive and polyethylene in the presence of Company Representative and test for the following properties at the coating yard at least one week prior to its use, to establish compliance with the manufacturer's Test Certificates.

a) Epoxy Powder

- i. Gel Time
- ii. Cure time
- iii. Moisture content
- iv. Thermal Characteristics (T91, T92, ΔH)

b) Adhesive

- i. Density
- ii. Melt flow rate
- iii. Vicat softening temperature
- iv. Water content

c) Polyethylene

- i. Melt flow rate (MFR)
- ii. Density
- iii. Water content
- iv. Thermal stabilization (as per ASTM D3895)

In case of failure of any of the above tests in a batch, that batch of material shall be tested for all other tests required as per Table 2, Table 3 and Table 4 of this specification including the tests which failed. If all tests pass, the batch shall be accepted for coating. If any of the tests fail, entire batch of material shall be rejected and shall not be used for the coating.

7.5 Storage and handling of coating materials

7.5.1 All materials to be used shall be supplied in sealed, damage free containers and shall be suitably marked with the following minimum information:

- a) Name of the manufacturer
- b) Type of material/ product description
- c) Mass/ Quantity of material
- d) Batch number
- e) Location of manufacture
- f) Date of manufacture
- g) Manufacturing identification number
- h) Temperature requirements for transportation and storage
- i) Shelf life or 'use by' date (DD/MM/YYYY)
- j) Qualified minimum flexibility test temperature
- k) Safety Data Sheets (to be included with delivery)

7.5.2 All materials noted to be without above identification shall be deemed suspect and shall be rejected by Company. Such materials shall not be used for coating and shall be removed from site/ store and replaced by Applicator at his own expense.

7.5.3 Applicator shall ensure that all coating materials are properly stored in accordance with the Manufacturer's recommendation at all times, to prevent damage and deterioration in quality prior to use.

7.5.4 Applicator shall be required to use all materials on a date received rotation basis, i.e. first-in-first used basis.

8.0 COATING SYSTEM QUALIFICATION

8.1 General

Properties of coating system and as-applied coating material shall comply the requirements indicated in Table 5 of this specification. In case the coating / material properties are tested as per test methods/ standards other than specified herein below, the same may be accepted provided the test procedures and test conditions are same or more stringent than the specified.

8.2 Application procedure specification (APS)

8.2.1 Upon award of the CONTRACT, the Applicator shall submit within two (2) weeks, for Company approval, a detailed report in the form of bound manual outlining, but not limited to, the following:

- a. Details of plant(s), location(s), layout, capacity and production rate(s).
- b. Details of process control and inspection equipment required for the coating process such as temperature control, thickness control, holiday testers, etc.
- c. Details of the equipment available to carry out the coating works including surface preparation, epoxy powder application and its recycling system, adhesive & polyethylene extrusion, moisture control facilities available for coating materials.
- d. Facilities in the yard for unloading, handling, transport, production, storage, stockpiling, loading of bare and coated pipes and warehouses for storage of other coating materials.
- e. Plant Organization Chart and availability of manpower including coating specialist
- f. Details of utilities/facilities such as water, power, fuel, access roads and communication etc.

After Company has given approval; no change in plant set-up shall be made. However, unavoidable changes shall be executed only after obtaining written approval from Company.

8.2.2 At least four (4) weeks prior to the commencement of production coating, a detailed procedure of the Applicator's methods, material proposed, etc., shall be formulated by the Applicator and submitted for Company approval in the form of a bound manual. The procedure shall include, but not limited to, the following information and proposals:

- a. Procedure for pipe inspection at the time of bare pipe receipt.
- b. Procedure for pipe tracking
- c. Procedure for steel surface preparation, including preheating, removal of steel defects, method of pipe cleaning, dust removal, abrasive blast cleaning and surface profile; methods of measurements and consumables.
- d. Procedure for pipe heating, temperatures and control prior to epoxy application.

- e. Complete details of raw materials for coating, repair and blasting operation including current data sheets showing values for all the properties specified together with quality control and application procedure recommendations from manufacturer(s).
- f. Procedure for application of FBE powder, adhesive and polyethylene, including characteristics, temperature, line speed, application window, curing time, gel time etc.
- g. Quenching and cooling procedure including time and temperature.
- h. Procedure for continuous temperature monitoring at various stages of coating.
- i. Procedure for preparation of coating cutback area.
- j. Quality Assurance System, Quality Plan, Inspection and Test Plan and reporting formats, including instrument and equipment types, makes and uses, etc
- k. Detailed method of repair of coating defects duly classified depending upon nature and magnitude of defects and repair thereof including coating stripping technique.
- l. Details of instrument and equipment calibration methods including relevant standards and examples of calibration certificates.
- m. Procedure for cleaning of all application equipment.
- n. Complete details and inventory of laboratory and equipment for procedure qualification and regular production.
- o. Coated pipe handling, stock piling and/or loading procedures including protection of pipe ends.
- p. Sample of recording and reporting formats (Daily log format), including laboratory reports, certificates and requirement as per clause 14.0 of this specification.
- q. Complete details of test certificates for raw materials including test methods and standards used.
- r. Test certificates from PE compound manufacturer for tests for thermal aging, volume resistivity and aging under exposure to light. These test certificates shall not be older than three years.
- s. Health, Safety and Environment Plans.
- t. Storage details of coating materials and chemicals.

8.3. Procedure Qualification Tests

- 8.3.1 Prior to start of production, the Applicator shall, at his expense, carry out a coating Procedure Qualification Tests (PQT), for each pipe diameter on max. wall thickness, for each type of pipe, for each coating material combination, and for each plant, to prove that his plant, materials, and coating procedures result in a quality of end product conforming to the properties stated in Table 5 of this specification, relevant standards, specifications and material manufacturer's recommendations. Applicator shall give seven (7) working days' notice to witness all procedures and tests.
- 8.3.2 Procedure Qualification Tests (PQT) shall be carried out only after obtaining written approval of the above procedure from Company. No change in the procedure shall be made after the Company has given approval. However, unavoidable changes shall be executed only after obtaining written approval from Company.
- 8.3.3 A batch representing a normal production run, typically fifteen (15) pipes, shall be coated in accordance with the approved coating procedure and the coating operations witnessed by Company Representative. Out of these pipes, at least one pipe shall be coated partly with epoxy and partly with both epoxy and adhesive layers.

- 8.3.4 At least five (5) test pipes shall be selected by Company Representative for coating procedure approval tests and shall be subjected to procedure qualification testing as described hereinafter. Company Representative shall witness all tests. Out of five (5) test pipes, one (1) pipe partly coated with epoxy and partly coated with both epoxy and adhesive layers shall be included. Remaining four (4) test pipes shall have all three layers.
- 8.3.5 During PQT, the Applicator shall qualify various procedures forming a part of coating operations as detailed subsequently.
- 8.3.6 After completion of the qualification tests and inspection as per clause 7.4.6 and Table 5 of this specification, the Applicator shall prepare and issue to Company for approval a detailed report of the tests and inspection including test reports/certificates of all materials and coatings tested. Only upon written approval from Company, Applicator shall commence production coating.
- 8.3.7 On successful completion of PQT, coating of all five (5) test pipes shall be removed and completely recycled as per the approved coating procedure specification, at Applicator's expense. Remaining pipes will be accepted by Company provided they meet the requirements of this specification and need not be stripped and re-cycled.
- 8.3.8 The Applicator shall re-establish the requirements of qualification and in a manner as stated before or to the extent considered necessary by Company, in the event of, but not limited to, the following:
- Every time there is a change in the previously qualified procedure.
 - Every time there is a change in the manufacturer and change in formulation of any of the raw materials and change in location of raw material manufacture.
 - Every time the coating yard is shifted from one location to the other or every time the critical coating equipment (induction heater, epoxy spray system, extruder etc.) are shifted.
 - Any change in line speed during coating application.
 - Any time when in Company's opinion the properties are deemed to be suspect during regular production tests.
- 8.3.9 Company reserves the right to conduct any or all tests required for qualification through an independent laboratory or agency at the cost of Applicator when in Company's opinion, the results are deemed suspect. Company's decision shall be final.
- 8.4. Properties of As-applied Coating System
- 8.4.1 All pipes shall be subject to the following inspections:
- a. Surface cleanliness, surface roughness measurements and dust control immediately after second abrasive blast cleaning and salt test.
 - b. Visual inspection of finished coating, cut back dimension, internal/external cleanliness, end sealing and bevel inspection.
- Acceptance criteria for all inspection and testing shall be as specified in this specification.
- 8.4.2 Properties of as-applied coating system shall meet the minimum requirements as per Table 5 below:

**Table 5 - Requirements for plant applied coating
(PQT and Production)**

Sl. No.	Properties	Acceptance Criteria	Test Method	Inspection Frequency	
				During PQT	During Production
A.	Epoxy Layer				
1.	Pipe feed rate	As per APS	As per APS	Each pipe	Continuous monitoring ^{a)}
2.	Air pressure in epoxy spray guns	As per APS	As per clause 9.3.3.7 of this specification	Each pipe	Continuous monitoring & recording
3.	Induction coil setting	As per APS	As per APS and clause 9.3.2.2 of this specification	Each pipe	Continuous monitoring ^{a)}
4.	Pipe temperature	As per clause 9.3.2.3 of this specification	As per clause 9.3.2.4 of this specification	Continuous monitoring & recording	Continuous monitoring and recording
5.	Minimum epoxy layer thickness (DFT)	≥ 0.200 mm	ISO 2808 e ¹⁾	One pipe ^{d)}	1/shift ^{o)}
6.	Degree of cure - Percentage cure, A1-11 - AT_g	95% ≤ 5°C	ISO 21809-1 Annex D and clause 10.9 of this spec.	4 samples x 1 pipe ^{d)}	1/shift ^{b)}
7.	Holiday detection (test voltage set to exceed 5V per pm of epoxy thickness)	No holidays	ISO 21809-1, Annex B	Each pipe ^{d)}	Not required
8.	Dry adhesion	Rating 1 or 2	ISO 21809-2 Clause A.4 & clause 10.10 of this spec.	One pipe	1/shift
9.	Cross-section porosity	≤ compared with Fig. A.11 of ISO 21809-2	ISO 21809-2 Clause A.12	Each pipe ^{d)}	Not required
10.	Interface porosity	≤ compared with Fig. A.12 of ISO 21809-2	ISO 21809-2 Clause A.12	Each pipe ^{d)}	Not required
11.	Hot water adhesion 24 h @ 65 °C	Rating of 1 to 3	ISO 21809-2, Clause A.16	One pipe	Not required
12.	Flexibility at 0 °C	No cracking, tears, disbondment & delamination at 2.0° ppd length	ISO 21809-2, Clause A.13	One pipe ^{d)}	Not required

**Table 5 - Requirements for plant applied coating
(PQT and Production)**

Sl. No.	Properties	Acceptance Criteria	Test Method	Inspection Frequency	
				During PQT	During Production
B.	Adhesive Layer				
13.	Minimum thickness	≥ 0.200 mm	ISO 2808 ^{e)}	One pipe ^{d)}	1/shift ^(f)
14.	Extrusion temperature of adhesive	As per APS	As per APS & clause 9.3.3.8 of this spec.	Continuous monitoring & recording	Continuous monitoring & recording
C.	PE layer and all three layer				
15.	PE extrusion temperature	As per APS	As per APS	Each pipe	Continuous monitoring & recording
16.	Water quenching	As per APS	As per APS	Each pipe	Continuous monitoring
17.	Visual inspection	As per clause 10.2 of this specification	Visual	Each pipe 100% surface area	Each pipe 100% surface area
18.	Holiday detection (test voltage shall be min. 25 kV & travel speed shall not exceed 300 mm/s)	As per clause 10.4.2 of this specification	As per ISO 21809-1, Annex B and clause 10.4.1 of this spec.	Each pipe 100% surface area	Each pipe 100% surface area
19.	Coating thickness	Table 1 of this specification	ISO 2808 & clause 10.3 of this spec.	Each pipe	Each pipe ^{h)}
20.	Tensile strength @ 23°C \pm 2°C	≥ 17 MPa	ISO 527	One pipe	Not required

21.	Air entrapment test	$\leq 10\%$ & as per clause 10.8 of this specification	As per clause 10.8 of this specification	5 pipes x 1 sample from body & 1 sample from weld (if applicable)	1 sample from body & 1 sample from weld (if applicable)/ shift
22.	Bond Strength (Peel Strength) ■ @ 23°C \pm 2°C (No peeling of FBE layer)	≥ 15 N/mm	ISO 21809-1 Annex C, (clause C.2 or C.5 hanging mass) and clause 10.5 of this spec.	5 pipes x 3 tests (@ both ends & middle) ^{d)}	2 h for pipe ends (cutback portion) & 4 h for middle of pipe
	■ @ 80°C \pm 2°C (No peeling of FBE layer)	≥ 3 N/mm		5 pipes x 3 tests (@ both ends & middle) ^{d)}	2 h for pipe ends (cutback portion) & 4 h for middle of pipe

Sl. No.	Properties	Acceptance Criteria	Test Method	Inspection Frequency	
				During PQT	During Production
23.	Coating Resistivity ^{k)}	$\geq 10^8 \Omega \cdot m^2$	Annex J of DIN 30670	One pipe	Not required
24.	Impact resistance (min. of 30 impacts on body located equi-distance along the length. No breakdown allowed when tested at 25 kV)	$\geq 7 \text{ J/mm}$ of coating thickness	ISO 21809-1 Annex E and clause 10.6 of this spec.	3 pipes	2 pipes/ shift ⁱ⁾
25.	Indentation resistance ■ @ 23°C ± 2°C	$\leq 0.2 \text{ mm}$	ISO 21809-1 Annex F and clause 10.6 of this spec.	2 samples x 5 pipes ^{m)}	2 pipes/ shift ^{j)}
	■ @ 80°C ± 2°C	$\leq 0.3 \text{ mm}$		2 samples x 5 pipes ^{m)}	2 pipes/ shift ^{j)}
26.	Elongation at break	$\geq 400\%$	ISO 527-3 & clause 10.12 of this spec.	6 samples x 3 pipes	Once per PE batch
27.	Cathodic disbondment test ■ 65 °C/ 24 h; - 3.5 V	(Average disbondment radius) $\leq 7 \text{ mm}$	ISO 21809-1 Annex H and clause 10.11 of this specification	One pipe	Once/ day
	■ 23 °C/ 28 d; -1.5 V	$\leq 7 \text{ mm}$		One pipe ⁱ⁾	Not required
	■ 80 °C/ 28 d; -1.5 V	$\leq 15 \text{ mm}$		One pipe ⁱ⁾	Not required
28.	Hot Water Immersion test	Avg. $\leq 2 \text{ mm}$ & max. $\leq 3 \text{ mm}$, 48 hours	ISO 21809-1 Annex M and clause 10.13 of this spec.	One pipe	Once/ day

29.	Flexibility	No cracking at an angle of 2.0° ppd length	ISO 21809-1 Annex I	One pipe	Not required
30.	Hardness	$\geq 55 \text{ Shore D}$	ISO 868	One pipe	Not required
31.	Residual magnetism of line pipe	Avg. of the four readings $\leq 2.0 \text{ mT}$ (20 gauss) & no single reading $\geq 2.5 \text{ mT}$ (25 gauss)	Hall - effect gaussmeter	One pipe x 4 readings approx. 90° apart around the circumference of both ends of the pipe	1/shift

Notes:

a) Parameter shall be recorded at least once per shift.

- a) Parameter shall be recorded at least once per shift.
- b) Lead pipe shall be subjected to this test and thereafter pipes shall be selected randomly by Company Representative during the middle of a shift. Suitable provisions/ arrangements as per the instructions of Company Representative shall be made by the Applicator for this purpose.
- c) Shift duration shall be maximum 12 hours.

- d) The value obtained from the test shall meet the specified requirement. None of the test value shall fail.
- e) Thickness shall be checked at every one metre spacing at 3, 6, 9 and 12 o'clock positions.
- f) Thickness of epoxy and adhesive shall be measured at the beginning of each shift and whenever the plant re-starts after any stoppage for compliance. Coating of epoxy and adhesive on portion of pipe required for this purpose, stripping and recoating of such partly coated pipes shall be at Applicator's expense.
- g) Epoxy film samples (minimum 4 no.) shall be scratched from the coated pipe. Care shall be taken to remove the samples of full film thickness avoiding inclusion of steel debris.
- h) The frequency may be reduced "Once in 10 pipes" depending upon consistency of results, at the sole discretion of Company Representative. Results of all measurements shall be recorded.
- i) Test shall be carried out at every change in batch of PE. Frequency of test may be reduced to one pipe per 2 weeks depending upon the consistently acceptable results at the sole discretion of Company's Representative.
- j) Test shall be carried out at every change in batch of PE. Frequency of test may be reduced to one test each on 2 coated pipes per week at random, after 1 week of consistently acceptable results.
- k) Test carried out in an independent laboratory of national international recognition on PE topcoat is also acceptable.
- l) In case of PQT necessitated for different pipe size with same coating material combination, 24 hours test shall only be conducted and 28 days test is not mandatory.
- m) If any one of these samples fails to satisfy the specified requirements, then the test shall be repeated on four more samples. In this case, none of the samples shall fail.

8.5 Qualification of Procedures

8.5.1 Epoxy Powder Application & Recycling

During pre-qualification, air pressure in the epoxy spray guns, satisfactory functioning of monitoring system, line speed v/s coating thickness, etc. shall be established. Dew point of air used to supply the fluidized bed, epoxy spray system and epoxy recycling system shall be recorded during the PQT.

Also, the Applicator shall remove samples of reclaimed powder from the reclamation system. These samples of reclaimed powder shall be subject to a detailed visual examination, thermal analysis and moisture content tests. The properties of the reclaimed powder shall be within the range specified by the Manufacturer of epoxy powder. In case the properties of the reclaimed powder are out of the range specified by the Manufacturer, Applicator shall not use the reclaimed powder during the regular production. The proportion of the reclaimed powder in the working mix shall not exceed 10% at any time.

8.5.2 Pipe Pre-heating

The Applicator shall establish the temperature variation due to in-coming pipe temperature, line speed variation, wall thickness variation, emissivity, interruptions, etc. and document the same during the PQT stage. During PQT, proper functioning of pipe temperature monitoring and recording system including alarm/hooter shall be demonstrated to the Company Representative.

8.5.3 Surface Preparation

The procedure to clean and prepare the pipe surface shall be in accordance with the requirements of this specification. The ratio of shot to grit shall be established during procedure qualification testing, such that the resultant surface profile is not dished and rounded. The qualification shall be performed through a visual inspection, measurement of roughness and check of the presence of dust on the abrasive blast cleaned pipe surface.

8.5.4 Coating Application

The Company Representative will check the correctness of each coating application operation, values of the main parameters of each operation, pre-heating pipe surface temperature prior to epoxy powder application temperature, line speed, fusion bonded epoxy curing time, temperature and flow rate of copolymeric or grafted adhesive and polyethylene, etc. and the same shall be recorded. These values shall be complied with during regular production.

9.0 APPLICATION OF COATING

9.1 General

Unless specified otherwise, the pipes shall be supplied free from mill applied oils but may be subject to contamination occurring during transit.

9.2 Pipe Surface Preparation

9.2.1 Initial evaluation and surface preparation

9.2.1.1 Applicator shall visually examine the pipes as per Table 6 of this specification and shall ensure that all defects and irregularities (i.e. slivers and scratches), flats and other damages have been repaired or removed. Grinding of steel defects shall not reduce the wall thickness of the pipes below the specified wall thickness of the pipe.

9.2.1.2 Any oil, grease, salt or other contaminants detrimental to the formation of a good coating bond or coating quality shall be removed prior to coating application. Contaminants may be removed by the use of non-oily solvents. Gasoline or kerosene shall not be used for this purpose. Visible oil and grease spots shall be removed by solvent wiping in accordance with SSPC-SP 1. Steel surface shall be allowed to dry before abrasive blast cleaning.

9.2.1.3 The Applicator shall also remove marking stickers, if any, present within the pipe. Record shall be kept of such marking on the stickers to ensure traceability of pipe after coating.

9.2.2 Abrasive blast cleaning

9.2.2.1 All pipes shall be preheated to a temperature of 65°C to 85°C prior to abrasive blast cleaning. The external surface of the pipes shall be cleaned using two (2) no. dry abrasive blast cleaning units to achieve the specified surface cleanliness and profile as per Table 6 of this specification.

9.2.2.2 The abrasive blast cleaning units shall have an effective dust collection system to ensure total removal of dust generated during blast cleaning from the pipe surface. During abrasive blast cleaning, the metallic abrasive shall be continuously sieved to remove "fines" and "contaminants" and the quality checked at every four (4) hours. Abrasives used for blast cleaning shall comply ISO-11124 (all parts) and Table 6 of this specification.

Silica sand or copper slag shall not be used as abrasive material.

9.2.2.3 Abrasive blast cleaning carried out shall be such that the resultant surface profile is not dished and rounded when viewed with 30X magnification. The standard of finish for cleaned pipe shall conform to near white metal finish as per Table 6 of this specification. This shall be measured by a suitable instrument such as surface profile depth gauge.

In addition the pipe surface after blast cleaning shall be checked for the degree of cleanliness, degree of dust and shape of profile as per Table 6 of this specification. Tape

used for assessment of degree of dust shall comply ISO 8502-3. Pressure shall be exerted on the applied tape using a 4 kg roller, prior to peeling-off to assess the degree of dust.

- 9.2.2.4 The blast cleaned surface shall not be contaminated with dirt, dust, metal particles, oil, water or any other foreign material, nor shall the surface or its anchor pattern be scarred or burnished. All blast cleaned pipe surface shall be kept in dust free enclosure prior to coating.
- 9.2.2.5 After blast cleaning, all surfaces shall be thoroughly inspected under adequate lighting to determine anchor pattern, quality of blasting and identify any surface defects prior to coating application. All surface defects such as slivers, scab, burns, laminations, welds spatters, gouges, scores, indentations, slugs or any other defects considered injurious to the coating integrity made visible during blast cleaning shall be reported to the Company Representative and on permission from Company Representative such defects shall be removed by filing or grinding. After any grinding or mechanical repairs, the remaining wall thickness shall be checked and compared with specified thickness. Any pipes having thickness less than specified wall thickness shall be kept aside and disposed-off as per the instructions of Company Representative.
- 9.2.2.6 The method employed to remove surface defects shall not burnish or destroy the anchor pattern or contaminate the surface. Pneumatic tools shall not be used unless they are fitted with effective air/oil and water traps. Wherever burnishing results in destruction of anchor pattern, the anchor pattern shall be restored by suitable means. Pipes having damages repaired by grinding and ground areas more than 50 mm in diameter shall be re-blasted.
- 9.2.2.7 Suitable plugs shall be provided at both pipe ends to prevent entry of any shot/grit into the pipe during blast cleaning operations. These plugs shall be removed after blast cleaning. Alternatively the Applicator may link the pipes suitably together to prevent the entry of any short/grit into the pipe.
- 9.2.2.8 At no time shall the blast cleaning be performed when the relative humidity exceeds 85%. The Applicator shall measure the ambient conditions at regular intervals during blast cleaning and coating operations and keep records of prevailing temperature, humidity and dew point as per Table 6 of this specification.
- 9.2.2.9 The total allowable elapsed time between completion of the blasting operations and commencement of the pre-coating and heating operations shall be such that no detectable oxidation of the surface occurs. Relative humidity readings shall be recorded every half an hour during the blasting operations in the immediate vicinity of the operations. The maximum elapsed time shall not exceed the duration given below:

Relative Humidity %	Maximum elapsed time
>80	2h
70 to 80	3 h
<70	4h
Note: a) Any pipe not processed within the above time-humidity requirement shall be completely re-blasted. Any pipe showing flash rusting shall be re-blasted even if the above conditions have not been exceeded.	

- 9.2.2.10 All pipes shall be visually examined for presence of any shot/ grit/ loose material left inside the pipe during blast cleaning. Suitable mechanical means (stiff brush) shall be employed to remove the same before the pipes are processed further. In addition, inside surface of the pipe shall also be visually inspected for presence of any foreign material or shots and grit (free or embedded/ sticking to pipe inside surface). The pipe inside surface shall be examined using sharp floodlight focused at the middle of the pipe at one end while inspection is carried out visually from other end. Any foreign material or shots/grit present in the pipe

shall be completely removed by mechanical brush, high pressure air jets, by tilting of pipe etc.

- 9.2.2.11 Upon Completion of the blasting operations, the quality control supervisor shall accept the pipe for further processing or return for re-blasting after removal of defects/ imperfections. In case imperfections are considered detrimental to the coating quality, the same shall be reported to Company's Representative for final decision on rejection or re-blasting/removal of defects. Re-blasting/ removal of defects or returning pipe to the yard shall be at the Applicator's cost. Company's Representative, in additions, reserves the right to initiate any of the above actions during periodic inspections for oil, dust, salt, imperfections, surface defects, lack of white metal finish, etc.

In order to ensure that pipe with defects are not processed further, provisions shall be available to lift the pipe from inspection stand.

- 9.2.2.12 Pipe handling between abrasive blasting and pipe coating shall not damage the surface profile achieved during blasting. Any pipe affected by the damage to the surface exceeding 200 mm² in area and/ or having contamination of steel surface shall be rejected and sent for re-blasting.

9.2.3 Surface dust contamination

- 9.2.3.1 Any dust or loose residues that have been accumulated during blasting and/or during filing/ grinding operations shall be removed by vacuum cleaning. The dust level shall be measured and acceptance requirements shall be in accordance with Table 6 of this specification.

- 9.2.3.2 If dust contamination of surface occurs, the quality of blast cleaning method and process shall be examined. If the surface roughness is outside the specified limit, the blast cleaning material shall be checked and replaced.

9.2.4 Surface cleanliness and salt contamination tests

- 9.2.4.1 All pipes shall be tested for salt contamination after blast cleaning as per Table 6 of this specification. An approved salt meter (SCM 400 or equivalent) shall be used to carry out salt tests and shall be calibrated in accordance with the equipment manufacturer's recommendations.

- 9.2.4.2 Any pipe having salt contamination exceeding the acceptable limits as per Table 6 of this specification shall be either re-blasted or washed by de-ionized water and then rechecked for salt contamination. In case salt level less than acceptable limit as per Table 6 of this specification is consistently achieved, the frequency of salt contamination testing may be relaxed to at least one pipe per hour at the sole discretion of the Company Representative.

Table 6 Requirements for inspection of surface preparation of pipe

Sl. No.	Properties	Test Method	Requirement	Frequency	
				During PQT	During Production
1.	Surface condition of pipe before blasting	Visual Inspection	Free of contaminations and surface defects	Each pipe	Each pipe

Table 6 Requirements for inspection of surface preparation of pipe

Sl. No.	Properties	Test Method	Requirement	Frequency	
				During PQT	During Production
2.	Relative humidity	Measurement/ as required	Record (relative humidity shall be < 80%)	Every 1/2 h	Every 1/2 h
3.	Pipe temperature before blasting	Thermocouple	min. 3°C above dew point	Each pipe	Every 1/2 h
4.	Water soluble contamination abrasive	ASTM D4940	Conductivity ≤ 60 pS/cm	Once	1/ shift
5.	Soluble salt after blasting	Conductive measurement ISO 8502-9	Salt (Chloride) content as (NaCL) max. 20 mg/m ²	Each pipe	Each pipe
6.	Size, shape and properties of virgin abrasive	Visual + Certification as per ISO 11124-3	Conformity to certificate and compliance with manufacturing/ working procedure	Every batch	Every batch
7.	Surface roughness of blasted surface	ISO 8503-4	R _z /R _{ys} : 75µm to 100µm	Each pipe	Every 1 h
8.	Visual inspection of blasted surface	ISO 8501-1	Grade Sa 21/2	Each pipe	Each pipe
9.	Presence of dust after dust removal	ISO 8502-3	max. class 2 (for both size and quantity)	Each pipe	Every 1 h

9.3 Coating application and curing temperature

9.3.1 General

The external surface of the cleaned pipe conforming to clause 9.2 of this specification shall be immediately coated with 3-layer extruded polyethylene coating in accordance with the procedures approved by Company, relevant standards and this specification.

9.3.2 Pipe heating and curing

9.3.2.1 Immediately prior to heating of pipe, all dust and grit shall be removed from inside of the pipe by a combination of air blast, brushing and vacuum cleaning. Suitable arrangement shall be made to protect the bevel ends from getting damaged during the coating operation.

9.3.2.2 Induction heater shall be used for heating the pipe. The method shall be capable of maintaining uniform temperature along the total length of the pipe, and shall be such that it shall not contaminate the surface to be coated. Appropriate frequency shall be used to ensure 'deep heating' and intense skin heating is avoided. This shall be demonstrated on bare pipes prior to start of PQT.

9.3.2.3 External surface of the pipe shall be heated to about 190°C or within a temperature range (min. to max.) as recommended by the epoxy powder manufacturer. However, application and curing temperature shall not exceed 250°C in any case. Required pipe temperature shall be maintained as it enters the coating chamber.

Any deviation from the application temperature range recommended by manufacturer shall be rectified. If immediate rectification is not feasible, the production shall be stopped until cause of deviation has been removed. Any pipe coated during the period of temperature

deviation shall be identified by marking and rejected. Such rejected pipes shall be stripped, re-cleaned and recoated.

- 9.3.2.4 Temperature of the pipe surface shall be continuously monitored & recorded by using suitable instruments such as infrared sensors, contact thermometers, thermocouples etc. The recording method shall allow to correlate each line pipe. The monitoring instrument shall be able to raise an alarm/ activate audio system (hooter) in the event of tripping of induction heater or in the event of pipe temperature being outside the range recommended by the manufacturer.

Temperature measuring & monitoring equipment shall be calibrated twice every shift and/or as per Company Representative's instruction.

- 9.3.2.5 Applicator shall ensure that pipe surface emissivity variations are minimized during pipe heating. To avoid significant variance, more than once blasted pipes should be coated at the same time and not mixed with pipes blasted only once.

9.3.3 Pipe Coating Application

- 9.3.3.1 Coating materials shall be inspected in accordance with the manufacturer's recommendation prior to coating application and it shall be ensured that the materials are moisture free. In case the relative humidity exceeds 80%, the adhesive and polyethylene material shall be dried using hot dry air as per the directions of Company Representative.

- 9.3.3.2 Only those coating materials which are pre-qualified and approved by Company in accordance with provisions of Annexure I of this specification and qualified in accordance with the requirements of clause 7.4 i.e. Table 2, Table 3 and Table 4 of this specification shall be utilized for coating. All coating application processes shall be carried out as per manufacturer's recommendations and procedure qualification tests (PQT) as per clause 8.3 and Table 5 of this specification.

- 9.3.3.3 Subsequent to pipe heating, coating consisting of following layers shall be applied onto the pipe.

- i. Electrostatic application of epoxy powder of minimum dry film thickness as per Table 5 of this specification, unless otherwise specified. The maximum thickness shall not exceed the epoxy thickness specified by epoxy powder manufacturer.
- ii. Copolymeric or grafted adhesive application by extrusion of minimum thickness as per Table 5 of this specification.
- iii. Polyethylene application by extrusion.

Minimum overall thickness of finished coating shall be as per Table 1 of this specification.

- 9.3.3.4 The coated pipe shall be subsequently quenched and cooled in water for a period that shall sufficiently lower the temperature of pipe coating, atleast upto 80°C, to permit handling and inspection.

- 9.3.3.5 Prior to starting the application of fusion bonded epoxy powder, the recovery system shall be thoroughly cleaned to remove any unused powder remaining from a previous line pipe coating application. The use of recycled powder shall be permitted subject to:

- a) Satisfactory qualification of the reclaimed system during PQT stage.
- b) The proportion of the reclaimed powder in the working mix does not exceed 10% at any one time.
- c) The quality of the recycled powder being routinely checked during production, at a minimum frequency of once per shift and consistently meets the requirements stated at clause 7.4.3 and Table 2 of this specification.

- 9.3.3.6 Dry air, free of oil and moisture shall be used in the coating chamber and spraying system and filters, dehumidifier/dryer as required along with control & monitoring system shall be provided for this purpose. Dew point of air used to supply the fluidized bed, epoxy spray system and epoxy recycling system shall be at least (-)40°C and this shall be monitored during the regular production.
- 9.3.3.7 Air pressure in the epoxy spray guns shall be controlled, continuously monitored and recorded by using suitable instruments. The air pressure shall be controlled within the limits established during coating procedure qualification. The monitoring system shall be able capable of raising an alarm / activate audio system (hooter) in the event of change in air pressure beyond the set limits. Any deviation from the pre-set limits shall be rectified. If immediate rectification is not feasible, the production shall be stopped until cause of deviation has been removed. Any pipe coated during the duration of air pressure deviation shall be identified by suitable marking and rejected. Such rejected pipes shall be stripped and recoated.
- 9.3.3.8 Extruded adhesive layer shall be applied before gel time of the epoxy coating has elapsed and within the window recommended by the manufacturer. The Applicator shall establish, to the satisfaction of the Company Representative, that the adhesive is applied within the gel time window of epoxy and at the temperature recommended by the adhesive manufacturer. The Applicator shall state the minimum and maximum time interval between epoxy and adhesive application at the proposed pre-heat temperature and line speed.
- 9.3.3.9 Extruded polyethylene layer shall be applied over the adhesive layer within the time limit established during PQT stage and within the time/temperature range recommended by the manufacturer. The extrusion temperatures of the adhesive and polyethylene shall be continuously recorded. The monitoring instruments shall be independent of the temperature control equipment. The instruments shall be calibrated prior to start of each shift.
- 9.3.3.10 Applicator shall ensure that there is no entrapment of air or void formation along the seam weld (where applicable) during application of coating. Air entrapment below the coating and also along the coating overlap shall be prevented by forcing the coating on to the pipe using high pressure roller of suitable design during coating application. In case it is not adequately achieved, Applicator shall supplement by other methods to avoid air entrapment. The methods used shall be witnessed and approved by Company.
- 9.3.3.11 Resultant coating shall have a uniform gloss and appearance and shall be free from air bubbles, wrinkles, holidays, irregularities, discontinuities, separation between layers of polyethylene & adhesive, etc.
- 9.3.3.12 Coating cutback
- Coating and/or adhesive shall terminate 120 mm (+) 20 / (-) 0 mm from pipe ends. The adhesive shall seal the ends of applied coating. Applicator shall adopt mechanical brushing for termination of the coating at pipe ends. Edge of the coating shall be shaped to form a bevel angle of 30° to 45°.
- Wherever specified the cut back shall be 150mm (+) 20 / (-) 0 to facilitate automatic welding.
- 9.3.3.13 Failure to comply with any of the above applicable requirement and of the approved procedure shall be cause for the rejection of the coating and such coating shall be removed in a manner approved by Company at Applicator's expense.

10.0 INSPECTION AND TESTING

10.1 General

The Applicator shall establish and maintain such quality assurance system as are necessary to ensure that goods or services supplied comply in all respects with the requirements of this

specification. The minimum inspection and testing to be performed shall be as indicated subsequently herein.

10.2 Visual Inspection

Immediately following the coating, each coated pipe shall be visually checked for imperfections and irregularities of the coating. The coating shall be of natural colour and gloss, smooth and uniform and shall be blemish free with no dust or other particulate inclusions. The coating shall not show any defects such as blisters, pinholes, scratches, wrinkles, engravings, cuts, swellings, disbonded zones, air inclusions, tears, voids or any other irregularities. Special attention shall be paid to the areas adjacent to the longitudinal weld (if applicable), adjacent to the cut-back at each end of pipe and within the body of the pipe.

In addition inside surface of the pipe shall also be visually inspected for presence of any foreign material or shots and grit (free or embedded/sticking to pipe inside surface). The pipe inside surface shall be examined using sharp floodlight focused at the middle of the pipe at one end while inspection is carried out visually from other end.

10.3 Coating Thickness

10.3.1 Coating thickness shall be checked by taking atleast 10 measurements at locations uniformly distributed over the length and periphery of each pipe. In case of welded pipes, five of these readings shall be made at apex of the weld seam, uniformly distributed over the length of the coated pipe.

10.3.2 Coated pipes not meeting the requirements shall be rejected. Rejected coated pipes shall be stripped and re-coated in accordance with approved procedure, at Applicator's expense.

10.4 Holiday Detection

10.4.1 The holiday detector shall be a low pulse D.C. full circle electronic detector with audible alarm and precise voltage control complying with DIN VDE 0433 Part 2. Applicator shall calibrate the holiday detector at least once every 4 hours of production. Applicator shall have necessary instruments or devices for calibrating the holiday detector.

10.4.2 Any pipe coating shall be rejected if more than one (1) holiday & area more than 100 cm² in size are detected in its length attributable to coating process.

10.4.3 Holidays, which are lesser in size than those mentioned in 10.4.2 above, shall be repaired in accordance with an approved procedure and shall be at Applicator's expense.

10.5 Bond Strength (Peel Test)

10.5.1 Applicator shall carryout bond strength test for applied coating as per Table 5 of this specification. A minimum of 65 mm length shall be peeled. First 20 mm and last 20 mm length shall not be counted for assessment of bond strength.

10.5.2 In case of non-grafted adhesive, the system shall disbond/ separate cohesively either in adhesive layer or in polyethylene layer. Majority of the peeled off area on the pipe shall show presence of adhesive. Disbondment/separation at epoxy to steel interface or epoxy / adhesive interface or adhesive/ polyethylene interface shall not be permitted. The failure mode shall be recorded for each test.

In case of grafted adhesive, cohesive failure mode is not applicable. However, the disbondment is not permitted in the epoxy layer and at the interface of epoxy & steel.

10.5.3 In case the test fails to comply the specified requirement, the Applicator shall test the preceding and succeeding coated pipe. If both pipes pass the test, then the remainder of the pipe joints in that shift shall be deemed satisfactory. If either pipe fails to meet the specified requirements, all pipes coated during that shift shall be tested until the coating is proved acceptable. Rejected coated pipes shall be stripped and re-coated in accordance with approved procedure, at Applicator's expense.

10.6 Impact resistance test

Minimum thirty (30) impacts located equidistant along the length of coated pipe shall be performed. Immediately after testing, the test area shall be subjected to holiday detection at the same voltage as used prior to impact strength test. The pipe shall be rejected if any holiday is noted in the test area. In case of test failure, retesting and disposal of coated pipe shall be as per clause 10.5.3 above.

10.7 Indentation Hardness

Two samples for each temperature shall be taken from the cut back portion of coated pipe and one in the middle of the pipe for this test. In case of test failure, retesting and disposal of coated pipe shall be as per clause 10.5.3 above.

10.8 Air Entrapment Test

10.8.1 Strips from bond strength tests (peel test) or coated pipe may be used to help determine the porosity of the finished coating. Strip shall be also cut from longitudinal weld (if applicable) at cut back portion and examined for the presence of voids.

10.8.2 Bond strength strip shall be viewed from the side and at the failure interface. At the pipe bond strength test location, utility knife shall be used to cut the edge of the coating to a 45° angle and view with a microscope. Similar examination shall be done in the coating cut back area.

10.8.3 Strips shall be viewed from the side. All examination shall done using a 30X magnification hand-held microscope. The polyethylene and adhesive layers shall have no more than 10% of the observed area taken up with air entrapment (porosity or bubbles). Air entrapment shall not occupy more than 10% of the thickness in each case. Bubbles shall not link together to provide a moisture path to the epoxy layer.

10.8.4 In case of test failure, retesting and disposal of coated pipe shall be as per clause 10.5.3 above.

10.9 Degree of Cure

10.9.1 Epoxy film samples shall be scratched from cut back portion of the coated pipe using hammer and cold chisel and the samples shall be taken for cure test using DSC procedure. Silicon coated sulphite paper shall be placed between the epoxy layer and adhesive layer immediately after epoxy application, to ensure physical separation of epoxy & adhesive as well as to prevent contamination of epoxy with adhesive layer, at a location from where the epoxy samples are to be removed for the test. Care shall be taken to remove the samples of full film thickness avoiding inclusion of steel debris. Glass transition temperature differential (ATg) and % cure (MI) shall comply the specified requirements.

10.9.2 In case of test failure, production carried out during the entire shift shall be rejected, unless the Applicator proposes a method to establish the compliance with the degree of cure requirements of all pipes coated during that shift.

10.10 Dry Adhesion Test (for epoxy)

The test shall be carried out at the cut back portion on the pipe from which the Degree of Cure test has been carried out as per clause 10.9 above. In case of test failure, retesting and disposal of coated pipe shall be as per clause 10.9.2 above.

10.11 Cathodic Disbandment Test

In case the test fails to conform to the specified requirement, at the option of the Applicator, all pipes coated after the previous acceptable test and prior to next acceptable test shall be rejected or the test shall be repeated using two additional samples taken from the same end of the affected pipe.

When both retests conform to the specified requirement, the lot of pipes shall be accepted. When one or both the retests fail to conform to the specified requirement, all coated pipes after previous acceptable test and prior to next acceptable shall be rejected. All rejected pipes shall be stripped, re-cleaned and re-coated. Company may consider a further retest program to determine whether any of the affected pipe meet the criteria for acceptance upon written request by the Applicator.

10.12 Elongation at break

In case the test fails to comply the specified requirement, the Applicator shall test the two preceding and two succeeding coated pipe. If both pipes pass the test, then the remainder of the pipe joints in that batch shall be deemed satisfactory. If either pipe fails to meet the specified requirements, all pipes coated with that batch of PE shall be tested until the coating is proved acceptable. Rejected coated pipes shall be stripped and re-coated in accordance with approved procedure, at Applicator's expense.

10.13 Hot water immersion

In case the test fails to comply the specified requirement, the Applicator shall test the two preceding and two succeeding coated pipe. If both pipes pass the test, then the remainder of the pipe joints in that day shall be deemed satisfactory. If either pipe fails to meet the specified requirements, all pipes coated in that day shall be tested until the coating is proved acceptable. Rejected coated pipes shall be stripped and re-coated in accordance with approved procedure, at Applicator's expense.

10.14 Damages occurring to pipe coating during above tests shall be repaired in accordance with approved coating repair procedure.

10.15 Repairs occurring on account of the production tests are however excluded from above mentioned limitations at clause 10.4.2 above.

10.16 Company reserves the right to perform inspection and witness tests on all activities concerning the pipe coating operations starting from bare pipe to finished coated pipe ready for despatch and also testing of raw materials. Applicator shall give reasonable notice of time and shall provide without charge reasonable access and facilities required for inspection to the Company's representative. Inspection and tests performed or witnessed by Company's representative shall in no way relieve the Applicator's obligation to perform the required inspection and tests.

10.17 In case rate of defective or rejected pipes and/or samples tests are 10% or more for a single shift (typically 8 hours), Applicator shall be required to stop production and carry out a full and detailed investigation and shall submit findings to Company for approval. Applicator shall recommence the production only after getting the written permission from Company.

Under no circumstances any action or omission of the Company's Representative shall relieve the Applicator of his responsibility for material and quality of coating produced. No pipes shall be transported from the coating plant unless authorized by Company in writing.

11.0 REPAIR OF COATING

11.1 General

Applicator shall submit to Company, its methods and materials (as per clause 8.2 of this specification) proposed to be used for executing a coating repair and shall receive approval from Company prior to use.

11.1.2 In open storage the repair coating materials must be able to withstand a temperature of at least(+) 80°C without impairing its serviceability and properties. Applicator shall furnish manufacturer's test certificates for the repair materials clearly establishing the compliance of the repair materials with the applicable coating requirements indicated in this specification.

- 11.1.3 All pipes leaving coating plant shall have sound external coating with no holiday or porosity on 100% of the surface.
- 11.1.4 Defects, repairs and acceptability criteria shall be as follows:
- Pipes showing porosities or very small damage not picked up during holiday test and having a surface less than 0.5 cm² or linear damage (cut) of less than 3 cm shall be repaired by stick using material of same quality.
 - Damages caused to coating by handling such as scratches, cuts, dents, gouges, not picked up during holiday test, having a total reduced thickness on damaged portion not less than 2 mm and an area not exceeding 20 cm² shall be rebuild by heat shrink patch only and without exposing to bare metal.
 - Defects of size exceeding above mentioned area or holidays of width less than 300 mm shall be repaired with heat shrink repair patch by exposing the bare metal surface.
 - Defects exceeding the above and in number not exceeding 2 per pipe and linear length not exceeding 500 mm shall be repaired using heat shrinkable sleeves of HTLP 80 or equivalent.
 - Pipes with bigger damage shall be stripped and recoated.
 - In case of coating defect close to coating cut back, Applicator shall remove the coating throughout the entire circumference of the pipe down to the steel surface and increase the coating cut back length. Now if the coating cut back exceeds 140 mm of linear length of pipe then the coating shall be repaired by the use of heat shrink sleeves thereby making up the coating cut back length of 120 mm.
- 11.1.5 Notwithstanding the above, if any defect exceeds 70 mm from the original coating cut back length, the entire coating shall be removed and the pipe shall be recycled through the entire coating procedure.
- 11.1.6 Irrespective of type of repair, the maximum numbers of repair of coating shall be as follows:
- Holiday repair of size 100 cm² attributable to process of coating application shall be maximum one number per pipe.
 - In addition to the above, defects to be repaired by heat shrink patch/sleeve shall be maximum 2 (two) per pipe.
- 11.1.7 Defects exceeding the above limits shall cause pipe coating rejection, stripping and recoating. The above is exclusive of the repairs warranted due to testing as per this specification.
- All repairs carried out to coating for whatever reason shall be to the account of Applicator.
- 11.1.8 Cosmetic damages occurring in the polyethylene layer only need not be repaired by exposing up to steel surface, as deemed fit by the Company Representative. In any case the Applicator shall establish his material, methods and procedure of repair that result in an acceptable quality of product by testing and shall receive approval from Company prior to use.
- 11.1.9 Testing of repairs shall be in the same form as testing coating. All repairs shall result in a coating thickness no less than the parent coating thickness. Applicator shall test repairs to coating as and when required by Company.

12.0 MARKING

Applicator shall place marking on the outside surface of the coating at one end of the coated pipe, and marking shall indicate, but not limited to the following information:

- a. Pipe number, Heat number

- b. Diameter & Wall thickness
- c. Coated pipe number
- d. Colour band
- e. Any other information considered relevant by Company.
- f. Pipe Manufacturer Name
- g. Inspection Mark/ Punch

Applicator shall obtain prior approval on marking procedure to be adopted from the Company.

13.0 HANDLING, TRANSPORTATION AND STORAGE

- 13.1 The Applicator shall be fully responsible for the pipe and for the pipe identification marking from the time of "taking over" of bare pipe from Company until such time that the coated line pipes are 'handed over' and/or installed in the permanent installation as the case may be according to the provisions of the CONTRACT.
- 13.2 At the time of "taking over" of bare pipes, Applicator shall inspect and record all the relevant details referred above including pipe defects in the presence of Company. All pipes shall be checked for bevel damages, weld seam height, dents, gouges, corrosion and other damages. Company Representative shall decide whether pipe defects / damages are suitable for repair. Damage to the pipes that occur after the Applicator has taken delivery such as dents, flats, or damage to the weld ends shall be cut off or removed and pipes rebevelled and repaired again as necessary. The cost of this work, as well as that of the pipe lost in cutting and repair shall be to the Applicator's account. All such works shall be carried out after written approval of the Company. Any reduction in length shall be indicated in the Applicator's pipe tracking system.
- 13.3 The Applicator shall unload, load, stockpile and transport the bare pipes within the coating plant(s) using suitable means and in a manner to avoid damage to pipes. The Applicator shall stockpile the bare pipes at the storage area of the coating plant. The Applicator shall prepare and furnish to Company a procedure/ calculation generally in compliance with API RP 5L1 for stacking of pipes of individual sizes, which shall be approved by Company prior to commencement.
- 13.4 The bevel protectors shall be removed and stored for reuse after completion of coating application. The ends of the pipes during handling and stacking shall always be protected with bevel protectors.
- 13.5 The Applicator shall load, unload, transport and stockpile the coated pipes within the coating plant using approved suitable means and in a manner to avoid damage to the pipe and coating. The Company shall approve such procedure prior to commencement of work.
- 13.6 Coated pipes may be handled by means of slings and belts of proper width (minimum 60 mm) made of non-abrasive/ non-metallic materials. In this case, pipes to be stacked shall be separated row by row to avoid damages by rubbing the coated surface in the process of taking off the slings. Use of round sectional slings is prohibited. Fork lifts may be used provided that the arms of the forklift are covered with suitable pads, preferably rubber
- 13.7 Bare/ coated pipes at all times shall be stacked completely clear from the ground, at least 300mm, so that the bottom row of pipes remains free from any surface water. The pipes shall be stacked at a slope so that driving rain does not collect inside the pipe. Bare/ coated pipes may be stacked by placing them on ridges of sand free from stones and covered with a plastic film or on wooden supports provided with suitable cover. This cover can be of dry, germ free straw covered with plastic film, otherwise foam rubber may be used. The supports shall be spaced in such a manner as to avoid permanent bending of the pipes.

- 13.8 Stacks shall consist of limited number of layers such that the pressure exercised by the pipe's own weight does not cause damages to the coating. Applicator shall submit calculations for Company approval in this regard. Each pipe section shall be separated by means of spacers suitably spaced for this purpose. Stacks shall be suitably secured against falling down and shall consist of pipe sections having the same diameter and wall thickness. The weld seam of pipes shall be positioned always in a manner so as not to touch the adjacent pipes.
- 13.9 The lorries used for transportation shall be equipped with adequate pipe supports having as many round hollow beds as there are pipes to be placed on the bottom of the lorry bed. Total width of the supports shall be at least 5% of the pipe length and min. 2 no. support shall be provided. These supports shall be lined with a rubber protection and shall be spaced in a manner as to support equal load from the pipes. The rubber protection must be free from all nails and staples where pipes are in contact. The second layer and all following layers shall be separated from the other with adequate number of separating layers of protective material such as straw in plastic covers or mineral wool strips or equivalent, to avoid direct touch between the coated pipes.
- 13.10 All stanchions of Lorries used for transportation shall be covered by non-abrasive material like rubber belts or equivalent. Care shall be exercised to properly cover the top of the stanchions and other positions such as reinforcement of the truck body, rivets, etc. to prevent damage to the coated surface. Slings or non-metallic straps shall be used for securing loads during transportation. They shall be suitably padded at the contact points with the pipe
- 13.11 Materials other than pipes and which are susceptible of deteriorating or suffering from damages especially due to humidity, exposure to high thermal excursions or other adverse weather conditions, shall be suitably stored and protected. Deteriorated materials shall not be used and shall be replaced at Applicator's expenses. These materials shall always be handled during loading, unloading and storage in a manner so as to prevent any damage, alteration and dispersion. When supplied in containers and envelopes, they shall not be dropped or thrown, or removed by means of hooks, both during the handling operations till their complete use. During unloading, transport and utilization, any contact with water, earth, crushed stone and any other foreign material shall be carefully avoided.
- 13.12 Applicator shall strictly follow Manufacturer's instructions regarding storage temperature and methods for volatile materials that are susceptible to change in properties and characteristics due to unsuitable storage. If necessary the Applicator shall provide for a proper conditioning.
- 13.13 In case of any marine transportation of bare/coated line pipes involved, the same shall be carried out in compliance with API RP 5LW. Applicator shall furnish all details pertaining to marine transportation including drawings of cargo barges, storing/stacking, sea fastening of pipes on the barges/marine vessels to the company for approval prior to undertaking such transportation works. In addition, Applicator shall also carry out requisite analyses considering the proposed transportation scheme and establish the same is safe and stable. On-deck overseas shipment shall not be allowed.
- 14.0 MEASUREMENT AND LOGGING
- Applicator shall maintain records in computer using MS ACCESS database Software containing all the relevant data of individual pipe and pipe coating including pipe number, heat number, diameter, length, wall thickness, defects, coating number, batches of materials, sampling, testing, damages, repairs, rejects and any other information that Company considers to be relevant and required for all incoming bare pipes and Company approved outgoing coated pipes as applicable. Applicator's documentation shall be designed to ensure full traceability of pipe and coating materials through all stages of coating and testing. Applicator shall submit this information in the form of a report at the agreed intervals. The above data shall also be provided in MS ACCESS format in Compact Disc (CD)/ pen drive . Applicator shall provide one Computer Terminal to Company Representative for

monitoring/tracking of the above. The Applicator shall also submit the material balance details to Company for information at the end of each shift.

ANNEXURE I

List of Acceptable Combinations of Coating Materials

The following combinations of coating materials are considered acceptable. In case any of the combinations listed below are offered, details regarding properties of the offered materials need not be furnished with bid. However, In the event of award of contract, Applicator shall furnish the combination(s) proposed as per Table below and re-confirmation of compatibility of the proposed combination (s) from the raw materials Manufacturers. Only straight line combination of epoxy, adhesive and PE compound is acceptable.

Epoxy Powder (Manufacturer)	Adhesive (Manufacturer)	PE Compound (Manufacturer)
CORRO-COAT EP-F 2001 (JOTUN)	FUSABOND 158D (DUPONT)	SCLAIR 35 BP HDPE (NOVACOR)
CORRO-COAT EP-F 2002HW (JOTUN) or SCOTCHKOTE 226N (3M)	LUCALEN G3710E (LYONDELLBASELL)	LUPOLEN 4552 D SW 00413 (LYONDELLBASELL)
PE 50-6109 (BASF) or CORRO-COAT EP-F 2001/ 2002HW (JOTUN) / JOTAPIPE AC 1003 (JOTUN) or SCOTCHKOTE 226N (3M)	ME 0420 (BOREALIS)	HE 3450H (BOREALIS / BOROUGE)
CORRO-COAT EP-F 2001 (JOTUN)	LE — 149 V (HYUNDAI ENGINEERING PLASTICS)	ET 509 B (HYUNDAI ENGINEERING PLASTICS)

Although the above combinations would be acceptable to Company, the responsibility of suitability for application, performance and compliance to the coating system requirements shall unconditionally lie with the Applicator.

SECTION-6

BID EVALUATION CRITERIA

6.1 TECHNICAL CRITERIA

The following vital technical conditions should be strictly complied with failing which bid will liable to be rejected:

- 6.1.1 Bidder or its stockist should have supplied at least three orders of API 5L, Grade x42 line pipes during last 5 years, each with minimum order value of 2 Rs. crores. Documentary evidence viz copy of successfully executed Purchase Orders / Contracts to be submitted along with the bid.
- 6.1.2 Bidder shall provide the list, with backup documents (Work orders, Completion certificates etc), complying the above requirement. Documents meeting the above requirements must be submitted along with the Technical bid. These documents shall be in the form of:
 - a) Copies of relevant pages of contract document showing contract number, period of contract and detailed Scope of Work etc.
 - b) Copies of experience Certificate (s) or payment certificates or Completion Certificate to substantiate execution of the jobs, issued by the client(s) with contact details of the issuing person/organization (e-mail address, Phone Number, Fax number etc.)
 - c) In case of Consortium/Joint venture bidder, Responsibility Matrix for each activity of the project to be executed by respective partner shall be submitted for evaluation.
 Documentary evidence in support of requirements at S. No. 6.1.1 above shall be submitted for evaluation.
- 6.1.3 Bidder should have valid API certificates and the copy of all relevant certificates to be submitted along with the bid.
- 6.1.4 Bidder to submit a declaration confirming that Bidder has understood the scope and requirements and the supplies offered are conforming to the Scope of Supply and requirements including quality parameters. Bidder to submit copy of internal QC protocol/procedure.

6.2 COMMERCIAL EVALUATION CRITERIA

Proof of the issue of Tender Document must be sent along with "Technical & Un-Priced Commercial Bid".

- 1) Submission of Bid: Bids are submitted as per instruction provided in Notice Inviting of Tenders in Section – 2.
- 2) Acceptance of Terms & conditions: The bidder must confirm unconditional acceptance of Terms & condition of Contract as per Section-3, Price Schedule format as per Section-7 and Instruction to bidder as per Section-2.
- 3) Offer of following type shall liable to be rejected:
 - (a) Fax / e-mail / Xerox/photo/scanned copy offers
 - (b) Offer made by Agent /retainer/consultant / Representatives /Associates / of the foreign principal
 - (c) Offer do not conform to validity period as per ITB
 - (d) Offer without Bid bond /bank guarantee in prescribed format for amount and validity as per ITB
 - (e) Offer without valid GST registration
 - (f) Offer not accompanied with an undertaking to provide all necessary certificates / document for enabling Company to avail input GSIT/IGST credit which is payable against the supply and services (if awarded) along with documentary evidence of payment of GSIT/IGST
 - (g) Offer where prices are not firm during entire duration of the contract and /or with qualifications.
 - (h) Offer not duly signed by authorized signatory

- (i) Bidders not meeting Mobilization, Delivery schedule, completion period
- Note: Bidder shall confirm that quoted price including of all taxes and duties applicable including corporate tax / income tax etc. as indicated.

6.3 FINANCIAL CRITERIA

1. Average turnover of the Bidder during last three years (FY 20-21, FY 21-22 and FY 22-23), should be at least Rs. 6 crores.
2. Net worth of the bidder should be positive for FY 2022-23. Bidder shall submit CA certified Net Worth Certificate.
3. Bidder to submit audited financial statement for relevant years.

6.4. Joint Venture / Consortium Bidder's Bid

6.4.1 In case of a joint venture / consortium bid, the members / partners of joint venture / consortium must meet the qualification criteria jointly as specified.

6.4.2 The overall responsibility of the Contract Management shall be of Lead member / partner of Joint Venture / Consortium.

6.4.3 In case of Joint venture / Consortium Bid, following additional requirement must also be satisfied:

- ii) Indian bidders whose proposal for technical collaboration / Joint Venture / consortium involves foreign equity participation / or payment of royalty and / or a lump-sum for technical know-how and wherever Govt. approval is necessary on their application submitted to SIA (Secretariat for Industrial Assistance), are required to submit:

- A copy of Govt. approval, along with techno-commercial bid (if already granted).

OR

- Furnish an undertaking to submit a copy of the required approval prior to the date of price bid opening.

- iii) Bidders should submit a Memorandum of Understanding (MOU) / Agreement with their technical collaborator / joint venture / consortium partner (in case of Joint venture) clearly indicating their roles and responsibility under the scope of work.

- iv) MOU / Agreement concluded by the bidder with technical collaborator / joint venture / Consortium partner (in case of joint venture), should also be addressed to Sun Petro, clearly stating that the MOU / Agreement is applicable to this tender and shall be binding on them for the entire currency of period of Contract / PO. Notwithstanding the roles and responsibilities of each partner defined in the MOU / Agreement, all the partners will be jointly and severally responsible for completion of job under this contract.

A statement to this effect shall be included in the authorization / nomination/ MOU / Agreement by all members / partners of JV / consortium.

6.5 DISCOUNT

Bidders are advised not to indicate any separate discount. Discount, if any should be merged with the quoted prices.

6.6 GENERAL

Bidders to note following:

1. In case bidder take exception to any clause or terms condition of tender document not covered under BEC, **Company shall** have discretion to reject the offer on account of such **exception**.

2. In case any contradiction between BEC and a clause appearing elsewhere in the bidding document, provision of BEC shall supersede all such clauses.
3. Inspection will be carried out by Company 's officers / representative / Third party at the discretion of Company

SECTION-7

BILL OF QUANTITY (BOQ)/ PRICE SCHEDULE (PS)

7.0 BILL OF QUANTITY (BOQ) / PRICE SCHEDULE (PS)

Bidder shall quote as per the following format. Contract shall be awarded to the technically acceptable most competitive bidder:

The Prices are to be quoted on FOR Bhaskar Field, Gujarat basis.

Sl. No.	Description of Items	UOM	QTY	Unit Rate (INR/USD)	Total Cost (INR/USD)
1	Supply of Line Pipes as per scope of supply/ technical specifications: OD of Pipe: 6-5/8" (168.3 mm), Beveled End, Wall Thickness :7.11mm Material: API 5L Grade X42, Seamless, PSL-2, 3LPE coated line pipes Piggable pipeline	m	9,000		
Total Cost (INR/USD)					

Note:

- The quantities indicated above are subjected to variation. Final quantity shall be confirmed at the time of order.
- All the material including raw material combination for 3LPE coating, shall be strictly as per the specifications specified in the SoW & no deviation shall be allowed.
- ITP of successful bidder shall be as per the specifications mentioned in the SoW and acceptable parameters against each criterion shall be mentioned in the ITP itself so that it is a standalone document.
- Bidder shall offer their earliest delivery period (from the date of receipt of order).
- Bidder to quote for full quantity. The Company shall have a Right to split the work /supply between two or more bidders at its sole discretion.
- The quantities mentioned above are indicative and for evaluation purposes only. The actual quantities may vary.
- The above rates are inclusive of all charges, taxes & duties but excluding GST, which shall be paid extra, as applicable, by the Company.
- Indian Bidder (which shall include any Company incorporated in India) shall be paid in Indian Rupees Only. Foreign Bidder (which shall include any Company other than Indian Bidder) shall be paid in US Dollars or INR.
- Inspection may be carried out by SunPetro representative at Bidders premises before dispatch. Only approved and certified quantity after inspection shall be accepted by SunPetro.
- Bidders to quote on FOR Bhaskar Field, Gujarat basis only. Incase Foreign bidder's quote are on CIF Mumbai Air/Sea Port, it should include but not limited to basic price, export crating, marking charges, packing, insurance, Freight, taxes and any other charges upto Mumbai Port.
- Foreign Bidder would be required to deliver the pipes at SunPetro field in Bhaskar. All associated cost of customs clearance, transportation, insurance and handling from Mumbai Port to SunPetro warehouse in Gujarat, SunPetro shall be quoted separately. Prices quoted shall be till SunPetro site in Bhaskar.
- Foreign Bidder is required to clearly state the value of Safeguard Duty and Antidumping Duty if applicable on the above material which shall be loaded on its price for evaluation. Foreign Bidder has to clearly state the origin of the material, the place of manufacture and place of shipment in Technical and Price bids. For any wrong information or misleading information, any such additional cost on account of Safeguard Duty or Anti-dumping duty will be recovered from the Bidder.
- Evaluation will be done on FOR Bhaskar Field Gujarat basis.
- Bidder can quote in INR /USD (must specify currency of quote)
- For Foreign Bidders, the 12% IGST shall be applicable as per Custom Notification No.50/2017 for goods imported in connection with a contract signed with Government of India under the New Exploration Licensing Policy (NELP) against EC.
- For Indian Bidders Concessional IGST at 12% as per Notification No.3/2017-Integrated Tax (Rate) dtd. 28th June, 2017 shall be applicable. SunPetro will provide Essentiality Certificate (EC) issued by DGH to the contractor to avail GST at the concessional rate.

SECTION-8

QUALITY CONTROL AND QUALITY ASSURANCE

QUALITY CONTROL AND QUALITY ASSURANCE

1. General

- 1.1 The Goods supplied by Supplier shall be strictly in accordance with technical specification set forth in SOS and PO issued. Trade names of products which have been identified by COMPANY accepted as meeting COMPANY's requirements will be given along with the specifications, where applicable.
- 1.2 Supplier shall be responsible for quality control of the Goods.
- 1.3 The PO issued pursuant to the Purchase Order will specify whether or not the Goods are subject to inspection by COMPANY or its authorized representative(s).
- 1.4 Upon reasonable notice given to Seller, Supplier shall ensure that COMPANY has the opportunity to inspect the Goods at any time, either at Supplier's facilities or at the facilities of Supplier's Suppliers, or wherever else the Goods may be located. Such inspection shall be in accordance with the requirements in Scope of Supply (SOS) and shall not relieve Supplier of any obligations under the Purchase Order and PO issued thereto.
- 1.5 All Goods furnished by Supplier shall be available for inspection at all reasonable times by COMPANY or their representatives. For such purpose Supplier shall allow or procure for COMPANY and/or its above mentioned authorized representative access to all workshops and other places where Goods are being manufactured (including the premises of Supplier's Suppliers) and COMPANY reserves the right to finally survey quality and place of final acceptance in accordance with Clause 15 (Title and Risk) of General terms & Conditions. COMPANY's inspection, failure to inspect or waiver of inspection of any part of the Goods shall not constitute acceptance thereof nor relieve Supplier of its obligation to comply with the provisions of the Price Agreement. If, upon inspection, any Goods are considered by COMPANY not to be of an acceptable standard in accordance with the Purchase Order specifications, Supplier shall on receipt of notice from COMPANY, repair or replace the same at its own cost and to COMPANY's satisfaction and Supplier shall be allowed no extension of time on account of such performance or replacement. In the event of Supplier's failure, following written notification from COMPANY, to repair or replace within a reasonable period of time any Goods considered unacceptable by COMPANY, COMPANY may repair (or have repaired) or replace the Goods at Supplier's expense and deduct the cost thereof from the Price Agreement.
- 1.6 If in compliance with the provisions of the Price Agreement, or by COMPANY's instructions or by reason of any applicable law any Goods are required to be tested or inspected, Supplier shall give COMPANY timely notice of Supplier's readiness for test/inspection thereof and, if the same is to be witnessed by someone other than COMPANY of the date fixed there for. Supplier will be reimbursed at cost for any tests / inspections not detailed or specified in the Price Agreement. /PO.
- 1.7 In the event of a complete or partial failure in any tests referred to in Paragraph "1.6" above, or for any other reason, COMPANY may request special tests. Supplier shall be responsible for all costs and any schedule impacts associated with such special tests, however, in the event that these tests disclose the Goods to be in accordance with the Price Agreement, such costs shall be to COMPANY's account and where such tests have an adverse effect on the delivery schedule, the Due Date for Delivery shall be extended by the time spent on such special tests.
- 1.8 All instruments, machines and equipment (including the testing laboratory) shall be subject to examination by or on behalf of COMPANY before they are used for the purpose of any tests.
- 1.9 If COMPANY appoints an Inspector, Supplier shall coordinate with such Inspector and treat its authorized representatives in the same manner, as COMPANY's authorized representatives, for inspection and testing of Goods under the provision of this Price Agreement.

2. Goods Subject to Inspection by COMPANY

- 1.1 COMPANY or its Inspector will carry out intermediate and final inspections depending on the nature of the Goods. COMPANY will provide the Supplier with the name and address of the Inspector.
- 1.2 Supplier shall provide at its expense:
 - 1.2.1 All facilities required by the Purchase Order and PO(s) issued thereto for the Inspector to inspect the Goods.
 - 1.2.2 Any required certificates including test and material certificates.
- 1.3 In the event of inspection requirement by COMPANY or its authorized representative(s), Supplier shall advise Inspector and COMPANY of the date on which and the location where the Goods are ready for inspection. Such advice shall be by fax and shall name COMPANY's Inspector. The Goods shall be set up in Supplier's or Suppliers' facilities, as far as necessary to carry out inspection.
- 1.4 Goods inspection shall be handled as follows:
 - 1.4.1 The Inspector shall reject all Goods that are found to be of unacceptable quality or workmanship, or fail to comply fully with the requirements of "A/B" and shall write and issue, on-the spot, to the Seller, a "Note of Non-acceptance". Note of Non-acceptance shall clearly state the basis for the rejection. Supplier shall submit to COMPANY the Inspector's notes.
 - 1.4.2 Subject to COMPANY's approval, Supplier shall take corrective action on rejections at Supplier's sole expense and with due regard to its obligation to deliver the Good in time.
 - 1.4.3 The cost of additional inspections caused by Supplier's non-compliance with Scope of Supply (SOS) and PO issued thereto shall be to Supplier's account.

3. Goods Subject to Inspection by Supplier / Manufacturer

Supplier shall, at its sole cost and expense, carry out all inspection and testing and shall provide certificates that may be required under the provisions of the Price Agreement. Such certificates shall be sent to COMPANY or its authorized representative(s) within one week from the date on which the Goods have been tested or inspected. Non-compliance will result in payment being deferred until certificates have been received.

SECTION-09

PACKING, MARKING, DOCUMENTATION AND DELIVERY INSTRUCTIONS

PACKING, MARKING, DOCUMENTATION AND DELIVERY INSTRUCTIONS

1. DOMESTIC SHIPMENT

1.1 PACKING AND PROTECTION INSTRUCTIONS

SUPPLIER shall be responsible for packing and protection of the goods whilst in transit to the destination shown on page one (1) of the Purchase Order.

1.2 MARKING INSTRUCTIONS

1.2.1 Stencil on two sides and one end in clear characters, at least centimeters high (where case size permits, otherwise use optimum size for each package dimension), the marks set out hereunder. If goods are to be shipped in shipping line containers then marking may be stenciled on one end only. However, packages must be stowed in a manner, which exposes these marks.

1.2.2 Packages containing fragile articles must be packed with special precaution against risk of breakage. Such containers must be stenciled on all sides "FRAGILE – HANDLE WITH CARE". This marking must be in English. Where cases are not to be overturned SUPPLIER must show on the cases clear and readily visible identification to ensure they are kept in the correct position.

1.2.3 Packages/equipment of five tons or more must be marked with slinging points and also clearly show on all sides the center of gravity. This is of paramount importance for pressure vessels and heat exchangers.

1.2.4 For hazardous/dangerous or restricted material, mark as specified by relevant international standards and regulation. Specific reference is made to most recent regulations of the International Civil Aviation Organization (for airfreight) and the International Maritime Cargo Organization (for sea freight).

1.2.5 Metal tags or labels must be stamped or indelibly marked with full shipping marks and must be securely attached using 6 twists of stainless steel wire to all loose bundles or uncrated items, alternatively marking boards can be securely strapped to bundles.

1.2.6 Each package and contents must clearly show the country of origin of the goods.

1.2.7 Number packages consecutively, i.e. 1 of 10, 2 of 10, etc. Do not duplicate package numbers.

1.2.8 All material must also bear the following **SHIPPING MARKS** in full: -

- **Marks according to final destination.**
- **Supplier's Name (in full)** _____
- **Purchase Order No. (in full)** _____
- **Tag No. (if applicable)** _____
- **Purchase Order Item Nos.** _____
- **Box No.:** _____ of _____
- **NDC Materials & Purchasing Department –**
- **FOR (Destination as Page 1 of Purchase Order).**
- **Gross Weight** _____ kilos.
- **Net Weight** _____ kilos.
- **Length x Width x Height** _____ centimeters.
- **Total Volume** _____ cubic meters.
- **Country of Origin** _____

Where appropriate, description signs such as 'FRAGILE', 'GLASS', 'THIS WAY UP', 'HAZARDOUS', 'RESTRICTED', 'FLASH POINT', etc. shall be prominently marked. Delete as applicable (please check with Freight Forwarder prior to marking).

1.2.9 Two packing lists detailing actual contents and listing all rust prevention agents and removal solutions, should be enclosed in each package. A master list detailing all packages, listing Purchase Order and Item Nos. For each item contained in the complete consignment, should be included in package No. 1.

1.3 SHIPPING AND DOCUMENTATION INSTRUCTIONS

- 1.3.1 Immediately the goods are in all respects ready for shipment, SUPPLIER shall contact NDC Purchasing Coordinator (for Purchase Orders issued on a delivered NDC Operating Unit basis) or NDC's Freight Forwarder (for Purchase Orders placed on a delivered Freight Forwarder basis). Twenty-four (24) hours Prior Notification shall be given for delivery.
- 1.3.2 In addition to any other requirements of these instructions, an original and one (1) copy of the Packing List must accompany each shipment together with an original and one (1) copy of the delivery note. It is Supplier's responsibility to obtain a receipt for proof of delivery.

2. OVERSEAS SHIPMENT

The following instructions are intended as minimum requirements, and adherence to these instructions in no way absolves or relieves SUPPLIER of any responsibility or obligation outlined in the Purchase Order.

- a. Shipment shall be effected by either a Conference Line vessel or a vessel acceptable to COMPANY's insurers.
- b. Sea carrier's certificate issued by Owners, Agents or Master of vessel to the effect that the carrying vessel is neither Israeli owned nor calling at/passing by any Israeli port during the voyage.

2.1 PACKING AND PROTECTION INSTRUCTIONS

- 2.1.1 Due to climatic extremes encountered in India (i.e. extreme heat, high humidity and fine drifting sand) and the complex transport operation (i.e. truck, sea or air), it is essential that protection and packing is of the highest standard. SUPPLIER must ensure that this will adequately protect material during the total transport operation from factory to job-site including short-time storage on site. Liability for damage to goods due to defective/or insufficient packing, as well as for corrosion due to insufficient protection, is to be borne by SUPPLIER.
- 2.1.2 High quality wooden cases and/or crates shall be used. These should be constructed of top quality softwood or rigid plywood and be solid and robust. Ends should be screwed or nailed in a manner where no sharp pieces are exposed.
- 2.1.3 UNDER NO CIRCUMSTANCES SHALL FIBREBOARD, CARDBOARD OR SIMILAR CARTONS BE USED AS OUTSIDE PACKING.
- 2.1.4 All items of fragile nature shall be suitably packed with special precaution against risk of breakage. Where material is encased or otherwise completely enclosed, the SUPPLIER shall be responsible for suitable inner packing, protection and wrapping of any items subject to damage from moisture and/or corrosion. Provision must also be made to include desiccant materials, i.e. silica-gel where appropriate.
- 2.1.5 Hay, straw or similar vegetable fibres subject to disease or fungus shall not be used in packing.
- 2.1.6 All heavy equipment shall be securely fastened to the bottom of the case with coach-bolts and wing-nuts and shall be blocked and braced to prevent movement. All exposed ends and open flanges shall be protected and covered against damage, using caps sealed with waterproof tape and blanks bolted over each flange face using a suitable gasket material to ensure a watertight joint. Large equipment which does not require to be completely enclosed by packing shall be palletized or skidded.
- 2.1.7 Cases weighing more than 136 kgs. shall have raised skid platform or pallet base, to permit sling or forklift truck handling.
- 2.1.8 Do not consolidate any two or more orders in any one package, before prior agreement with COMPANY .
- 2.1.9 All hazardous material must be prepared in adherence to the detailed requirements relating to packing, marking and labelling set out in the most recent report of the Board's Standard Advisory Committee on the Carriage of Dangerous Goods in ships (The Blue Book), for

sea freight and the restricted articles regulations, laid down by the International Air Transport Association, for airfreight.

- 2.1.10 Two packing lists detailing actual contents and listing all rust prevention agents removal solutions should be enclosed in each package. A master list detailing all packages, listing Purchase Order and Item Nos. for each item listed in the complete consignment should be included in package number 1.
- 2.1.11 The preparation for export shipping (including packing) may be subject to inspection by COMPANY or appointed representative at Supplier's plant prior to shipment and at dockside prior to Loading aboard ship. Inspection shall not relieve SUPPLIER of any responsibilities or obligations under the terms and conditions of the Purchase Order.
- 2.1.12 All spare parts (such as commissioning spares or one year operational spares) when available at time of shipment of main equipment, must be either packed and clearly marked and included in main packing case attached to base boards, or, if size and dimensions deem separate shipment then shall be properly protected for short term storage in accordance with relevant Purchase Order Specification and then packed in accordance with Paragraphs 5.1.2 or 5.1.3 (above).
- 2.1.13 If SUPPLIER is in any doubt as to the correct method of protection or packing, please contact the COMPANY by telex or fax with a copy to the appointed Forwarding Agent.

Note: SUPPLIER should ensure that marking and preparation for shipment instructions which are listed by commodity of equipment and attached to each Purchase Order are passed on to their dispatch departments, or sub-SUPPLIER s, prior to commencement of packing.

2.2 MARKING INSTRUCTIONS

- 2.2.1 Stencil on two sides and one end in clear characters at least 5 centimeters high (where case size permits, otherwise use optimum size for each package dimension), the marks set out above (If goods are to be shipped in shipping line containers then marking may be stenciled on one end only. However, packages must be stowed in a manner which exposes these marks).
- 2.2.2 Packages containing fragile articles must be packed with special precaution against risk of breakage. Such containers must be stenciled on all sides "Fragile - Handle with Care". This marking must be in English. Where cases are not to be overturned SUPPLIER must show on the cases clear and readily visible identification to ensure they are kept in the correct position.
- 2.2.3 Packages/equipment of five tons or more must be marked with slinging points and also clearly show on all sides the center of gravity. This is of paramount importance for Pressure Vessels and Heat Exchangers.
- 2.2.4 For hazardous/dangerous or restricted material, mark as specified by relevant.
- 2.2.5 All spares orders must be clearly marked as spares and shall not be simply included unmarked with main equipment.
- 2.2.6 Metal tags or labels must be stamped or indelibly marked with full shipping marks and must be securely attached using 6 twists of stainless steel wire to all loose bundles or uncrated items, alternatively marking boards can be securely strapped to bundles.
- 2.2.7 Each package and contents must clearly show the country of origin of goods.
- 2.2.8 Number packages consecutively i.e. 1 of 10, 2 of 10 etc. Do not duplicate package number.
- 2.2.9 All materials must also bear the following shipping marks in full within a yellow coloured:

MARKS:- According to final destination:-

P.O. No. (in full)

Tag No. _____ (if applicable)

P.O. Items No's - _____

Box No. _____ of _____

COMPANY Port Mark India Seaport

Gross _____ Kilos

Net _____ Kilos

Length x width x height in centimetres

Total Cube in _____ Cubic Meters

Made in _____ (Country of Origin)

And where appropriate description signs such as:

"Fragile", "Glass", "This Way Up", "Hazardous", "Restricted", "Flash Point", etc.

* Delete as applicable (please check with nominated forwarding agent prior to marking).

2.3 DOCUMENTATION

2.3.1 Shipping Invoices and Packing Lists

2.3.1.1 Combined Invoice/Packing Lists must clearly describe each Purchase Order item. Export marks, including all weights and dimensions, must be shown. If goods are packed in containers then exact details of materials in each container and container number must be shown on Combined Invoice/Packing List. Description of each item on these documents must match the Purchase Order Description.

2.3.1.2 Combined Invoice/Packing Lists must be typewritten and the original and all copies must be manually and individually signed in ink by Supplier's authorized signatory as follows:

-I/We hereby certify that this Invoice is true and correct and that these materials are of _____ origin, (Specific Country of Origin) of goods e.g. United Kingdom, France, U.S.A., etc. - E.E.C. EFTA or any other group of countries is not acceptable) and manufactured by (Name and Address of Manufacturer(s)).

-Signed

2.3.1.3 Additionally, the following details shall be provided on all Combined Invoice/Packing Lists :

-Purchase Order number.

-Delivery Terms of Purchase Order, (i.e. CFR., etc.).

-Item number, quantity and complete description of goods precisely in accordance with the Purchase Order including any tag, item coding or stock numbers as specified. The description must match the packing list.

- Itemized net price, both unit and total, of the goods, wherever applicable. Prices and extensions must be accurate but no discount shall be shown.

-Marks, numbers, quantity of packages and contents of each package.

-Gross and net weight in Kg, and dimensions of each package in cu. m.

-Name(s) and address(es) of actual manufacturer(s).

-"Partial Shipment" or "Final Shipment" if delivered in partial consignments, separate documents must be raised and issued for each separate consignment. Final shipment against this order must be marked "Final Shipment-Order Complete".

2.3.1.4 Hazardous materials must be identified on a separate Combined Invoice/Packing List, from non-hazardous materials. All hazardous materials must be identified by the appropriate hazardous class and technical and proper shipping name. All Combined Invoices/Packing Lists for hazardous materials shall contain the following statements:-

"This is to certify that the above named materials are properly classified, described, packaged, marked and labelled, and are in proper condition for transportation according to the appropriate Government of International Transportation Regulations".

NAME _____

TITLE _____

HAZARD CLASS U.S. NO. _____

TECHNICAL SHIPPING NAME _____

COMPANY NAME _____

SIGNATURE _____

SUPPLIER must produce necessary hazardous cargo certificates in accordance with the appropriate regulations for all shipments. On application to the Project Freight Forwarder these forms will be supplied for completion.

2.3.1.5 SUPPLIER must provide all information shown in Paragraphs 2.3.1.1–2.3.1.4 to enable COMPANY to produce the Combined Invoice/Packing List, should COMPANY decide to handle certification & legalization of these shipping documents.

2.3.2 Certificate of Origin

2.3.2.1 This document is crucial for the clearing of all materials into Abu Dhabi. Utmost care must be exercised to ensure that all information is absolutely clear and correctly represented and that the origin is always true.

India Customs check certificates of origin very carefully and also physically inspect materials for manufacturers name and country of origin.

2.3.2.2 The SUPPLIER shall arrange for the timely preparation, certification and legalization of all Certificates of Origin. SUPPLIER must supply such information and documentation as required to COMPANY's Freight Forwarding Agent. Failure to do so will delay shipment and payment.

2.3.2.3 Where materials are supplied as separate units which are manufactured by separate sub-SUPPLIER and included in one consignment, those separate manufacturer's names and addresses must be declared on the Certificate of Origin.

2.3.2.4 ALL Suppliers' Company names must be shown in full. Initials are not acceptable. If your Company trades using its initials, the full Company name must be shown and in brackets after it, the initials.

2.3.2.5 Where materials are purchased from sub-SUPPLIER s for incorporation into one final unit product and the sub-SUPPLIER s have manufactured the items in the same country as the producer of the final unit product, declare the name and address of the manufacturer of the final product.

2.3.2.6 Where materials are manufactured as one final product which contains materials from sources outside the producing country, declare the percentage by country of the constituent materials.

2.3.2.7 In cases where a certain country's commercial law prohibits the name and address of the Manufacturer being shown on the body of the Certificate of Origin, a separate Manufacturer's Declaration shall be completed and legalized.

2.3.2.8 The Declaration shall be drawn up on Supplier's Company letterhead and state: - "We hereby certify that the goods covered in Invoice Number _____ and Certificate of Origin Number _____ have been manufactured by _____ (full name and address of actual manufacturer(s) and are of _____ (country) origin." Purchase Order reference and description of goods shall also be included.

This Declaration shall be signed in ink by authorized signatory of SUPPLIER

2.4 SHIPPING INSTRUCTIONS

2.4.1 COMPANY will advise the Forwarding Agent to arrange shipping of project goods after release/waiver of inspection, packing & receipt of correct documentation from SUPPLIER.

2.4.2 Shipment direct from the sub-SUPPLIER may only be arranged after written agreement with COMPANY .

2.4.3 If shipment of GOODS is to be made directly from sub-SUPPLIER works, it is Supplier's responsibility to ensure that sub-SUPPLIER pack and mark all materials and equipment in accordance with these instructions, together with any specific instructions for preparation and marking prior to shipment.

SECTION-10

ANNEXURES

List of ANNEXURES

ANNEXURE-1	Bidder's Response Acknowledgement Form For Receipt Of Tender Document
ANNEXURE-2	Bid Bond Format
ANNEXURE-3	Check List Prior To Bidding
ANNEXURE-4	Exception / Deviation / Conditions Performa
ANNEXURE-5	Cut-Out Slips For Technical & Unpriced Commercial Bid
ANNEXURE-6	Cut-Out Slips For Priced Offer
ANNEXURE-7	Cut-Out Slips For Outer Envelope
ANNEXURE-8	Performance Bank Guarantee
ANNEXURE-9	List Of Approved Banks
ANNEXURE-10	Customs Notification
ANNEXURE-11	Check List Post Purchase Order

ANNEXURE – 1**BIDDERS RESPONSE ACKNOWLEDGMENT FORM FOR RECEIPT OF TENDER DOCUMENT**

As a delegated authority/representative of the organization named below, I have reviewed the contents of the package and on behalf of my Company, acknowledge the receipt of the same and advise that we will:

BID _____ **NOT**
BID _____

Reason for no Bid
(optional): _____

For
Name of Company : _____
Signature : _____
Title : _____
Date : _____

Transmittal via facsimile:
ATTENTION
Head –Supply Chain Management
Sun Petrochemicals Private Limited
8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7,
Saki Vihar Road, Chandivali, Powai
Andheri (E), Mumbai – 400072, Maharashtra [INDIA]
Email: Dheeraj.Paroch@sunpetro.com

ANNEXURE – 2

BID BOND FORMAT

TO: SPPL a division of Sun Petrochemicals Private Limited, a Company incorporated under the provisions of the Companies Act, 1956 and having its registered office at 8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] . (hereinafter referred to as “Company”).

WHEREAS:

.....(hereinafter referred to as “Tenderer”) has submitted a proposal dated (“hereinafter referred to as Proposal”) against **TENDER NO.:** _____ dated _____ for _____ (hereinafter referred to as the “Tender”).

NOW, THEREFORE,

- (1) In response to the request made by the Tenderer, we (Name of Banker/Insurer :) _____ (hereinafter called the “Guarantor”) hereby irrevocably and unconditionally guarantee the sum of Indian Rupees _____/- (INR _____ for Indian Bidders) and US \$ _____ United States Dollars _____ only – for Foreign Bidders) in favor of Company, if Tenderer fails to perform its obligations as set forth below:
 - (i) The Tenderer agrees to keep the Proposal open for acceptance by Company during the period of validity (150 days from the Closing Date) specified in the Tender.
 - (ii) The Tenderer, having been notified of acceptance of its Proposal by Company during the period of Tender validity:
 - (a) Fails or refuses to execute the agreed PO, if required; or
 - (b) Fails or refuses to furnish the Performance Bank Guarantee in accordance with the format provided in the Tender document; or
 - (c) Seeks Variation or modification of Proposal; modifications to the agreed terms and conditions
 - (d) Tries to influence Company on bid evaluation, bid comparison or Purchase Order (PO) award decision.

The sum shall become payable by us immediately on first demand by Company without proof or conditions notwithstanding any constitution or protest by the Tenderer or any other third party.

- (2) Company shall have the fullest liberty without our consent and without affecting in any manner, our obligation hereunder, to relax any of the terms and conditions of the aforesaid Tender, from time to time, or to postpone any time any of the powers exercisable by Company against the said Tenderer and Guarantor shall not be relieved from its liabilities by reason of any such relaxation being granted to the Tenderer by Company or any indulgence by Company to the said Tenderer or by any such matters or things whatsoever.
- (3) The Guarantor shall not be discharged or released from this Guarantee by any Purchase Order (PO) made between the Tenderer and Company with or without the consent of the Guarantor or by any alteration in the obligations undertaken by the Tenderer or by any change in name or constitution of Company or the Tenderer.
- (4) The Guarantee herein shall not be affected by any change in the constitution of the Bank or the Tenderer.
- (5) This Guarantee shall not be revoked during its currency, and shall remain in effect for One Hundred and fifty (150) days from the Tender Closing Date.
- (6) This Guarantee shall be governed and construed in accordance with the laws of India and all of the parties to this Guarantee hereby irrevocably submit to the non-exclusive jurisdiction of the High Court of Mumbai.

IN WITNESS whereof this Guarantee has been duly executed by GUARANTOR the _____ day of _____ for and on behalf of (_____)

Name : _____
Designation : _____
Banker's Seal : _____
Address : _____

NOTE:

1. Bid bond required as Tender Security deposit /Earnest money

It is a condition precedent to the acceptance of any Tender by the Company that the Tenderer shall provide a Bid Bond by means of a Bank Guarantee for an amount stated in the Invitation to Tender in the prescribed format and valid for a period of 150 days from the Closing Date. The Tender may be disqualified in the absence of a Bid Bond in the prescribed format. In providing such a Bid Bond the bank shall also undertake to issue the Performance Bank Guarantee as required by Company in the event that the Tender is accepted.

2. Conditions for Invoking of Bid Bond Guarantee

The following conditions would also lead to the invoking of Bid Bond Guarantee:

- a) If the Tender is withdrawn during the validity period or any extension thereof.
- b) If the Tender is varied or modified in a manner not acceptable to Company during the validity or agreed extension validity period duly agreed by the Tenderer or after notification of award by Company and prior to signing of the PO.
- c) If the successful Tenderer is seeking modifications to the agreed terms and conditions after notification of award or declines to accept the Letter of Intent/Award.
- d) If the successful Tenderer fails to furnish Performance Bank Guarantee within 21 days of the issue of the Letter of Intent/Award.
- e) Any effort by the Tenderer to influence Company on bid evaluation, bid comparison or Purchase Order (PO) award decision.

The formats for any of the Bank Guarantees shall not be changed except for any minor variations that the Bank may require. Failure to comply with this requirement may entail disqualification of the Tender.

ANNEXURE - 3**CHECK LIST FOR BIDDING**

This portion of the Tender is intended to serve as a checklist to ensure that all information necessary to evaluate your proposal has been included. Please indicate Yes / No or Acceptable / Not Acceptable, whichever is not applicable.

TECHNICAL

1. Has the bidder quoted for full scope of work as specified in the tender?
YES / NO
2. Has the bidder furnished the list of equipment that will be used in the performance of the work, along with their make, technical data, catalogue/ brochure of the manufacturer, etc.?
YES / NO
3. Quality Control Manual and/ or Quality Control Program along with the Unpriced Techno Commercial Bid
YES / NO

COMMERCIAL

4. Confirm whether the bidder has submitted a Bid Bond as per Clause mentioned in the Instructions to Bidders.
YES / NO
5. Confirm whether the bidder agrees to furnish a performance Bank Guarantee
YES / NO
6. Confirm that the prices quoted are firm and are inclusive of all taxes, duties, levies etc., applicable to personnel, equipment and materials to be used for execution of the Purchase Order (PO) for the contract period
YES / NO
7. Confirm whether the prices quoted are firm and applicable even if the work is awarded only in part.
YES / NO
8. Has the bidder confirmed the Commencement Date?
YES / NO
9. Confirm acceptance of Insurance liability as per Clause of the Model PO.
YES / NO
10. Confirm acceptance of Force Majeure provision as per mentioned in the Model PO.
YES / NO
11. Confirm acceptance of Liquidated Damages provision as per the Model PO.
YES / NO
12. Confirm acceptance provision for Arbitration as per Clause of the Model PO.
YES / NO
13. Confirm acceptance Taxes and Duties provision as per of the Model PO.
YES / NO
14. Confirm whether Unpriced Technical bid with all annexures and enclosures have been furnished in duplicate (1Original + 1 copy) in a separate sealed cover. Ensure that Price Schedule of the Unpriced Technical bid is blank.
YES / NO

- 15.** Confirm whether Priced Commercial Bid (1 Original +1 Copy) comprising only the Price Schedule has been furnished
YES / NO
- 16.** Has bidder ensured that there is no over-writing in the offer? Have corrections, if any, been properly attested/ initialled by the bidder
YES / NO
- 17.** Has bidder ensured that the all pages of the bid documents including additional sheets, if any, attached by the bidder signed by the duly authorized officer of the bidder?
YES / NO
- 18.** Bidder ensured that proof of the signing authority
YES / NO
- 19.** Does the bidder accept bid validity period?
YES / NO
- 20.** If the bid is submitted by a consortium, confirm whether the MOU of the consortium / JVC has been furnished.
YES / NO
- 21.** Have all the exceptions/deviations/conditions taken by the bidder, having cost impact or not, been listed in the format provided as Annexure 4 and attached with the Unpriced Techno Commercial Bid, without including the cost impact, if any?
YES / NO
- 22.** Has bidder proposed any incentive scheme?
YES / NO
- 23.** Has the bidder included the cost impact of incentive schemes in the Priced Commercial Bid only?
YES / NO
- 24.** Has the cost impact, if any, of the exceptions taken been attached with the Priced Commercial Bid?
YES / NO
- 25.** Confirm whether the bidder agrees for applicability of Indian Laws
YES / NO

ANNEXURE – 4

EXCEPTION/DEVIATION/CONDITIONS PROFORMA

Any and all exceptions/deviations/conditions to the terms and conditions of Tender No.- _____ should be indicated here and submitted along with the Unpriced Techno Commercial Bid without any price impact. Price impact, if any, of the exceptions/ deviations shall be duly completed, in this proforma, and attached to the Priced Commercial Bid only. If the bidder does not intend to take any exception / deviation then he shall mark "No Exceptions Taken" in this proforma. If the proforma is left blank or if this sheet is not attached to the bid, then it will be presumed that bidder has not taken any exception/deviation/condition to the terms and conditions of the TENDER DOCUMENT. Company shall not take cognisance of any exception/deviation/condition (if any) indicated elsewhere except in this proforma.

Tender No. -

Technical Part (attach to Unpriced Techno Commercial Bid)

Section No, Page No. and Clause No.	Description of exception/ deviation/ condition	Reason(s) for exception/ deviation/ condition	Whether there is a Cost impact? ** (Yes / No)	Effect on Commencement Date

** Please do not indicate the price impact, if any, here.

Tender No.-

Commercial Part (attach to Priced Commercial Bid)

Currency : _____

ANNEXURE -5

CUT-OUT SLIPS FOR TECHNICAL & UNPRICED COMMERCIAL BID

DO NOT OPEN - THIS IS A TENDER QUOTATION

(TECHNICAL & UN-PRICED COMMERCIAL BID)

Client : SUN PETROCHEMICALS PRIVATE LIMITED

Tender No. : _____

Project Name: _____

Bid Due Date: _____

From:

To:

(Bidder's Details)	Head-SCM SUN PETROCHEMICALS PRIVATE LIMITED (SunPetro) 8 th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] Kind Attn: Mr Dheeraj Paroch
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ANNEXURE -6**CUT-OUT SLIPS FOR PRICED OFFER****DO NOT OPEN - THIS IS A TENDER QUOTATION****(PRICED COMMERCIAL BID)****Client : SUN PETROCHEMICALS PRIVATE LIMITED****Tender No. : _____****Project Name: _____****Bid Due Date: _____****From:****To:**

(Bidder's Details)	Head-SCM SUN PETROCHEMICALS PRIVATE LIMITED (SunPetro) 8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] Kind Attn: Mr Dheeraj Paroch
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ANNEXURE -7

CUT-OUT SLIPS FOR OUTER ENVELOPE

DO NOT OPEN - THIS IS A TENDER /QUOTATION

(ENVELOPE CONTAINING TECHNICAL & UN-PRICED COMMERCIAL BID +
PRICED COMMERCIAL BID)

Client : SUN PETROCHEMICALS PRIVATE LIMITED

Tender No. : _____

Project Name : _____

Bid Due Date : _____

From:

To:

(Bidder's Details)	Head-Supply Chain Management SUN PETROCHEMICALS PRIVATE LIMITED 8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] Kind Attn: Mr Dheeraj Paroch
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(To be pasted on the outer envelope containing PRICED & UNPRICED OFFER)

ANNEXURE –8

PROFORMA OF PERFORMANCE BANK GUARANTEE

TO: **Sun Petrochemicals Private Limited** , a Company incorporated under Company's Law 1956 and having its office at 8th Floor, ATL Corporate Park, Opp. L&T Gate no. 7, Saki Vihar Road, Chandivali, Powai Andheri (E), Mumbai – 400072, Maharashtra [INDIA] . (hereinafter referred to as **"Company"**).

WHEREAS:

(1) By an Purchase Order (PO) for _____ (here in after referred to as the **"PO"**) between _____ hereinafter referred to as the (**"Supplier"**) of the one part and Company of the other part, the Supplier agrees to perform the Work in accordance with the PO.

(2) In response to the request made by Supplier , we (Name of Banker:) _____ (hereinafter referred to as the **"Guarantor"**) hereby irrevocably and unconditionally guarantee in favour of Company , the payment of amounts (without any withholding, deduction or set off) upto _____ (Rupees _____) being 10% **of the estimated Purchase Order (PO) value**, as guarantee for the obligations of the Supplier to perform the Work in accordance with the PO. The sum shall become payable by us immediately on first demand by Company without proof or conditions notwithstanding any dispute or protest by the Supplier or any other third party. Multiple demands may be made in respect of our guaranteed obligations.

(3) We shall not be discharged or released from this Guarantee by any waiver, modification, Purchase Order (PO) made between the Supplier and Company with or without our consent or by any alteration in the obligations undertaken by the Supplier or by any forbearance whether as to payment, time performance or otherwise, or by any change in name or constitution of Company or the Supplier.

(4) This Guarantee is a continuing security and, accordingly, shall remain in operation for six months after the completion / termination of the PO.

We agree that the Guarantee is given regardless of whether or not the sum outstanding occasioned by the loss, damages costs, expenses or otherwise incurred by Company is recoverable by legal action or arbitration.

The rights under this Guarantee shall be assignable by Company to third parties, if required. This Guarantee shall be governed by and construed in accordance with the laws of India.

The Guarantee herein contained shall not be determined or affected by the liquidation or winding up, dissolution or changes or constitution or insolvency of the said Supplier but shall in all respects and for all purposes be binding and operative until payment of all money due to you in respect of such liabilities is paid.

IN WITNESS where of this Guarantee has been duly executed by GUARANTOR the _____ day of _____ 20____ or and on behalf of (_____).

Name	:	_____
Designation	:	_____
Banker's Seal	:	_____
Address	:	_____

ANNEXURE -9

LIST OF APPROVED BANKS

Guarantee issued from following banks will be accepted as PBG/SD/EMD/BID BOND

1. All Nationalised Banks including Public Sector Banks-IDBI Ltd
2. Private Sector Banks- Axis Bank, ICICI Bank and HDFC Bank
3. Commercial Banks:
 - I. Kotak Mahindra Bank
 - II. Yes Bank
 - III. RBL Bank (The Ratnakar Bank Ltd)
 - IV. IndusInd Bank
 - V. Karur Vysya Bank
 - VI. DCB Bank
 - VII. Federal Bank
 - VIII. South Indian Bank
4. Co-operative and Rural Banks:
 - I. The Kalupur commercial co-operative bank Ltd
 - II. Rajkot Nagrik Sahakari Bank Ltd
 - III. The Ahmedabad Mercantile Co-operative Bank Ltd
 - IV. The Mehsana Urban Co-operative Bank Ltd
 - V. Nutan Nagrik Sahakari Bank Ltd
 - VI. Dena Gujarat Gramin Bank

Any other Indian Scheduled bank not covered above

ANNEXURE - 10

CUSTOMS NOTIFICATION

Custom Notifications will be applicable as per latest and relevant guidelines for goods imported in connection with the Purchase Order (PO) signed with the Government of India as applicable under the relevant Production Sharing Purchase Order (PO) (PSC) / New Exploration Licensing Policy (NELP).

ANNEXURE - 11

CHECK LIST POST PURCHASE ORDER

This check list is preliminary for vital compliance to be fulfilled by successful bidder at immediate post award stage and not limited to followings:

Commercial / Financial

- a. Performance bank guarantee – value and validity
- b. PAN & TAN number
- c. Bank Account number with documentary proof
- d. Any other documents / details sought by Company.

End of the Tender document