

REPLY TO PRE-BID QUERIES

Tender No.: HOGPL/2021-22/C&P/005 DATED: 29.06.2021

SUPPLY OF 3LPE COATED LINE PIPES FOR CITY GAS DISTRIBUTION PROJECTS AT AMBALA-KURUKSHETRA & KOLHAPUR GA

Sl. No.	Clause No.	Description	Bidders Query	HOGPL Reply																																			
TECHNICAL QUERY																																							
1	MATERIAL REQUISITION FOR LINEPIPE Clause No. 6	<p>BOM</p> <table border="1"> <thead> <tr> <th rowspan="2">Sl. N</th> <th rowspan="2">SIZE (Inch)</th> <th rowspan="2">THK. (mm)</th> <th rowspan="2">MATERIAL (PSL-?)</th> <th rowspan="2">EXTERNAL COATING</th> <th rowspan="2">METHOD OF MANUFACTURE</th> <th colspan="2">QTY (Mtr)</th> </tr> <tr> <th></th> <th>COATED</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>6"</td> <td>6.4</td> <td>API 5L GR.B</td> <td>3LPE</td> <td>HFW/SMLS</td> <td></td> <td>26000</td> </tr> <tr> <td>2.</td> <td>6"</td> <td>6.4</td> <td>API 5L GR.B</td> <td>3LPE</td> <td>HFW/SMLS</td> <td></td> <td>20000</td> </tr> </tbody> </table>	Sl. N	SIZE (Inch)	THK. (mm)	MATERIAL (PSL-?)	EXTERNAL COATING	METHOD OF MANUFACTURE	QTY (Mtr)			COATED	1.	6"	6.4	API 5L GR.B	3LPE	HFW/SMLS		26000	2.	6"	6.4	API 5L GR.B	3LPE	HFW/SMLS		20000	<p>Bidder understands that –</p> <table border="1"> <thead> <tr> <th>Given OD, inch</th> <th>OD, inch to be considered</th> <th>OD, mm to be considered</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>4.5</td> <td>114.3</td> </tr> <tr> <td>6</td> <td>6.625</td> <td>168.3</td> </tr> </tbody> </table> <p>Also, Bidder has considered HFW to be the method of pipe manufacturing.</p>	Given OD, inch	OD, inch to be considered	OD, mm to be considered	4	4.5	114.3	6	6.625	168.3	Accepted
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2	MATERIAL REQUISITION FOR LINEPIPE Clause No. 12	For butt weld end, bevel shall be in accordance with API specification 5L or ASME B16.25 as applicable.	With the provisions of API 5L, Pipes shall be supplied with both ends beveled in accordance with API 5L clause 9.12.5.2 as - Bevel angle of 30° (+5°, -0°) with a root face of 1.6mm ± 0.8mm.	Tender condition shall prevail																																			
3	MATERIAL REQUISITION FOR LINEPIPE 7.0 DESIGN DATA Clause No. 13 & STANDARD SPECIFICATION FOR HIGH FREQUENCY WELDED LINE PIPE Clause No 9.12.5.7	<p>Bevel Protector or end caps shall be installed on all pipe ends. End caps shall be hookable type which shall allow the use of end hooks without the need for their removal during pipe handling. The bevel protector shall be the re-usable type. The details of the bevel protector/end caps shall be furnished for approval prior to start of the production.</p> <p>Both pipes end 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 after coating of line pipe.</p>	Bidder confirms to provide hookable type plastic end caps for OD 4.5" and OD 6.625".	Accepted																																			
4	3.1.1 STANDARD SPECIFICATION FOR SEAMLESS (SMLS) LINE PIPE (ONSHORE) Clause No. 1. SCOPE	<p>This specification establishes the minimum requirements for the manufacture of high frequency welded steel line pipe in accordance with the requirements of API (American Petroleum Institute) Specification 5L, Forty-Fifth Edition, 2012 and makes restrictive amendments to API Specification 5L. Unless modified and/or deleted by this specification, the requirements of API Specification 5L shall remain applicable.</p> <p>The Manufacturer shall have a valid license to use API Monogram in accordance with the requirements of Specification 5L, Forty-Fifth Edition, 2012 for line pipe as Product Specification Level PSL 2.</p>	Bidder clarifies that manufacturing, inspection, testing, certification & supply of ERW Pipes from Hot Rolled Coil through in accordance with API 5L 46th Edition-2018 & Errata 1 dated May 2018 for the size & grade specified in page 1 of this comment sheet for Onshore & Non-sour service application. Pipes shall be supplied with delivery condition M.	Tender condition shall prevail																																			
5	Clause no 9.8.2.1 & 10.2.3	<p>The average (set of three test pieces) absorbed energy value (KvT) for each pipe body test shall be as specified in Table 8 of this specification, based upon full sized test pieces at a test temperature of 0°C (32°F) or at a lowest test temperature as specified in the purchase order.</p> <table border="1"> <thead> <tr> <th rowspan="2">Sample Location</th> <th rowspan="2">Type of Test</th> <th colspan="2">Number, Orientation and location of test pieces per sample a</th> </tr> <tr> <th colspan="2">Specified outside diameter, D mm (in)</th> </tr> </thead> <tbody> <tr> <td>Pipe Body</td> <td>CVN</td> <td>3 T90</td> <td>3T 90</td> </tr> <tr> <td>Seam Weld</td> <td>CVN</td> <td>3W & 3HAZ</td> <td>3W & 3HAZ</td> </tr> </tbody> </table> <p>Lower Pipe sizes wherein preparation of transverse sub-sized specimen is not possible, CVN impact testing shall be carried out on longitudinal test specimen [see Note 'a' of Table 8 of this specification].</p>	Sample Location	Type of Test	Number, Orientation and location of test pieces per sample a		Specified outside diameter, D mm (in)		Pipe Body	CVN	3 T90	3T 90	Seam Weld	CVN	3W & 3HAZ	3W & 3HAZ	Bidder clarifies that extraction of transverse sample is not feasible for OD 4.5" and 6.625". Therefore, bidder proposes to carry out CVN at longitudinal direction at base metal only.	Tender condition shall prevail																					
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7	Clause No. 10.2.1.2	<p style="text-align: center;">Table 16 - Inspection frequency of pipe</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">Sl. no.</th> <th style="width: 40%;">Type of inspection</th> <th style="width: 50%;">Frequency of inspection</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Heat analysis^a</td> <td>One analysis per heat of steel</td> </tr> <tr> <td>2</td> <td>Product analysis^b</td> <td>Two pipes per lot (maximum 100 pipes) per heat</td> </tr> </tbody> </table> <p><small>^a For each section of the pipe body. ^b Two pipes per heat out of not more than</small></p> <p>b Pipes selected shall be such that one at the beginning of the heat and one at the end of the heat are also represented.</p>	Sl. no.	Type of inspection	Frequency of inspection	1	Heat analysis ^a	One analysis per heat of steel	2	Product analysis ^b	Two pipes per lot (maximum 100 pipes) per heat	Bidder confirms for product analysis in pipes with 2 samples / 100 pipes / heat shall be selected randomly from the heat used at pipe mill for pipe production with lot of 100 pipes.	Tender condition shall prevail
Sl. no.	Type of inspection	Frequency of inspection											
1	Heat analysis ^a	One analysis per heat of steel											
2	Product analysis ^b	Two pipes per lot (maximum 100 pipes) per heat											
8	Clause No. 10.2.5.3	The test piece shall be visually examined using a minimum 40X magnification to provide evidence that heat treatment of weld zone is adequate and there is no untampered martensite or detrimental oxides from the welding process present along the weld seam. The metallographic examination shall be documented on micrographs (at 10X to 20X magnification).	Bidder proposes to carry out metallographic examination at more than 40X magnification and document with the same magnification.	Accepted									
9	Clause No. 11.2	Pipe Markings	Bidder proposes that stenciling marking for 4.5 inch, 6.625 inch & 8.625 inch diameter pipes shall be done at OD surface.	Tender condition shall prevail									
10	Clause No. 11.2.7	A colour band shall be marked on inside surface of finished pipe of finished pipe for identification of pipes of same diameter but different wall thickness, as indicated in the Purchase Order.	Bidder understand that color coding is not required since only one wall thickness i.e. 6.4 mm is covered in this tender MR.	Bidder's Understanding is correct									
11	Clause No.B.5.2.C	<p>iv. CVN impact testing CVN impact test shall be performed on test pieces extracted as follows: - Five (5) sets of three (3) transverse test pieces each from base metal - One (1) set of three (3) transverse test pieces with weld in middle - One (1) set of three (3) transverse test pieces with HAZ in middle</p> <p>v. Fracture toughness testing Four (4) sets of CVN base metal test pieces shall be tested at, - 40°C, -30°C, - 20°C, - 10°C, 0°C, +10°C and + 20° C for shear area and absorbed energy to produce full transition curve. The minimum average (set of three test pieces) shear fracture area at the test temperature specified in clause 9.8 of this specification shall be complied with. For other temperatures, the value shall be for information only.</p>	Bidder clarifies to extract total 8 sets of samples from base metal during MPQT for energy & shear area, one at test temperature of -29°C and others at one each temperature of - 40°C, -30°C, -20°C, - 10°C, 0°C, +10°C and + 20° C. Results at test temperature (0 & -29) shall meet the requirement. For other temperatures, the value shall be for information only.	Tender condition shall prevail									
12	Clause No. E.5.1.1 & E.11	<p>In addition, an automatic weld tracking system shall be provided for correct positioning of the probes with respect to weld center.</p> <p>ROTARY ULTRASONIC INSPECTION OF PIPE (ALTERNATIVE METHOD)</p>	For pipe OD 4.5" and 6.625", since Roto UT is carried out in accordance with ISO 10893-10, automatic weld tracking system is not required.	Accepted									
13	Clause No. E.5.2.3.2	<p>Reference standards for coil/ pipe body UT: Reference standard for the ultrasonic inspection of coil or pipe body (except the coil edges/pipe ends) shall contain continuous machined notch of following dimension: a) width, w : 8 mm, with a tolerance +0.8/ - 0.0 mm b) depth, d : 0.25 t < d < 0.5 t, where 't' is the specified wall thickness Reference standard for the ultrasonic inspection of coil edges (area adjoining weld seam)/ pipe ends shall have 6.4 mm (1/4 inch) diameter FBH of a depth 0.5 t, where 't' is the specified wall thickness.</p>	For pipe 4.5" and 6.625", Ultrasonic inspection is carried out with 100% coverage area of the pipe body including weld seam and HAZ. The reference standard for both, pipe body & HAZ will be used dia 6.0mm flat bottom hole with depth thickness/4 to thickness/2 for the detection of laminar imperfection and which is more stringent than specification requirement.	Tender Condition Shall Prevail									

14	<p>Cl. 8.0 of MR Doc.: 1001-CGD-PL-MR-001, Rev. D1, Dated: 18.05.2021: Material requisition for line pipes</p> <p>Cl. 5.1 & 5.4 of Doc. No.: 1001-CGD-PL-SW-001, Rev. D1, Dated: 18.05.2021: Scope of work for procurement of coated line pipes</p>	<p>Cl. 8.0 of MR Doc.: 1001-CGD-PL-MR-001 Supply of all coating materials as per specification no. HOGPL-003 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows: • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm</p> <p>Cl. 5.1 of Doc. No.: 1001-CGD-PL-SW-001 ii. Supply of all coating materials as per specification no. SS-PL-02 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows: • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm</p> <p>iv. Cleaning and surface preparation of pipes, application of 3-layer side extruded polyethylene coating on bare line pipes, carrying out inspection Cl. 8.0 of MR Doc.: 1001-CGD-PL-MR-001 Supply of all coating materials as per specification no. HOGPL-003 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows: • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm</p> <p>Cl. 5.1 of Doc. No.: 1001-CGD-PL-SW-001 ii. Supply of all coating materials as per specification no. SS-PL-02 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows: • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm</p> <p>iv. Cleaning and surface preparation of pipes, application of 3-layer side extruded polyethylene coating on bare line pipes, carrying out inspection and testing, repairing of coating defects, re-testing, any cutting of pipes for the purpose of PQT or regular production testing, carrying out re-beveling and all associated works after cutting etc. and carrying out all coating works as per specification no. SS-PL-02. Application shall also include coating of pipes of non-standard lengths obtained in case of cutting of bare pipes necessitated for removal of dents/defects.</p> <p>Cl. 5.4 of Doc. No.: 1001-CGD-PL-SW-001 ii. All external coating materials shall be as per specification no. SS-PL-02 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 understands there may be a typo error in document number of 3 Layer Polyethylene coating specification. Coating specification provided with tender documents has document number Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021.</p> <p>We have considered the Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021 for 3 Layer Polyethylene coating.</p> <p>Please confirm.</p>	Acceptable																								
15	<p>Cl. 3.0 & 5.4 of Doc. No.: 1001-CGD-PL-SW-001, Rev. D1, Dated: 18.05.2021: Scope of work for</p>	<p>DETAILS OF LINE PIPE The line pipes shall be API 5L Gr. B of HFW/SMLS type PSL 2 (as applicable) and following are quantities of all line pipes covered under this requisition:</p> <table border="1" data-bbox="604 1339 968 1453"> <thead> <tr> <th>Sl No.</th> <th>QTY (Meter)</th> <th>Material (PSL-2)</th> <th>Specified Outside Dia. mm (Inch)</th> <th>Method of Manufacture</th> <th>Specified Wall thickness (mm)</th> </tr> </thead> <tbody> <tr> <td colspan="6">Line Pipe duly coated with 3 Layer Polyethylene (External) & Epoxy (Internal) as per specification nos. HOGPL-PL-00003</td> </tr> <tr> <td>1</td> <td>56616</td> <td>API-5L Gr-B</td> <td>168.3 (6 Inch)</td> <td>HFW/SMLS</td> <td>6.4</td> </tr> <tr> <td>2</td> <td>20832</td> <td>API-5L Gr-B</td> <td>114.3 (4 Inch)</td> <td>HFW/SMLS</td> <td>6.4</td> </tr> </tbody> </table>	Sl No.	QTY (Meter)	Material (PSL-2)	Specified Outside Dia. mm (Inch)	Method of Manufacture	Specified Wall thickness (mm)	Line Pipe duly coated with 3 Layer Polyethylene (External) & Epoxy (Internal) as per specification nos. HOGPL-PL-00003						1	56616	API-5L Gr-B	168.3 (6 Inch)	HFW/SMLS	6.4	2	20832	API-5L Gr-B	114.3 (4 Inch)	HFW/SMLS	6.4	<p>Bidder intent to clarify that the internal epoxy coating client specification is not received with Tender documents & internal epoxy coating detail is not specified in Scope of work for procurement of coated line pipes (Doc. No.: 1001-CGD-PL-SW-001, Rev. D1, Dated: 18.05.2021).</p> <p>Bidder also clarifies that Spec. No. HOGPL-PL-00003 is applicable for "External 3 Layer Polyethylene coating" and not for internal epoxy coating.</p>	Bidder's Understanding is correct
Sl No.	QTY (Meter)	Material (PSL-2)	Specified Outside Dia. mm (Inch)	Method of Manufacture	Specified Wall thickness (mm)																							
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2	20832	API-5L Gr-B	114.3 (4 Inch)	HFW/SMLS	6.4																							

	procurement of coated line pipes	<p>Cl. 5.4 of Doc. No.: 1001-CGD-PL-SW-001</p> <p>All external coating materials shall be as per specification no. SS-PL-02 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>ii. Bidder intent to clarify that the internal epoxy coating is not specified in MR (MR Doc.: 1001-CGD-PL-MR-001, Rev. D1, Dated: 18.05.2021)</p> <p>Please confirm if internal epoxy coating is also required.</p> <p>As of now bidder considers only external 3LPE coating.</p>																								
18	Cl. 1.0 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>For application of external anti-corrosion coating of pipes by using Three Layer Side Extruded Polyethylene coating conforming to DIN-30670, 1991, 'Polyethylene Coating for Steel Pipes and Fittings' and the requirements of this specification.</p>	<p>Bidder has considered the latest version DIN-30670: 2012. Please confirm.</p>	Latest DIN 30670 version is acceptable.																							
19	Cl. 3.1.1 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>OPERATING TEMPERATURE The coating must be able to withstand minimum and maximum continuous in-service operating temperatures of 0°C and (+) 65°C respectively and still comply with the performance requirements of this specification.</p> <p>EXPOSURE TO ENVIRONMENT The coating materials shall withstand exposure to ultraviolet radiation (i.e. sunlight) and heat due to exposure to sunlight with a daytime coating temperature of at least 80°C without impairing its serviceability and properties specified</p>	<p>Bidder intent to clarify that top coat material manufacturer will provide certificate for 3LPE coating that there shall no appreciable changes occurs during exposure to such environments up to at least a period of 6000 hours (at operation temperature of 80°C). Please confirm.</p>	Tender condition shall prevail																							
20	Cl. 3.2.2 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>FUSION BONDED EPOXY (FBE) POWDER Epoxy powder shall comply Canadian Standard Association (CSA) Standard Z245.20-02.</p>	<p>Bidder has considered the latest version CAN/CSA Z245.20-2018. Please confirm.</p>	Tender condition shall prevail																							
21	Cl. 3.2.5 (a), 5.3.1 5.3.5 & Table 5.3.2 (c) of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>Bond Strength (using Type 2 Test Assembly i.e. Dynamometer</p>	<p>Bidder proposes to bond strength test shall be carried out by manual peel test machine due to size constraint. Please confirm.</p>	Tender condition shall prevail																							
22	Cl. 4.2.7 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>PQT REPORT Upon completion of the testing, the Contractor shall prepare and submit to the Company a detailed report covering operating and controlling parameters, inspection and test reports and material test certificates for Company approval. Only upon written approval from Company, the Contractor shall commence production coating.</p>	<p>Bidder would like clarify that PQT (Pre-Qualification Tests) shall be carried out as a part of first day production and shall be followed by regular production without waiting for the results of the long duration tests. Please confirm.</p>	Tender condition shall prevail																							
23	Cl. 4.3.6 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>Anchor pattern/roughness profile shall be between 50 to 70 microns.</p>	<p>Bidder clarifies; that surface roughness criteria range is very narrow and stringent.</p> <p>Hence, Bidder proposes surface roughness criteria range between 50-100 micron and use of digital surface roughness profile in accordance with ISO 8503-4.</p>	Tender condition shall prevail																							
24	Cl. 4.3.6 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>Dust contamination shall be rating max. 2 as per ISO 8502-3.</p>	<p>Test frequency for degree of dust test is not mentioned in specification. Bidder proposes; degree of dust test shall be checked once per hour.</p>	Shall be decided during MPS stage																							
		<p>APPLICATION OF EPOXY, ADHESIVE AND POLYETHYLENE The heated pipe surface shall be applied with following coating layers:</p> <table border="1" data-bbox="594 1243 955 1356"> <thead> <tr> <th rowspan="2">Specified Pipe OD, Inches (mm)</th> <th colspan="5">Minimum Coating Thickness in mm</th> </tr> <tr> <th>FBE (1)</th> <th>Adhesive (2)</th> <th>PE (3)</th> <th>Normal Type (4)</th> <th>Total (3+4)</th> </tr> </thead> <tbody> <tr> <td>Up to 4½ (114.3)</td> <td>0.15</td> <td>0.2</td> <td>1.45</td> <td>1.8</td> <td>2.5</td> </tr> <tr> <td>Over 4½ (114.3) Up to 10½ (273.1)</td> <td>0.15</td> <td>0.2</td> <td>1.65</td> <td>2.0</td> <td>2.7</td> </tr> </tbody> </table>	Specified Pipe OD, Inches (mm)	Minimum Coating Thickness in mm					FBE (1)	Adhesive (2)	PE (3)	Normal Type (4)	Total (3+4)	Up to 4½ (114.3)	0.15	0.2	1.45	1.8	2.5	Over 4½ (114.3) Up to 10½ (273.1)	0.15	0.2	1.65	2.0	2.7	<p>Bidder understands that 10% reduction in minimum total 3LPE coating thickness is allowed as per Cl. 4.4.2, Note 3 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021, in case bidder uses HDPE topcoat material as per approved coating material list given in Annexure – I.</p>	
Specified Pipe OD, Inches (mm)	Minimum Coating Thickness in mm																										
	FBE (1)	Adhesive (2)	PE (3)	Normal Type (4)	Total (3+4)																						
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25	<p>Cl. 4.4.2 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes</p> <p>Cl. 8.0 of MR Doc.: 1001-CGD-PL-MR-001, Rev. D1, Dated: 18.05.2021: Material requisition for line pipes</p> <p>Cl. 5.1 of Doc. No.: 1001-CGD-PL-SW-001, Rev. D1, Dated: 18.05.2021: Scope of work for procurement of coated line pipes</p>	<p>Notes:</p> <p>3. In case HDPE is used as top coat, 10% reduction in PE top coat thickness is permissible</p> <p>4. Unless indicated otherwise in Purchase Order, total thickness corresponding to Normal Type (n) coating shall be applicable.</p> <p>Cl. 8.0 of MR Doc.: 1001-CGD-PL-MR-001 Supply of all coating materials as per specification no. HOGPL-003 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows:</p> <ul style="list-style-type: none"> • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm <p>Cl. 5.1 of Doc. No.: 1001-CGD-PL-SW-001</p> <p>ii. Supply of all coating materials as per specification no. SS-PL-02 for carrying out 3-layer polyethylene coating. The minimum thickness of finished coating shall be as follows:</p> <ul style="list-style-type: none"> • 4 inch dia = 1.8 mm • 6 inch dia = 2.0 mm 	<table border="1"> <thead> <tr> <th rowspan="2">Specified Pipe OD, Inches (mm)</th> <th colspan="2">Min Total 3LPE Coating Thickness (mm)</th> </tr> <tr> <th>PE</th> <th>Normal Type (n)</th> </tr> </thead> <tbody> <tr> <td>4.5"(114.3)</td> <td>Min. 1.31 mm</td> <td>Min. 1.66 mm</td> </tr> <tr> <td>6.625" (168.3)</td> <td>Min. 1.49 mm</td> <td>Min. 1.84 mm</td> </tr> </tbody> </table> <p>Please Confirm</p>	Specified Pipe OD, Inches (mm)	Min Total 3LPE Coating Thickness (mm)		PE	Normal Type (n)	4.5"(114.3)	Min. 1.31 mm	Min. 1.66 mm	6.625" (168.3)	Min. 1.49 mm	Min. 1.84 mm	Tender condition shall prevail No deviation accepted
Specified Pipe OD, Inches (mm)	Min Total 3LPE Coating Thickness (mm)														
	PE	Normal Type (n)													
4.5"(114.3)	Min. 1.31 mm	Min. 1.66 mm													
6.625" (168.3)	Min. 1.49 mm	Min. 1.84 mm													
27	Cl. 4.4.2 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<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>The extrusion temperatures of the adhesive and polyethylene shall be continuously monitored and recorded at least four times per working shift (maximum 12 hours). The monitoring instruments shall be independent of the temperature control equipment. The instruments shall be calibrated prior to start of each shift.</p>	Bidder proposes that the instrument use for PE & adhesive temperature (Pyrometer) shall be calibrated in specialized equip outside laboratory, so we proposed review of outside lab calibration certificate.	Tender condition shall prevail											
28	Table 5.3.2 (c) & 5.3.5 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>Table-5.3.2 Test: Bond Strength Testing Frequency: One out of 25 Pipes</p> <p>Cl. No. 5.3.5 One test shall be performed at cut back portion at each end and one in the middle of test pipe for each specified temperature (i.e. total 6 tests per pipe).</p>	<p>Bidder proposes that the frequency of bond strength test for middle of pipe shall be one pipe in every sixty (60) pipes coated or one pipe per shift whichever is higher because number of repair will be increased, if the middle bond strength test is done in one pipe in 25 pipes.</p> <p>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.</p> <p>For bond strength at each cut back ends, bidder confirms to comply specification.</p>	Tender condition shall prevail											
29	Cl. 5.3.5 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	<p>BOND STRENGTH TEST</p> <p>One test shall be performed at cut back portion at each end and one in the middle of test pipe for each specified temperature (i.e. total 6 tests per pipe). Test method and acceptance criteria shall be as per Section 3.2.5, Sl. No. (a) of this specification. The coating 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 also be recorded for each test.</p>	Bidder intent to clarify that the cohesive failure in adhesive layer is not practical when grafted adhesive are used as per ISO 21809-1:2018 Table 7, there shall be No disbonding between steel and epoxy. Bidder will use adhesive material Borouge/Borealis ME0420 which is grafted adhesive; hence 3LPE coating system failure mode is not much relevant in this case.	Tender condition shall prevail											
30	Cl. 5.3.12 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	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 clarifies; DIN VDE 0433 Part 2 has been withdrawn. Bidder confirms that holiday detector shall be as per Annex. E of DIN 30670:2012.	Accepted											

31	Cl. 5.3.12 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	ONLY EPOXY / EPOXY AND ADHESIVE COATED PIPES Only epoxy coated section shall be subject to holiday inspection at a test voltage set to exceed 5V / micron of epoxy thickness. Section of pipe coated with both epoxy and adhesive shall be tested at a voltage of 25kV. No holidays are permitted.	Bidder also clarifies that it is practically difficult to achieve no holiday at 200 microns minimum dry film thickness of FBE layer. Hence holiday acceptance criteria shall be ≤ 1.0 Holiday per meter as per Table-9 of CSA Z245.20-18 for FBE coated portion of partly coated pipe. Bidder proposes to pipe coated with both epoxy and adhesive shall be tested at a voltage of 5V/microns and holiday if any will be reported. Bidder understands that the epoxy coated & both epoxy and adhesive coated holiday test shall be applicable for procedure qualification test (PQT) only. Please confirm.	Tender condition shall prevail
32	Cl. 5.6 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	SOLUBLE SALT MEASUREMENTS Chlorides and ferrous salts present on pipe surface that can affect the coating performance shall be monitored prior to application of coating. After blast cleaning, all pipes shall be tested for salt contamination. One test shall be carried out at each end of each pipe using salt meter (SCM 400 or approved equivalent). The acceptance criteria shall be $2\mu\text{g}/\text{cm}^2$. Any pipe having salt contamination exceeding $2\mu\text{g}/\text{cm}^2$ shall be treated by phosphoric acid wash followed by de-ionized water wash in accordance with the recommendations of the manufacturer. The Contractor shall submit a detailed procedure for phosphoric acid wash for Company approval.	Bidder proposes that the salt contamination test shall be performed at one end of each pipe. Please confirm.	Tender condition shall prevail
33	Cl. 8.0 of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	MARKING AND PIPE IDENTIFICATION Colour band	Please provide the colour coding requirement. If any.	Tender condition shall prevail
34	Annexure-I of Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021: Standard specification for 3 layer polyethylene coating of linepipes	PE compound (Manufacturer) HE 3450 (Borealis)	Bidder has considered approved material PE compound HE 3450 (BOROUGE/BOREALIS) instead of HE 3450 (BOREALIS). Please confirm.	Tender condition shall prevail
35	Cl. 3.5 & 3.7 of Doc. No.: HOGPL-PL-ITP-003, Rev. 00, Dated: 18.05.2021: Inspection and test plan for 3-layer PE coating of line pipes	Chromate treatment (As applicable)	As per your tender 3LPE technical specification, there is no requirement of chromate treatment, whereas in ITP as mentions as applicable, kindly clarify chromate treatment is to be done or not.	Chromate treatment is required
36	Doc. No.: HOGPL-PL-ITP-003, Rev. 00, Dated: 18.05.2021	Inspection and test plan for 3-layer PE coating of line pipes	Bidder understands; Inspection and test plan for 3-layer PE coating of line pipes Doc. No.: HOGPL-PL-ITP-003 is for information only. Bidder confirms to follow Doc. No.: HOGPL-PL-00003, Rev.00, Dated: 18.05.2021 (Standard specification for 3 layer polyethylene coating) for all the testing, test frequency and acceptance criteria except the comments / clarification given in this comments sheet.	Doc. No.: HOGPL-PL-ITP-003 describes generic test requirements, Doc No. HOGPL-PL-00003, Rev.00 is to be followed.
37	3.0 DETAILS OF LINE PIPE	Line Pipe duly coated with 3 Layer Polyethylene (External) & Epoxy (internal) as per specification nos. HOGPL-PL-00003	We understand that the requirement is only for the external coating and not internal coating. Please confirm.	Internal Coating is not required
38	HOGPL-PL-00001 9.11.3.4	Tolerance of straightness - The local deviation from straight line in 1.0 m (3.0 ft) portion at each pipe end shall be ≤ 3.0 mm (0.120 in), as shown in figure 2 of API spec 5L.	This requirement is as per 45th edition of API 5L. It is modified in 46th edition of API 5L. "The local deviation from straight line in 1.5 meter portion at each pipe end shall be ≤ 3.2 mm."	Accepted
39	HOGPL-PL-00001 11.2.3	Pipe markings - 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.	Stamping on pipe is technically not advisable. Also stamping is not a safe practice. Hence we propose to waive off the requirement of stamping.	Tender Condition Shall Prevail
40	3.4 of HOGPL-PL-ITP-003 REV.0 18.05.2021	Blast cleaning - Quantum of check (100%) Pre-heating Elapsed time Surface profile Degree of dust & roughness	Quantum of check (100%) is too stringent. We propose for Quantum of check shall be once per hour.	Tender condition shall prevail

41	4.4.2 of HOGPL-PL-00003 REV.0 18.05.2021	Adhesive and Polyethylene Application - The extrusion temperature of adhesive and polyethylene shall be continuously recorded. The monitoring instrument shall be calibrated prior to start of each shift.	Temperature recording shall be done at once per hour in log book / test report. Such instruments (i.e infrared thermometer, pyrometer) shall be calibrated from third party lab with the frequency of one year. Please confirm.	Tender condition shall prevail
42	Table 5.2 of HOGPL-PL-00003 REV.0 18.05.2021	In house Polyethylene test - Test : Moisture content Test method and acceptance criteria: As per Section 3.2.4 (a) of this specification.	Test method and acceptance criteria of Moisture content are not found in cl. no. 3.2.4. Or we propose Water Absorption, 24 hours, @+ 25 °C as per 3.2.4 (e) Please arrange same.	Accepted
43	5.3.5 of HOGPL-PL-00003 REV.0 18.05.2021	Bond Strength Test: One test shall be performed at cut back portion at each end and one in the middle of test pipe for each specified temperature (i.e. total 6 tests per pipe).	We propose that Peel test for middle of pipe shall be performed at maximum feasible distance from pipe end. It is not possible to maintain the specified test temperature at the middle of the pipe due to size constraint and safety issue. Location will be decided by customer / customer representative at a time of PQT.	Tender condition shall prevail
44	5.3.5 of HOGPL-PL-00003 REV.0 18.05.2021	Bond Strength Test: The coating 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 also be recorded for each test.	We intent to clarify that as per cl no. 3.2.3 "Co-polymer adhesive used shall be grafted type ". When grafted adhesive such as (borealis- ME0420) is used, due to their material properties the failure mode is not always cohesively. The bond strength of grafted adhesive shall be higher than specification requirement and also it is not separated cohesively; however epoxy to steel disbondment shall not permitted. We propose cohesive criteria will deviate (especially for grafted adhesive) if strength beyond specification requirement and as per ISO 21809-1 table 7. Material manufacture technical letter for your ready ref.	Tender condition shall prevail
45	5.3.6 of HOGPL-PL-00003 REV.0 18.05.2021	Frequency of salt contamination test: After blast cleaning, all pipes shall be tested for salt contamination. One test shall be carried out at each end of each pipe using salt meter (SCM 400 or approved equivalent).	Mentioned frequency is more stringent. We proposed that after successful consistency result of salt contamination test the frequency will be relaxed at once per hour in regular production.	Tender condition shall prevail
46	5.3.11 of HOGPL-PL-00003 REV.0 18.05.2021	Total Coating Thickness: The coating thickness shall be determined by taking at least 10 measurements uniformly distributed over the length and periphery of each pipe.	Mentioned frequency is more stringent. We proposed that after consistency in thickness measurement, frequency will be relaxed at once per hour in regular production with approval of inspection authority.	Tender condition shall prevail
47	5.3.12 of HOGPL-PL-00003 REV.0 18.05.2021	Only epoxy / epoxy and adhesive coated pipes - Only epoxy coated section shall be subject to holiday inspection at a test voltage set to exceed 5V / micron of epoxy thickness. Section of pipe coated with both epoxy and adhesive shall be tested at a voltage of 25KV. No holidays are permitted.	We intent to clarify that 25KV voltage is applicable for 3LPE coating system, it is not applicable for FBE+ Adhesive layer, so please provide actual voltage to test FBE+ Adhesive layer. Or We propose acceptance criteria for FBE coating holiday as per latest CAN/CSA Z245.20. Please confirm	Tender condition shall prevail
48	Cl. 10.2.1.2 of table 18, Page 25 of 137 of HOGPL-PL-00002	Inspection Frequency of Pipe : Tensile testing of the pipe body: Two pipes per test unit of not more than 100 pipes per heat	Inspection Frequency of Pipe : Testing Frequency of Product analysis, Tensile Testing & Harness shall be one per 100 pipes instead of Two per lot of 100 pipes	Tender condition shall prevail
49	Cl. 10.2.1.2 of table 18, Page 25 of 137 of HOGPL-PL-00002	Inspection Frequency of Pipe : Pipe diameter and out-of roundness - Each pipe	Inspection Frequency of Pipe : OD, Out of Roundness shall be measured 10%	Tender condition shall prevail
50	Cl. 10.2.1.2 of table 18, Page 25 of 137 of HOGPL-PL-00002	Inspection Frequency of Pipe : Wall thickness measurement d - Each pipe	Inspection Frequency of Pipe : 100% WT shall be tested in EMI/UT, physically 10% during final dimensional inspection.	Tender condition shall prevail
51	Cl. 10.2.1.2 of table 18, Page 25 of 137 of HOGPL-PL-00002	Inspection Frequency of Pipe : Weighing of pipe - Each pipe shall be measured and recorded	Inspection Frequency of Pipe : Weighing of Pipe shall be done in bundle only.	Accepted

52	Cl. 10.2.3.1 of page 27 of 137	Sample Location	Type of test	Number, Orientation and location of test pieces per sample a		Orientation & Location of CVN: Due to thickness constraint the orientation shall be longitudinal.	Tender condition shall prevail
				Specified outside diameter, D mm (in)			
		< 219.1 mm (8.625 in) ~ 219.1 mm (8.625 in)					
		Pipe body	Tensile	1 L90	1T180		
			CVN	3T90	3T90		
		Seam Weld	Tensile	---	IW ^b		
CVN	3W and 3HAZ		3W and 3HAZ				
Hardness	1W (As shown in figure 10.2.5.3 of this specification)						
Pipe body and weld	Flattening	As shown in figure 6 a) of API Spec 5L					
	Reverse Bend	As shown in figure 10.2.4.9.1 of this specification					
A See figure 5 (b) of API Spec 5L for an explanation of the symbols used to designate orientation and location.							
B Test specimen shall be tested for ultimate tensile strength only.							
53	Cl. E.5, Page 37 of 137	ULTRASONIC AND ELECTROMAGNETIC INSPECTION		Method of inspection: We will do inspection by any one method i.e. either EMI or Auto UT		ROTO UT/AUTO UT is acceptable	
54	Cl. 11.2.3 page 60 of 137	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		Pipe No. Marking : We will do paint marking on OD instead of Dot marking.		Tender condition shall prevail	
COMMERCIAL QUERY							
1	SECTION-V FORMS & FORMATS: Form-11 and Form-12	FORM F - 11 (CERTIFICATE FROM CHARTERED ACCOUNTANT) & FORM F- 12 FORMAT FOR STATUTORY AUDITOR'S/ CHARTERED ACCOUNTANT CERTIFICATE FOR FINANCIAL CAPABILITY OF THE BIDDER		Please allow to use the already available CA certificate for financial capability (Form F-11 and F-12) issued for some other project of other customer. Format is exactly same as per the requirement of HOGPL. Certificate is having an UDIN number also.		Not acceptable	
2	SECTION - I INVITATION FOR BIDS (IFB) BIDDER EVALUATION CRITERIA (BEC) 8.1.1 TECHNICAL	8.0	The Bidder must have successfully completed supplies of API 5L Gr. B, 3PLE Coating, PSL-2-line pipes in at least two supply orders of any size line pipes during the last 5 (five) Year.	The Bidder must have successfully completed supplies of API 5L Gr. B or higher, 3PLE Coating, PSL-2-line pipes in at least two supply orders of any size line pipes during the last 5 (five) Year.		Refer Corrigendum 1	
3	SECTION - I INVITATION FOR BIDS (IFB) DELIVERY LOCATION & SCHEDULE	4.0	Complete Material Should be delivered within 04 (four) months from the date of LOI/PO.	Complete Material Should be delivered within 06 (six) months from the date of LOI/PO. Reason: Considering the current market situation, procurement of raw material takes at least 3-4 months. Thereafter we need 2-3 months to manufacture and deliver the pipes.		Refer Corrigendum 1	
4	SECTION - I INVITATION FOR BIDS (IFB) 5.0 BID VALIDITY		Bid should be valid for 120 days from the date of schedule submission.	Bid should be valid for 60 days from the date of schedule submission. Reason: Due to COVID-19 pandemic the steel prices are very volatile and unpredictable. Hence it is not possible for us to keep the longer bid validity.		Refer Corrigendum 1	
5	SECTION - I INVITATION FOR BIDS (IFB) Clause No. 7.2,7.5 & 7.6	DETAILS OF BID DOCUMENTS			We would also request to extend the due date for submission of our bid by 10 days from the date of receipt of your clarification on above points to enable us to participate in the bid		Refer Corrigendum 3
		Sl. No.	Description	Details			
		7.2	Tender Document on Sale	29.06.2021 to 14.07.2021 till 1200 HRS IST			
		7.5	Bid Submission date and time	14.07.2021 till 14:30 HRS IST			
7.6	Un-Priced bid opening date and Time	14.07.2021 at 15:00 HRS IST					