

SI. No.	Tender Clause No./ Annexures	Page No.	Tender Description	Bidder's Query	PLECO/ AGCL Response
<b>COMMERCIAL QUERIES</b>					
1	Clause No. 6.3 Volume II of II	20 of 110	Delivery location for Coated Pipe Works associated with Ware House/Storage yards	<p>1) Bidder understand that under scope of work we should have to do stacking and unloading of pipes at the designated site provided by the Assam Gas. We do not have to do any development work at the designated locations where the pipes are going to stored. Please confirm.</p> <p>2) Further we understand that land development along with development of Internal Roads and drainage arrangement are not in the scope of bidder. Please confirm.</p> <p>3) Please also confirm whether arrangement of Sand Bags and Preparation of Sand Rows is in the scope of Bidder.</p> <p>4) We understand that land for dumpsite will be free issued by in developed condition</p>	<p>Please refer clause 6.3 of scope of work page no. 20 of 110 of Volume II of II.</p> <p>Owner shall select dumpsite in high land area so that rain water does not accumulate. However during unloading &amp; movement , any levelling or temporary measures to be done for movement of trailer and crane is in Bidder scope. Also note unloading of pipe by using crane is in Bidder scope.</p>
2	Clause No. 37.1 Volume I of II	34 of 88	Quantity may vary $\pm$ 10% for coated pipe & $\pm$ 25% for bare pipe. Final quantity will be informed to successful bidder. Bidder also to consider a provision for manufacturing of extra pipe (If required by Client) after placement of order & during execution / laying of pipeline on site. Extra line pipe length may vary from 10% to 15% and the required pipe may be coated or bare pipe or both.	<p>Bidder stated that the quantity variation shall be limited up to maximum 15% of the total quantity and same shall be intimated to the successful bidder within 30 days from the date if award of the order.</p> <p>Please confirm.</p>	The quantity variation limit shall be as per tender document. However, the intimation period is accepted.
3	Cl. No. 9.2 Volume I of II	12 of 88	BID SECURITY Bid must be accompanied by a bid security amount of INR 1,32,00,000.00/- Bid security/ EMD submission will be online only.	<p>a. We request that we are allowed to submit EMD in the form of Bank Guarantee. This is prevalent in Oil &amp; Gas line pipe tenders of other Central and State PSUs</p> <p>b. We request that EMD value is brought down in-line with existing practice in in Oil &amp; Gas line pipe tenders of other Central and State PSUs. Given EMD Value INR 1,32,00,000/- in the tender is too high when compared to industry practice.</p>	<p>a. Please refer Corrigendum #1 dated 25.05.2022.</p> <p>b. Bid security amount mentioned in tender shall prevail at this stage.</p>

4	Clause No. 4.2 Volume I of II	07 of 88	<p>Delivery Period:</p> <p>Delivery within 22 weeks. Progressively from beginning of 16th week and up to the end of 22nd week.</p>	<p>Bidder stated that to bring it our notice that commencement of delivery within 16th week from date of LOI may not be feasible because of lead time of steel procurement, pipe manufacturing ,coating and delivery of pipes to distant locations along with unloading ,stacking arrangements at site</p> <p>In the view of above bidder proposed to deliver Pipes as per below schedule :</p> <p>Starting from 20th week and end up to 24th week from the date of LOI with continuous delivery period during this period.</p>	Refer Corrigendum #1 dated 25.05.2022.
5	Clause No.32.4 Volume I of II	33 of 88	<p>Comparison of Prices</p> <p>Prices shall be evaluated on overall basis to arrive at the lowest evaluated cost to Purchaser.</p>	<p>We understand that order shall be awarded on package basis i.e. entire tendered quantity shall be awarded to one bidder. Please confirm.</p>	Confirmed.
6	Clause No. 40.0 Volume I of II	61 of 88	<p>REPEAT ORDER</p> <p>PURCHASER reserves the right, within 6 months of order to place repeat order up to 25% of the total order value without any change in unit price or other terms and conditions.</p>	<p>Bidder stated to please appreciate that it will not be commercially viable to procure steel in small quantity.</p> <p>Hence bidder requested to limit repeat order to the extent of 25% within a month of award instead of within a period of six months so that additional steel quantity can be manufactured with the original quantity. Please confirm.</p>	Noted.
7	Clause No. 7.6 Volume I of II	08 of 88	<p>Bid is due on 31.05.2022 at 14:30 Hrs</p>	<p>Bidder requested to extend bid date by 10 days as it will require minimum 7 days time to prepare BG and other documents after our confirmation.</p>	Please refer Corrigendum #2 dated 25.02.2022.
8	Clause No. 38 Volume I of II	60 of 88	<p>Fall Clause</p>	<p>Bidder stated that to note that the prices of Line Pipes quoted by them are dependent on Raw Materials like steel, PE, Adhesive, Epoxy, etc. which are procured from an open competitive market and their prices are volatile and dynamic.</p> <p>Depending on the ever-changing market conditions, prices of raw materials fluctuate.</p> <p>Therefore, bidder requested to remove this clause as it restricts us from quoting against this tender.</p>	Tender condition shall prevail at this stage.

9	Clause No. 6.4.1 Volume I of II	8 of 88	Part -1 (Un Priced) , Submission of Physical Documents	<p>1. Bidder requested to share the contact person's name &amp; detailed address for submission of the Physical Documents.</p> <p>2. Also, bidder understands that below-defined documents are comprised as a part of physical submissions :</p> <p>A) Tender Processing Fees. B) EMD/Bid Security C) Power of Attorney.</p> <p>3. Apart of the above-mentioned document bidder understands that rest of the documents are required submitted online mode in <a href="http://www.assamtenders.gov.in">http://www.assamtenders.gov.in</a> website.</p> <p>4. Also, bidder proposed to provide 7 days' time to submit the original documents from bid due date.</p>	Bidder understanding is correct. Bidder shall submit the documents as a part of physical submission to the consultant's office referring to the address mentioned in Clause No. 11.5, Pg No. 13 of 88.
10	Clause No. 11.1 & Clause No. 37.1 Volume I of II	12 of 88 & 34 of 88	<p>AGCL reserves the right to place the order for part quantity or delete and item from bidder's scope of work.</p> <p>The Purchaser reserves the right at the time of contract award to increase or decrease the quantity of goods and services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions.</p>	<p>Bidder requested to give clarity on Quantity Variation percent in bidding stage. Also bidder stated to note that negative quantity variation is likely to have cost impact on account raw material (steel) sourcing constraints. Hence bidder requested us to clarify quantity variation at bid stage only so that any cost impact can considered at bid stage.</p> <p>Please confirm.</p>	At present scenario, possibility of negative quantity variation is zero.
11	Tender Documents	General	Rate of Custom Duty considered for Import of Raw Material	We understand that Merit rate of custom duty shall be applicable for this tender. Please confirm.	Tender condition shall prevail.
12	Tender Documents	General	Recovery of custom duty, GST etc.	Any new taxes or duty imposed by competent authority on import of raw material should be reimbursed by Purchaser to Supplier. Please confirm.	Tender condition shall prevail.
13	Tender Documents	General	<p>1. DMI &amp; SP Policy.</p> <p>2. Applicability of MoPNG PP-LC policy.</p>	<p>1. Bidder stated that they understand the Ministry of Steel (MOS) Domestic Steel policy (linked with value addition) policy is not applicable for subject tender.</p> <p>2. Bidder also stated that they understand the "Ministry of Petroleum &amp; Natural Gas policy of Purchase Preference linked with local content" is not applicable for subject tender.</p>	<p>1. Steel Policy will be applicable.</p> <p>2. Tender condition shall prevail.</p>
<p>1. Bidder to submit signed and stamped copy of this Reply to Pre-Bid Queries along with Un-Price Bid .</p>					

Sl. No.	Tender Clause No./ Annexures	Page No.	Tender Description	Bidder's Query	PLECO/ AGCL Response
<b>TECHNICAL QUERIES- BARE PIPE</b>					
1	Material Requisition for Line Pipe, Doc. No. P101-MRR-P001, Rev.B Clause No. 8  Foot note 1  Foot note 2		All bare pipes are meant for hot induction bend & station piping and shall have zero negative wall thickness tolerance.  Negative tolerance for coated pipe wall thickness is not acceptable.	Bidder requests to clarify if any additional requirements to be considered for Mother pipes to be used for hot induction bend forming. However, we have considered the requirement of Client specification for HFW pipes along with API 5L 46th Edition.  Please confirm.	Noted and Confirm no additional requirements
2	Material Requisition for Line Pipe, Doc. No. P101-MRR-P001, Rev.B Clause 8 Foot note 10  Standard Specification for High Frequency Welded (HFW) Line Pipe (ONSHORE), Doc. No. P-SPC-002, Rev. 0 Cl. 9.11.3.3		Pipes shall be supplied between 11.5 m to 12.5 m in length as specified in specification.  All pipes shall be supplied with length between 11.5 m and 12.5 m. However pipe with length between 10.0 m and 11.5 m can also be accepted for a maximum of 5% of the ordered quantity. The minimum average length of the entire ordered quantity in any case shall be 12.0 m. Overall length tolerance shall be (-) Zero and (+) One pipe length to complete the ordered quantity. Table 12 of API Specification 5L stands deleted.	Bidder Understands that pipes shall be supplied for pipe in double random length with below length range: • Minimum 95% pipes shall be supplied with length between 11.5 meters to 12.5 meters. • Maximum 5% pipe shall be supplied with length between 10 meters to 11.5 meters. • Minimum Average shall be 12m.  Please confirm.	Noted
3	Material Requisition for Line Pipe, Doc. No. P101-MRR-P001, Rev.B Clause 8 Foot note 18		For butt weld end, bevel shall be in accordance with API specification 5L or ASME B16.25 as applicable.	Bidder confirms for bevel end preparation as per API 5L CL 9.12.5.2.  Please confirm.	Noted

4	<p>Material Requisition for Line Pipe, Doc. No. P101-MRR-P001, Rev.B Clause 8 Foot note 19</p> <p>Standard Specification for High Frequency Welded (HFW) Line Pipe (ONSHORE), Doc. No. P-SPC-002, Rev. 0 Clause 9.12.5.7</p>		<p>Bevel Protector or end caps shall be installed on all pipe ends. End caps shall be hook able type which shall allow the use of end hooks without the need for their removal during pipe handling. The bevel protector shall be the reusable type. The details of the bevel protector/end caps shall be furnished for approval prior to start of the production.</p> <p>Bevel Protectors Both pipe ends of each pipe shall be provided with metallic or high impact plastic bevel protectors as per Manufacturer's standard. Bevel protectors shall be of a design such that they can be re-used by coating applicator for providing on externally anti-corrosion coated pipes subsequent to coating of line pipe.</p>	<p>Bidder confirms to supply pipes with our own made metallic bevel protectors for sizes 12.75"OD pipes.</p> <p>Please confirm.</p>	<p>Bevel protector shall be such that they can be reused by coating applicator.</p>
5	<p>Standard Specification for High Frequency Welded (HFW) Line Pipe (ONSHORE), Doc. No. P-SPC-002, Rev. 0 Clause 2</p>		<p>NORMATIVE REFERENCES The latest edition (edition enforce at the time of issue of enquiry) of following additional references are included in this specification: ASTM E112-12: Standard Test Methods for Determining Average Grain size</p>	<p>Bidder understands that the latest year edition of ASTM E112 i.e of 2013 is to be considered. We confirm to follow this latest edition.</p> <p>Please confirm.</p>	<p>Latest edition to be followed</p>

6	<p>Standard Specification for High Frequency Welded (HFW) Line Pipe (ONSHORE), Doc. No. P-SPC-002, Rev. 0</p> <p>Clause 9.8  Clause 9.8.1  Clause 9.8.1.2  Clause 9.8.2  Clause 9.8.2.1  Clause 9.8.2.2  Clause 9.8.3</p>		<p>CVN Impact Test for PSL 2 Pipe  General  From the set of three Charpy V-notch impact test pieces, only one is allowed to be below the specified average absorbed energy value and shall meet the minimum single absorbed energy value requirement as specified in Table G of this specification.</p> <p>Pipe Body Tests  The average (set of three test pieces) absorbed energy value (KvT) for each pipe body test shall be as specified in Table G of this specification, based on full sized test pieces at a test temperature of 0°C (32°F) or at a lower test temperature as specified in the Purchase Order.</p> <p>The minimum average (set of three test pieces) shear fracture area shall be at least 85 % with one minimum value of 75%, based at a test temperature of 0 °C (32 °F) or at a lower test temperature as specified in the Purchase Order.</p> <p>Pipe Weld and HAZ Tests  The average (set of three test pieces) absorbed energy value (KvT) for each pipe weld and HAZ test shall be as specified in Table G of this specification, based on full-size test pieces at a test temperature of 0°C (32°F) or at a lower test temperature as specified in the Purchase Order.</p>	<p>Bidder has considered the test temperature for CVN impact test (pipe body, weld &amp; HAZ) as 0°C.</p> <p>Please confirm</p>	<p>Charpy impact test shall be carried out at -29C as per MR and order of precedence.</p>
7	<p>Standard Specification for High Frequency Welded (HFW) Line Pipe (ONSHORE), Doc. No. P-SPC-002, Rev. 0  Clause 11.2.4</p>		<p>The pipe number shall be placed by cold rolling or low stress dot marking or vibro-etching on the outside surface of the pipe at an approximate distance of 50 mm from both ends. In case of non-availability of either cold rolling or low stress dot marking facility in pipe mill, an alternative marking scheme of a permanent nature may be proposed by the Manufacturer.</p>	<p>With respect to the given provision In the tender spec for alternate marking scheme of a permanent in nature, Bidder proposes that the use of Laser Marking machine shall also be permitted for placing the pipe number on OD surface.</p> <p>Please re-confirm.</p>	<p>Tender condition shall prevail at this stage.</p>
8	<p>Cl. No. 9.11.3.3 of Client Spec P-SPC-002</p>		<p>All pipes shall be supplied with length between 11.5 m to 12.5 m. However pipe with length between 10.0 m and 11.5 m can also be accepted for a maximum of 5% of the quantity. The minimum average length of the entire ordered quantity in any case shall be 12.0 m.</p>	<p>As per rules and regulations of Road and Transport department (RTO). The pipe length above 12 meter is not allowed. Hence it should be allowed to supply the pipes in the range between 11.0m to 12.0m with average length 11.50m and maximum 5% of ordered qty. shall be between 10.0m to 11.0m.</p> <p>Kindly confirm.</p>	<p>Tender condition shall prevail at this stage.</p>

9	Cl. No. 10.2.8.7 of Client Spec P-SPC-002		The measuring equipment requiring calibration or verification under the provisions of API Spec 5L shall be calibrated with manual instruments at least once per operating shift (12 hours maximum). Such calibration records shall be furnished to Purchaser's Representative on request.	We are using calibrated measuring instruments /equipment's as per API 5L latest edition. So We shall follow the API (46th edition) requirements regarding to comply the calibration & verification frequency of instruments & equipment.	Tender condition shall prevail at this stage.
10	Cl. No. 11.2.8 of Client Spec P-SPC-002		A colour code band shall be marked on inside surface of finished pipe for identification of pipes of same diameter but different wall thickness, as indicated in the Purchase Order. The colour code band shall be 50 mm wide and shall be marked at a distance of 150 mm from the pipe ends.	Please provide the colour for colour code band.	Yellow colour for 7.1 mm thickness bare pipe
11	Sr. NO. 1.2 of Inspection Test Plan P-ITP-001		STAGE/ ACTIVITY WPS, PQR & WPQ	MPS (Manufacturing Procedure Specification) & Welding Parameter Sheet shall be provided instead of WPS/PQR, as WPS/PQR is not applicable for HFW process. Kindly confirm.	Tender condition shall prevail at this stage.
12	-			Bidder understand that supplier scope is limited to pipe manufacturing, coating, transportation and land development and unloading & stacking of pipes at owner given land. Dump Site management is not in scope of the supplier. Please confirm.	Owner shall select dumpsite in high land area so that rain water does not accumulate. However during unloading & movement , any levelling or temporary measures to be done for movement of trailer and crane is in Bidder scope. Also note unloading of pipe by using crane is in Bidder scope.
13	-			Bidder understand that order shall be awarded on package basis i.e. entire tendered quantity shall be awarded to one bidder. Please confirm.	Confirmed
14	-			Bidder understand that delivery tolerance is + / - one random length on item wise basis. Please confirm.	Overall length tolerance shall be (-) Zero and (+) One pipe length to complete the ordered quantity.
15	Cl. 40 of GCC			Bidder understand that repeat order shall be guided by clause 40 of GCC at page 61 of 88 of doc. Tender Notice_1. Please confirm.	Confirmed

16	Cl.8.0, Note 8			Bidder request you to withdraw clause 8 at page 7 of 109 of doc Tendernotice_2: Bidder also to consider a provision for manufacturing of extra pipe (If required by Client) after placement of order & during execution / laying of pipeline on site. Extra line pipe length may vary from 10% to 15% and the required pipe may be coated or bare pipe or both.	Tender condition shall prevail
17	-			Bidder understand that OD of all tendered items is 12.75". Please confirm.	Confirmed
18	Cl.8.0, Note 8			Bidder request that quantity variation at the time of award of order is limited to +/- 5% of tendered quantity on item wise basis. Please confirm.	Tender condition shall prevail
19	-			Please share list of approved steel suppliers	Line pipe manufacturer can procure from supplier with PTR for supply of coil to the pipeline industry for hydrocarbon.

**TECHNICAL QUERIES- 3LPE PIPE**

	Cl. 8.0 (Note 16) of Doc. No.:		Cl. 8.0 (Note 16) of Doc. No.: P101-MRR-P001, Rev. B, Dated: 08.03.2022: Material Requisition for Line Pipe  Bidder shall inspect of all bare & coated line pipes in presence of Owner representative while handing over of pipes. Also Bidder shall carry out 10% of pipes for Holiday inspection while handing over of pipes. Repair of	Bidder wants to inform that each coated pipe holiday test shall be carried out during final inspection of coated	
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1	<p>P101-MRR-P001, Rev. B, Dated: 08.03.2022: Material Requisition for Line Pipe</p> <p>Cl. 6.3 (IV) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022: Scope of work for Line Pipes</p>		<p>damaged pipes, beveled end defects and damaged coating (including supply of coating materials for repair) noticed at the time of handing over of bare/coated pipes. All handling, lifting tools etc. required for inspection of coated/ bare line pipes at Storage Yards shall be carried out by the bidder.</p> <p>Cl. 6.3 (IV) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022: Scope of work for Line Pipes</p> <p>Bidder shall inspect all bare &amp; coated line pipes in presence of company representative while handing over of pipes. Repair of damaged pipes, beveled end defects and damaged coating (including supply of coating materials for repair) noticed at the time of handing over of bare/ coated pipes. All handling, lifting tools etc. required for inspection of coated/ bare line pipes at Storage Yards shall be carried out by the bidder.</p>	<p>pipes in presence of TPIA at coating applicator's plant.</p> <p>Bidder intent to clarify that repeat holiday test normally not recommended, Since the coating stability will deteriorate after multiple holiday test &amp; holiday test at site practically not possible. This will also have safety concern at site.</p> <p>Bidder proposes that pipes will be visually inspected for damages if any. In case of coating damage, pipe coating shall be repaired and tested for holidays on repaired area.</p>	<p>Tender condition shall prevail at this stage.</p>						
2	<p>Cl. 6.1 (III) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022: Scope of work for Line Pipes</p> <p>Cl. 6.2 (Table 1) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.</p>		<p>Cl. 6.1 (III) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022: Scope of work for Line Pipes</p> <p>III. Supply of all coating materials as per specification no. P-SPC-003 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows:</p> <p>12" = 2.5 mm</p> <p>Cl. 6.2 (Table 1) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.</p> <p>Coating thickness</p> <p>Minimum overall thickness of finished coating shall be as per Table 1 below:</p> <table border="1" data-bbox="624 1134 1081 1273"> <thead> <tr> <th>Pipe Size (Specified Diameter)</th> <th>Outside</th> <th>Minimum Coating Thickness (mm)</th> </tr> </thead> <tbody> <tr> <td>≥ 12 3/4" ( 323.9 mm) to ≤ 18" (457 mm)</td> <td>323.9</td> <td>2.8</td> </tr> </tbody> </table>	Pipe Size (Specified Diameter)	Outside	Minimum Coating Thickness (mm)	≥ 12 3/4" ( 323.9 mm) to ≤ 18" (457 mm)	323.9	2.8	<p>Bidder intent to clarify there is a conflict regarding total 3LPE coating thickness for 12.75" OD between Cl. 6.1 (III) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022 (Scope of work for Line Pipes) &amp; Cl. 6.2 (Table 1) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022 (Standard specification for 3 layer polyethylene coating of line pipes).</p> <p>As of now bidder has considered total 3LPE coating thickness shall be minimum 2.8 mm for 12" OD as per Cl. 6.2 (Table 1) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022 (Standard specification for 3 layer polyethylene coating of line pipes).Please confirm.</p> <p>Please confirm final governing requirement.</p>	<p>Noted and Accepted</p>
Pipe Size (Specified Diameter)	Outside	Minimum Coating Thickness (mm)									
≥ 12 3/4" ( 323.9 mm) to ≤ 18" (457 mm)	323.9	2.8									

3		<p>Cl. 4.4 (II) of Doc. No: P101-SOW-P001, Rev. B, Dated: 13.03.2022: Scope of work for Line Pipes</p>	<p>All external coating materials shall be as per specification no. P-SPC-003 and those for internal coating shall be as per details covered in this document. The bidder's proposed coating raw material supplier(s) shall be manufacturer of the materials meant for the three-layer side extruded polyethylene coating. He must have manufactured and supplied the offered grades of materials within the last five years reckoned from the bid due date. Bidder's offer shall be unconditional irrespective of the finally qualified raw material manufacturer(s).</p>	<p>Bidder intent to clarify that the internal coating is not specified in MR (Doc. No.: P101-MRR-P001, Rev. B, Dated: 08.03.2022: Material Requisition for Line Pipe)</p> <p>Please confirm if internal coating is also required.</p> <p>As of now bidder considers only external 3LPE coating.</p> <p>Please re-confirm.</p>	<p>Internal coating not required</p>
			<p>The coating materials manufacturer shall carry out tests</p>	<p>Bidder clarifies that material manufacturer will provide test certificate for all properties specified in Table 2, Table 3 and Table 4 of specification for each batch of epoxy, adhesive and polyethylene compound respectively. However all the properties will not be tested for each batch. Epoxy, Adhesive and Polyethylene manufacturer will provide batch test certificate for the measured value and typical value as mentioned below:</p> <p>Epoxy Powder: All Properties tested for each batch as per Table 2</p> <p>PE Adhesive: MFI, Density and Water content results shall be reported as measured value for each batch</p>	

4	Cl. 7.4.2 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>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 infra-red scan for each batch of epoxy powder. The manufacturer shall issue Inspection Certificate 3.1 B 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.</p>	<p>whereas the Tensile Yield Strength, Elongation at break, Vicat Softening Temperature and Flexural Modulus will be reported as typical values supported by reputed lab reports.</p> <p>High Density Polyethylene: Density, Melt Flow Rate, Oxidation Induction Time, Carbon Black Content, Water Content results shall be reported as measured value for each batch. The properties –Melting Point, Hardness Shore D, Elongation at break, Tensile Strength, Vicat Softening Temperature, ESCR, Indentation, Impact Resistance, Volume Resistivity and Dielectric Withstand shall be reported as typical value supported by independent lab test report valid for one year.</p> <p>For UV resistance, Thermal ageing and Coating Resistivity test bidder will submit independent laboratory test report furnished by material manufacturer. These test certificates will not be older than three years.</p>	Tender condition shall prevail at this stage.										
5	Cl. 7.4.3 (Table 2) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<table border="1" data-bbox="613 815 1111 983"> <thead> <tr> <th>Sr. No.</th> <th>Properties</th> <th>Unit</th> <th>Requirement</th> <th>Test Method</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Density</td> <td>g/l</td> <td>Within <math>\pm 0.05</math> of the manufacturer's specified nominal value</td> <td>ISO 21809-1 Annexure N</td> </tr> </tbody> </table>	Sr. No.	Properties	Unit	Requirement	Test Method	1.	Density	g/l	Within $\pm 0.05$ of the manufacturer's specified nominal value	ISO 21809-1 Annexure N	<p>Bidder would like to clarify that Density unit shall be g/cc to meet the specified requirement or the requirement shall be <math>\pm 50</math> in g/l, as confirmed by Epoxy powder manufacturer.</p> <p>Please refer Attachment 01 - Batch Test Certificate FBE Scotchkote 226 (3M) for reference.</p>	Noted
Sr. No.	Properties	Unit	Requirement	Test Method											
1.	Density	g/l	Within $\pm 0.05$ of the manufacturer's specified nominal value	ISO 21809-1 Annexure N											
6	Cl. 7.4.3 (Table 2) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		Epoxy properties (As – Applied): Hot water adhesion 28 days @65°C.	<p>Bidder intent to clarify that the hot water adhesion 28 Days at 65°C is to be performed for 28 Days at raw material supplier Lab., Epoxy material supplier shall perform the test for each batch and submit the report after 28 Days from date of dispatch of material but each batch test report will written as under testing for 28 days during initial dispatch.</p> <p>Please confirm</p>	This will be taken up during MPS satge in case bidder is awarded the job.										

7	<p>Cl. 7.4.4 (Table 3) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.</p>		<p>Adhesive material properties Copolymeric or grafted adhesive material shall meet the properties listed in Table 3 below:</p> <p>Flexural Modulus acceptance criteria <math>\geq 450</math> MPa.</p>	<p>Bidder clarifies that acceptance criteria for Flexural Modulus Test shall be as per adhesive material manufacturer's specification and the same shall be supported by reputed lab reports.</p> <p>As confirmed by adhesive raw material manufacturer (Make: Borealis, Grade: ME0420, Flexural modulus acceptance criteria shall be <math>\geq 350</math> MPa. Technically adhesive thickness of nearly 200 micron in applied condition will not make any difference on flexural modulus of coated pipe as it will be govern by Top Coat. The top coat Flexural modulus is typically <math>&gt;900</math> MPa. The ISO 21809-1 and Canadian standards CSA.Z245.21 do not stipulate this test.</p> <p>(Please refer Attachment – 2, 3, 4 and 5 as a declaration / PDS of all the approved adhesives materials/manufacturers in line with above mentioned proposal for Flexural Modulus as per ANNEXURE I of Spec. No.: P-SPC-003 for review and acceptance.)</p> <p>Please confirm</p>	<p>Bidder shall submit earlier acceptance on this by PMC/ Client during MPS stage duly signed.</p>
8	<p>Cl. 7.4.6 c) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.</p>		<p>In house testing Polyethylene Thermal stabilization test (as per ASTM D3895)</p>	<p>Bidder would like to clarify that as per ASTM D3895: Oxidative Induction Time shall be performed to determine qualitative assessment for the stabilization of the material. Bidder understands that OIT shall be carried out at 220°C as per Table 4 of Spec. No.: P-SPC-003, Rev. 00.</p> <p>Please confirm</p>	<p>This will be taken up during MPS satge in case bidder is awarded the job.</p>

9	Cl. 7.5.1 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>All materials to be used shall be supplied in sealed, damage free containers and shall be suitably marked with the following minimum information:</p> <p>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)</p>	<p>Bidder proposes based on confirmation from Adhesive and PE manufacturer that the information required in clause 7.5.1 points a, b, c, d, e, g will be marked on bag whereas others shall be provided through Certificate of Analysis / Batch test certificate.</p> <p>For FBE powder packages marking will be complied.</p> <p>Please confirm</p>	This will be taken up during MPS satge in case bidder is awarded the job.
10	Cl. 9.3.3.7, 9.3.2.4, 9.3.3.8, 9.3.3.9 & Table 5 (A2), (A4), (B14) & (C15) & (C16) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>A (2): Air pressure in epoxy spray guns – Continuous monitoring &amp; recording</p> <p>A (4): Pipe temperature: Continuous monitoring &amp; recording</p> <p>B (14): Extrusion temperature of adhesive – Continuous monitoring &amp; recording</p> <p>C (15): PE extrusion temperature – Continuous monitoring &amp; recording</p> <p>C (16): Water quenching – Continuous monitoring</p>	<p>Bidder propose and consider that the following application parameters shall be monitored continuous &amp; recorded at once per hour during the regular production.</p> <ul style="list-style-type: none"> <li>• Air pressure in epoxy spray guns;</li> <li>• Pipe temperature prior to epoxy application;</li> <li>• Temperature of adhesive film;</li> <li>• Temperature of PE film.</li> <li>• Water quenching temperature</li> </ul> <p>Bidder understands that “Water quenching temperature” refers to the coated pipe temperature after quenching / cooling. Kindly confirm.</p>	This will be taken up during MPS satge in case bidder is awarded the job.

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Table 5 (A7), (A9) & (A10) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.

Properties	Inspection frequency during PQT
Holiday detection (test voltage set to exceed 5V per $\mu\text{m}$ of epoxy thickness)	Each pipe <b>No holidays</b>
Cross-section porosity	Each pipe
Interface porosity	Each pipe

Bidder would like to clarify that, these test are applicable for partially coated pipe with epoxy and partially coated with both epoxy and adhesive layer.  
As specified in clause 8.3.4 of Spec. No.: P-SPC-003, Rev. 00, during PQT out of five pipes one pipe partly coated with epoxy and partly coated with both epoxy and adhesive layers shall be included. Remaining 4 test pipes shall have all three layers.

So Bidder understands frequency of these tests shall be one partly coated pipe instead of each pipe.

Bidder would like to state that it is practically difficult to achieve no holiday at 200 microns minimum dry film thickness. Hence holiday acceptance criteria shall be 0.7 holiday per square meter as per clause 10.3.2.2 of ISO 21809-2 for FBE coated portion of partly coated pipe.

Please confirm

Tender condition shall prevail at this stage.

12

Table 5 (C22) & Cl. 10.5 Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.

Table 5 (C22) :  
Properties: Bond strength (peel Strength) @  $23^{\circ}\text{C}\pm 2^{\circ}\text{C}$  &  $80^{\circ}\text{C}\pm 2^{\circ}\text{C}$   
Acceptance Criteria:  $\geq 15$  N/mm &  $\geq 3$  N/mm  
Test method: ISO 21809-1 Annex C, (clause C.2 or C.5 hanging mass) and clause 10.5 of this spec.  
During PQT: 5 pipes x 3 tests (@ both ends & middle)  
production: 2 h for pipe ends (cutback portion) & 4 h for middle of pipe  
  
Cl. 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.

Bidder proposes to bond strength test shall be carried out by manual peel test machine (Spring loaded type test assembly) due to size constraint.

Please confirm.

We request to kindly consider the practical difficulty.

Bidder proposes to perform bond strength test at maximum feasible distance from either end instead of middle of the pipe. It is not possible to maintain the test temperature required at the middle of the pipe due to size constraint.

For bond strength at each cut back ends, bidder confirms to comply specification.

Noted

13	Table 5 (C23) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<table border="1"> <thead> <tr> <th>Properties</th> <th>Inspection frequency During PQT</th> </tr> </thead> <tbody> <tr> <td>Coating resistivity</td> <td>One pipe (Test carried out in an independent laboratory of national/ International recognition on PE topcoat is also acceptable).</td> </tr> </tbody> </table>	Properties	Inspection frequency During PQT	Coating resistivity	One pipe (Test carried out in an independent laboratory of national/ International recognition on PE topcoat is also acceptable).	<p>Bidder understands that the Coating resistivity is the long term tests and shall be performed by PE topcoat raw material supplier / manufacturer. Test certificates shall be furnished by raw material supplier / manufacturer shall be submitted for review and acceptance.</p> <p>Please confirm</p>	Noted
Properties	Inspection frequency During PQT								
Coating resistivity	One pipe (Test carried out in an independent laboratory of national/ International recognition on PE topcoat is also acceptable).								
14	Table 5 (C25) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>Properties: Indentation resistance  Test Method: ISO 21809-1 Annex F and clause 10.6 of this spec.</p>	<p>Bidder understands that there is typographical error, the Indentation resistance test Cl. No. 10.6 read as 10.7 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022.</p> <p>Please re confirm</p>	Noted				
15	Table 5 (C26) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>Elongation at break  Test Method : ISO 527-3 &amp; clause 10.12 of this spec.</p>	<p>Bidder clarifies; ISO 527-3 is applicable for Test conditions for films and sheets and it need to read in conjunction with ISO 527-2: Test conditions for moulding and extrusion plastics as per ISO 21809-1 table no. 5.</p> <p>Please confirm</p>	Noted				
16	Table 5 (C27) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<table border="1"> <thead> <tr> <th>Sl. No.</th> <th>Properties</th> </tr> </thead> <tbody> <tr> <td>27</td> <td>Cathodic Disbondment  • 65 °C/24 h;-3.5V  • 23 °C/28 d;-1.5V  • 80 °C/28 d;-1.5V</td> </tr> </tbody> </table>	Sl. No.	Properties	27	Cathodic Disbondment • 65 °C/24 h;-3.5V • 23 °C/28 d;-1.5V • 80 °C/28 d;-1.5V	<p>Bidder understands that the Cathodic Disbondment temp. range shall be as per ISO 21809-1 as follow:</p> <ol style="list-style-type: none"> <li>65±3°C /24 h: -3.5V</li> <li>23°±3° C /28 d: -1.5V</li> <li>80°±3°C /28 d: -1.5V</li> </ol> <p>Please confirm</p>	Confirm
Sl. No.	Properties								
27	Cathodic Disbondment • 65 °C/24 h;-3.5V • 23 °C/28 d;-1.5V • 80 °C/28 d;-1.5V								

17	CS. Cl. 9.2.4.1 & Table 6 (5) of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>CS. Cl. 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.</p> <p>Table 6 Soluble salt after Blasting – Max. 20mg/m2 Test Method- Conductive measurement ISO 8502-9 Frequency during PQT-Each pipe Frequency During Production- Each pipe</p>	<p>There are two different method are mentioned in clause 9.2.4.1 and Table 6, for salt contamination testing. Bidder proposes to use Elcometer 130 SCM 400 machine as per SSPC Guide 15 to check chloride contamination.</p> <p>Elcometer 130 SCM 400 provides instant results and is critical for coating operations. This test method is also widely practiced in the industry.</p> <p>Please confirm</p>	Noted
18	Cl. 9.3.3.9 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>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.</p>	<p>Bidder clarifies that pyrometers that are used for PE &amp; adhesive temperature monitoring, are specialized equipment and are calibrated in specialized equip outside laboratory, so we propose to review the outside lab calibration certificate.</p> <p>However the pyrometer shall be checked for errors every shift against a calibrated temperature-measuring instrument.</p> <p>Please confirm</p>	This will be taken up during MPS satge in case bidder is awarded the job.
19	Cl. 9.3.3.12 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		<p>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°.</p> <p>Wherever specified the cut back shall be 150mm (+) 20/ (-) 0 to facilitate automatic welding.</p>	<p>There are two different requirements of cut back length mentioned in specification.</p> <p>Please confirm the applicable external coating Cut-back length for this project.</p> <p>Please confirm</p>	Cut back length 120 mm (+) 20 / (-) 0 mm to be followed



20	Cl. 10.4.1 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		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.	Bidder will use high voltage Holiday Detector in accordance with Annex-B of ISO 21809-1:2011. DIN VDE 0433 Part 2 has been withdrawn.  Please confirm	This will be taken up during MPS satge in case bidder is awarded the job.
21	Cl. 12.0 of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		MARKING Colour band	Please provide the colour coding requirement. If any.  Please confirm	Yellow colour for 7.1 mm thickness pipe and white for 6.4 mm thickness pipe
22	Annexure-I of Spec. No.: P-SPC-003, Rev. 00, Dated: 05.01.2022: Standard specification for 3 layer polyethylene coating of line pipes.		PE compound (Manufacturer) HE 3450H (Borealis / Borouge)	Bidder propose HDPE topcoat grade HE 3450 (Manufacturer: Borouge / Borealis) in addition to the list of approved coating material supplier.  HE 3450 meets all the requirements of Specification No.: P-SPC-003, Rev. 00, Dated: 05.01.2022.  Please confirm	This will be taken up during MPS satge in case bidder is awarded the job.
23	Sr. No. 3.5, 3.6 & 3.7 of Doc. No. P-ITP-003, Rev. 00, Dated: 04.01.2022: Inspection and Test Plan for 3-Layer PE Coating of line pipes		SL. No. 3.5 Lab test for Chromate, Phosphoric acid & de-ionized water (as applicable) SL. No. 3.6 Phosphoric acid wash followed by de-ionized water wash (as applicable) SL. No. 3.7 Chromate Treatment (as applicable)	As per your tender specification for 3LPE coating (Specification No.: P-SPC-003, Rev. 00, Dated: 05.01.2022), there is no requirement of chromate treatment & phosphoric acid wash, whereas in ITP as mention as applicable, kindly clarify chromate treatment & phosphoric acid wash is to be done or not.  Please confirm	Please follow ITP requirement

24	-		<p>Doc. No. P-ITP-003, Rev. 00, Dated: 04.01.2022:  Inspection and Test Plan for 3-Layer PE Coating of line pipes</p>	<p>Bidder understands; INSPECTION AND TEST PLAN FOR 3-LAYER PE COATING OF LINE PIPES Doc. No. P-ITP-003, Rev. 00, Dated: 04.01.2022 is for information only.</p> <p>Bidder confirms to follow Specification No.: P-SPC-003, Rev. 00, Dated: 05.01.2022 (Standard specification for 3 layer polyethylene coating of line pipes) for all the testing, test frequency and acceptance criteria except the comments / clarification given in this comments sheet.</p> <p>Please confirm</p>	<p>Bidder to consider ITP for testing requirements as well as follow specification where more clarity required in frequency and acceptance criteria and follow more stringent requirement out of two.</p>
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1. Bidder to submit signed and stamped copy of this Reply to Pre-Bid Queries along with Un-Price Bid .