ENERGISING QUALITY

REPLY TO BIDDER'S PRE-BID QUERIES FOR

SUPPLY OF 3LPE COATED LINE PIPE FOR CITY GAS DISTRIBUTION PROJECT AT KANPUR, UNNAO, BAREILLY & JHANSI GA

TENDER NO. CUGL/VCS/PRC/2022/02
TENDER ID : 54229

TENDER NO : CUGL/VCS/ PRC/2022/02

Owner - CENTRAL UP GAS LIMITED (CUGL)

Consultant - VCS Quality Services Pvt Ltd.

Pre-bid meeting held on 20.10.2022

Date: 31.10.2022

CUGL

Sl. No.	REFERENCE OF BIDDING DOCUMENT No.				Bidder's Query/Clarification	CUGL/VCS Reply
	Tender Sec.No.	Tender Clause No.	Tender Page No.	Tender specification / Clause Description		
COMMERCIAL						
1	ITB	15.2.1	Page No. 32 of 90 (Commercial Vol I of II)	**Evaluation:** Price bid shall be evaluated on totality basis to arrive at the lowest evaluated cost to owner.	Kindly note that our manufacturing range starts from OD 6" pipes. Hence we will be not able to quote for OD 4" pipes. However, considering that the evaluation is on overall value basis, we will not be able to participate in the tender. To improve the competitiveness we would request you to evaluate the bid on item-wise basis. Alternatively, please allow us to outsource the manufacturing of OD 4" bare pipes. We will arrange commitment letter from the manufacturer. We can apply 3LPE coating at our own plant. However, the manufacturer from which we would procure the OD 4" pipes should also be able to submit his bid separately.	Tender conditions shall prevail.
2	IFB	4.0	Page No. 6 of 90 (Commercial Vol I of II)	**Delivery Schedule:** The basis of delivery shall be FOT, CUGL Site/ Store at Kanpur, Bareilly, Unnao & Jhansi.	Bidder request to provide the location wise delivery quantity.	Location wise delivery quantity shall be confirmed at the time of dispatch clearance to the awarded bidder.
3	IFB	5.0	Page No. 6 of 90 (Commercial Vol I of II)	**Bid Validity:** Bid should be valid for 120 days from the date of schedule submission.	Bidder request Bid validity to be around 45-60 days. Prices of steel are very volatile and thus it will be very difficult to order steel at the same price after 6 months.	Tender conditions shall prevail.
4	IFB	8.0	Page No. 9 of 90 (Commercial Vol I of II)	**Mill Qualification:** The bidder shall furnish a certificate for proposed pipe mills along with their bid, which have not been audited by GAIL/BPCL/CUGL or its authorized representatives or, have not supplied pipes to GAIL/BPCL/CUGL of same or higher size and material Grade as quoted for or higher grade during last seven years reckoned from the due date of submission of bid.	Bidder request to submit the Mill capability certificate issued to any PSU project customer in the last 12 months	Tender conditions shall prevail.
5	GCC	41.0	Page No. 54 of 90 (Commercial Vol I of II)	**Repeat Order:** Prices and discounts, if any and other terms & conditions shall also remain valid up to twelve (12) months from the placement of notification of award (Letter of Intent) for the purpose of placement of repeat order up to 100% ordered quantity.	Bidder request CUGL to place repeat order within 2-3 months of issuance of order if awarded. Contract is valid for 1 year and it's very difficult to deliver the repeat order at the same price as of today. Prices of steel being volatile it will be very difficult for us to commit the delivery of the repeat order.	Repeat Order Clause deleted
6	IFB	13.1	Page No. 14 of 90 (Commercial Vol I of II)	**General:** CUGL reserves the right to place the order for part quantity.	Bidder request to place order in full quantities to L1 bidder. Please note that the Tender quantities are very small to supply and if the order is placed in part Quantities then we may face MOQ issue.	Tender conditions shall prevail.
7	IFB	7.0	Page No. 7 of 90 (Commercial Vol I of II)	**Details of Bid Documents** 31.10.2022 till 1500 HRS. IST, on tendering website https://cugl.abcprocure.com	The total time period for bid preparation for this tender is only 15 days and also Diwali holidays are there wherein many of the employees are on leave at least for a week thus, we request for some support in terms of extension. In light of the above, we request you to please extend the Bid Submission Due Date of subject tender by two weeks giving us more time to prepare our most competitive & accomplished bid	Bidder to refer Corrigendum#01
TECHNICAL						
1	Scope	1.0		Three Layer Side Extruded Polyethylene coating conforming to DIN-30670, 1991,	JIL has considered the latest version DIN-30670, 2012 to be followed for 3LPE coating. Kindly confirm.	Confirmed.
2	ACCEPTANCE OF SURFACE PREPARATION	4.3.6		Anchor pattern/roughness profile shall be between 50 to 70 microns.	As per our past experience 50 to 100 microns surface profile is better for 3LPE Coating instead of 50 to 70 µm. So JIL proposes roughness profile shall be 50 to 100 µm. Kindly conform.	Tender conditions shall prevail.
3	Testing requirement During Production Coating	Table 5.3.2 (g)		Epoxy & Adhesive Layer Thickness shall be checked Once in the beginning of Shift or whenever plant restart after stoppage	JIL Purposes that Epoxy & Adhesive Layer Thickness shall be checked once in the beginning of shift every shift and whenever plant restart after any stoppage more than 6 hrs. Kindly Confirm	Tender conditions shall prevail.
4	Testing requirement During Production Coating	Table 5.3.2 (f)		Air Entrapment Test shall be carried out One out of 25 Pipes	JIL Purposes that Air Entrapment Test shall be carried out once per shift instead of one out of 25 pipes. Kindly Confirm	Tender conditions shall prevail.
5	Testing Requirement During Production Coating	Table 5.3.2 (c)		Bond Strength test shall be carried out one out of 25 pipes.	JIL Purposes that Bond Strength test shall be carried out one out of 50 pipes (both ends) instead one out of 25 pipes. Kindly Confirm	Tender conditions shall prevail.
6	BOND STRENGTH TEST	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).	JIL Purposes that Bond Strength test shall be carried out one out of 50 pipes in Middle for each specified temperature as Middle test area shall be repair after each test. Due to this Repair percentage will be increased. Kindly Confirm	Tender conditions shall prevail.
7	BOND STRENGTH TEST	5.3.5		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.	JIL intent to clarify that the cohesive failure in adhesive layer may not be evident when grafted adhesive will used, as per ISO 21809-1:2018 Table 7. There shall be No disbonding between steel and epoxy. JIL confirms that we are going to use grafted adhesive and hence cohesive failure may not be evident. Kindly Consider.	Tender conditions shall prevail.
8	HOLIDAY DETECTION (ONLY EPOXY / EPOXY AND ADHESIVE COATED PIPES)	5.3.12		Pipe coated with both epoxy and adhesive shall be tested at a voltage of 25kV. No holidays are permitted.	JIL clarify that at 25 kV, only 3LPE Coating pipes are tested. No any technical specification allow to do holiday test on adhesive at 25 kV. JIL 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. Kindly Confirm	Tender conditions shall prevail.

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9	SOLUBLE SALT MEASUREMENTS	5.6		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 µg/cm2.	JIL proposes that the salt contamination test shall be performed at one end of each pipe during PQT. Any pipe having salt contamination exceeding 2 µg/cm 2 shall be either re-blast or shall be treated by phosphoric acid wash followed by de-ionized water wash. Kindly confirm.	Tender conditions shall prevail.
10					Please also allow outsoursing for 4"OD Pipes as our manufacturing range is from 6"OD to 20" OD.	Bidder to quote as per provision specified in BEC.
11	Technical Specifications	Cl. No. 9.11.3.3		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. Overall length tolerance shall be (-) Zero and (+) One pipe length to complete the ordered quantity. Table 12 of API Spec 5L stands deleted.	As per rules and regulations of Road and Transport department (RTO). The pipe length above 12m 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 for sample pipes maximum 5% of ordered qty. shall be 10.0m to 11.0m. Kindly confirm.	Tender conditions shall prevail.
12	Technical Specifications	Cl. No. 10.2.8.7		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 measuring instruments/equipment's calibrated from NABL accredited Laboratory. So We shall follow the API (46th edition) requirements regarding to comply the calibration & verification frequency of instruments & equipment. Kindly confirm.	Tender conditions shall prevail.
13	Technical Specifications	Cl. No. 11.2.8 & Note 21 & 22 of MR.		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. Color bands of 50 mm width to be placed at both the ends, inside of Bare Pipes at a distance of 150 mm from the pipe ends and outside of 3LPE Coated Pipes at a distance of 450 mm from the pipe ends. White Band marking inside for all the items	As per MR and your technical spec, we understand that color code band is not required for this tender. Kindly confirmed	Colour band code information shall be provided to the successful bidder(s).
14	ITP of HFW PIPES.	Sr. No. 1.2		WPS, PQR & WPQ.	MPS (Manufacturing Procedure Specification) & Welding Parameter Sheet shall be provided instead of WPS, PQR & WPQ as WPS/PQR is not applicable for HFW process. Kindly Confirm	As per tender condition & applicability in HFW process.
15	ITP of HFW PIPES.	Sr. No. 3.2		Raw material Inspection 1) Mechanical 2) Chemical 3) Impact	We shall do the chemical and mechanical (tensile) test of raw material at our works and all other tests with chemical and mechanical test like as impact, grain size, hardness etc. will be done at raw material supplier premises and review the RMTC at our premises. Kindly confirm	Tender conditions shall prevail.
16	Doc. No. VPC-ITP-PP-2017 3lpe ITP	CS. Cl. 4.2.4.1 & 5.6 of Doc. no.: VCS-SS-PP-2003 Of 3LPE Coating spec. & sr.no. 3.6 & 3.7 of		PHOSPHORIC ACID WASH FOLLOWED BY DE-IONIZED WATER WASH. Any pipe having salt contamination exceeding 2µg/cm2 shall be treated by phosphoric acid wash followed by deionized water wash in accordance with the recommendations of the manufacturer. Sr.no. 3.6 of Doc. No. VCS-PL-ITP-025 3LPE ITP Phosphoric acid wash followed by de-ionized Water wash (As applicable). Sr.no. 3.7 of Doc. No. VCS-PL-ITP-025 3LPE ITP Chromate Treatment (as applicable).	Bidder understands that chemical pre-treatments with phosphoric acid wash followed by de-ionised water wash shall be carried out only in case salt contamination exceeds 2µg/cm2. Please confirm. Please also confirm a chromate treatment is required or not.	Bidder's understanding is correct. Chromate treatment shall be carried out for salt contamination greater than 2µg/cm2.
17	VCS-SS-PP-2003 Of 3LPE Coating spec.	CS. Cl. 4.2.8 of Doc. no.:		**DISPOSAL OF TEST PIPES** On completion of coating application procedure qualification, the Contractor shall completely remove the coating on all remaining intact pipes coated for the purpose of procedure qualification and recycle them for production coating.	Bidder understands that on completion of coating application procedure qualification, only five selected test pipes in which tests shall be conducted, completely remove the coating and recycle them for coating.	Tender conditions shall prevail.
18	Doc. no.: VCS-SS-PP-2003 Of 3LPE Coating spec.	CS. Cl. 5.3.5 & Table 5.3.1(e) & 5.3.2 (c)		**SOLUBLE SALT MEASUREMENTS** One test shall be carried out at each end of each pipe using salt meter (SCM 400 or approved equivalent)	Bidder proposes that salt test shall be carried out one test at one end of each pipe.	Tender conditions shall prevail.
19	Doc. no.: VCS-SS-PP-2003 Of 3LPE Coating spec.	CS. Cl. 5.3.5 & Table 5.3.1(e) & 5.3.2 (c		**Test: Bond Strength** Testing Frequency: One out of 25 Pipes 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).	Bidder proposes that peel test at both ends of the pipes shall be carried out one in every 25 pipes and middle peel test shall be carried out one in every 50 pipes.	Tender conditions shall prevail.
20	Doc. no.: C211036-00-PP-MR-2001	Cl. no.: 21 & 22 of MR		Color bands of 50 mm width to be placed at both the ends, inside of Bare Pipes at a distance of 150 mm from the pipe ends and outside of 3LPE Coated Pipes at a distance of 450 mm from the pipe ends. White Band marking inside for all the items	Please provide colour code for outside of 3LPE coated pipes.	Colour band code information shall be provided to the successful bidder(s).

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21		6.0 Note. 14 9.12.5 9.12.5.6		For butt weld end, bevel shall be in accordance with API specification 5L **Plain ends** During removal of inside burrs at the pipe ends, care shall be taken not to remove excess metal and not to form an inside cavity on bevel. Removal of excess metal beyond the minimum wall thickness as indicated in clause 9.11.3.2 of this specification shall be a cause for re-bevelling. In case root face of bevel is less than that specified, the pipe ends shall be re-bevelled and rectification by filing or grinding shall not be done.	Bidder clarifies that bevel end preparation shall be as per CL 9.12.5.2 of API 5L.	Bidder's proposal/ clarification is accepted.
22		2.0		**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	Bidder understands that: • The latest year edition of ASTM E112 is of 2013.We confirm to follow this latest edition.	Tender conditions shall prevail.
23		9.8.2.2 & 9.8.3		**Pipe body tests** 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 0F) or at a lower test temperature as specified in the Purchase Order / Material Requisition (MR). **Pipe weld and HAZ tests** The average (set of three test pieces) absorbed energy value (Kv1) for each pipe weld and HAZ test shall be as specified in Table 8 of this specification, based upon full-size test pieces at a test temperature of 0°C (32°F) or at a lower test temperature as specified in the Purchase	Bidder Clarifies that CVN absorbed energy value for Pipe body, Weld and HAZ of PSL2 Pipe is considered as per Table 8 of Client Spec.	Bidder's proposal/ clarification is accepted. Impact test shall be carried out at -29°C.
24		10.2.1.2 Table 18		Pipes selected shall be such that one at the beginning of the heat and one at the end of the heat are also represented.	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 conditions shall prevail.
25		10.2.3.3 & 10.2.3.1		**Test pieces for the CVN impact test** In addition to the API Spec 5L requirements, following shall also be applicable: The test pieces shall be prepared in accordance with ASTM A370. Non-flattened test pieces shall be used. The axis of the notch shall be perpendicular to the pipe surface. Charpy V-notch impact testing shall be performed on full-sized test pieces. However, if preparation of full size test piece is not possible, then standard sub-sized test pieces shall be prepared as per ASTM A370. 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]. **General** **Sample Location** / **Type of test** / **Number, Orientation and location of test pieces per sample** (< 219.1 mm (8.625 in)) Pipe body — CVN — 3T90 Seam Weld — CVN — 3W and 3HAZ	Bidder clarifies that sample extraction for 4.5" & 6.625" OD with the specified wall thickness in transverse direction is not feasible. However, non-flattened sub-size specimen can be extracted in longitudinal direction for base metal only. Also as per API 5L Table 22, sample extraction (full size / sub size) for the above specified sizes not specified.	Bidder to note that ower pipe sizes wherein preparation of transverse sub-sized specimen is not possible, CVN impact testing shall be carried out on longitudinal test specimen incompliance of Table-8 & Table-20 of client specification.
26		10.2.8.7		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	Welspun confirms that repeatability of measuring instruments Verification of all measuring instruments shall be done in each shift of 12 hours at final station. Record of same shall be furnished to the appointed representative. However, Welspun clarifies that calibration of dimension measuring equipment shall be done on yearly basis from an external NABL lab.	Bidder's understanding is correct.
27		11.2.4		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.	As permitted in Technical specification, as an alternate marking scheme, Welspun proposes that the use of Laser Marking machine shall also be permitted (permanent in nature) for placing the pipe number on OD surface.	Bidder's understanding is correct.
28		E.5.1.1		In addition to the API Spec 5L requirements, all automatic ultrasonic equipment shall have an alarm device, which continuously monitors the effectiveness of the coupling. The equipment for the automatic inspection shall allow the localization of both longitudinal and transverse defects corresponding to the signals exceeding the acceptance limits of the reference standard. The equipment shall be fitted with a paint spray or automatic marking device and alarm device for areas giving unacceptable ultrasonic indications. All ultrasonic testing equipment shall be provided with recording device. In addition, an automatic weld tracking system shall be provided for correct positioning of the probes with respect to weld centre.	Welspun intend to clarify that Ultrasonic testing for pipe Body will be carried out after pipe forming using ROTO UT (immersion technique) as per Client Spec CL E.11, where seam tracking will not be applicable.	Tender conditions shall prevail.
29		-		General	Bidder has retained Inspection & Test Plan of Electric Welded Line Pipes for information only, however project specific ITP shall be submitted upon receipt of award of Contract.	Bidder to note that minimum inspection and testing requirement of the line pipes shall be governed by attached ITP with Tender. However, vendor shall submit their ITP for approval covering the requirement specified in tender QAP. Same shall be finalized during ITP approval stage after award.

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30	Standard specification for 3LPE coating of line pipes	Cl. 1.0 of Doc. No. VPC-SS-PP-2003, Rev.03		Three Layer Side Extruded Polyethylene coating conforming to DIN-30670, 1991,'Polyethylene Coating for Steel Pipes and Fittings' and the requirements of this specification.	Bidder has considered the latest version DIN-30670, 2012 to be followed for 3LPE coating. Please confirm	Confirmed.
31	Standard specification for 3LPE coating of line pipes	Cl. 3.2.2 of Doc. No. VPC-SS-PP-2003, Rev.03		Epoxy powder shall comply Canadian Standard Association (CSA) Standard Z245.20-02.	Bidder has considered the latest version CAN/CSA Z245.20-2018. Please confirm.	Confirmed.
32	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 3.2.5 (a), Table 5.3.1, Table 5.3.2, 5.3.5		Bond Strength (using Type 2 Test Assembly i.e. Dynamometer	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	Tender conditions shall prevail.
33	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.2.3a.1, 4.3.6 & 5.6		**Cl. 4.2.3a.1: Phosphoric Acid Wash followed by De-ionized Water Wash** The procedure to apply the chemical pre-treatment viz. phosphoric acid wash followed by de-ionized water wash shall be in accordance with the recommendations of the manufacturer and shall result in intended cleaning equirements of this specification. Working solution preparation, maintaining concentration, application procedure including method of spreading, spreading rate, drying times, etc. depending upon the cleanliness/temperature of the incoming pipe and the line speed shall be established. Temperature of the chemical, pipe pre-heat temperature vs. line speed vs. dwell time, rinsing procedure, testing & control, rectificatory measures, drying procedure etc. shall be clearly established during PQT. Also the quality of the de-ionized water shall be established during PQT. **Cl. 4.3.6** Upon Completion of the blasting operations, the Contractor"s quality control supervisor shall inspect the pipes for their compliance to requirements specified below: • Salt content shall be less than 2 µg/cm2 **Cl. 5.6: 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 µg/cm2. Any pipe having salt contamination exceeding 2 µg/cm2 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 understands that the phosphoric acid wash followed by de-ionized water wash shall be carried out only in case salt contamination level of blast cleaned pipe exceeds 2µg/cm2. Please confirm.	Bidder's understanding is correct.
34	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.2.7		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.	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.	Tender conditions shall prevail.
35	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.3.6		Anchor pattern/roughness profile shall be between 50 to 70 microns.	Bidder clarifies; that surface roughness criteria range is very narrow and stringent. Hence, Bidder proposes surface roughness criteria range between 50-100 micron and use of digital surface roughness profile in accordance with ISO 8503-4.	Tender conditions shall prevail.
36	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.3.6		Dust contamination shall be rating max. 2 as per ISO 8502-3.	Test frequency for degree of dust test is not mentioned in specification. Bidder proposes; degree of dust test shall be chcked once per hour.	Bidder's understanding is correct.
37	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.4.2		**Notes:** 4. Unless indicated otherwise in Purchase Order, total thickness corresponding to Normal Type (n) coating shall be applicable.	Bidder understands that FBE thickness minimum 0.2 mm, Adhesive thickness minimmum 0.2 mm & minimum total coating thickness 2.7 mm as per MR.	Bidder's understanding is correct.
38	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 4.4.2		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. 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	Bidder clarifies that pyrometers that are used for PE & adhesive temperature monitoring, are specialized equipment and are calibrated in specialized equip outside laboratory, so we propose to review the outside lab calibration certificate. However the pyrometer shall be checked for errors every shift against a calibrated temperature-measuring instrument.	Tender conditions shall prevail.

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39	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Table 5.3.2 & Cl. 5.3.5		Table-5.3.2 Test: Bond Strength Testing Frequency: One out of 25 Pipes 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).	Bidder clarifies that the test frequency of Middle peel test is very high. Middle peel test area is repaired by patch repair. From technical point of view bond strength and mechanical strength at patch repair portion is lower than other extruded 3LPE coated portion of the pipe. Hence bidder proposes that peel test at both ends of the pipe shall be carried out one in out of 25 pipes and middle peel test shall be carried out one in out of 50 pipes. Please confirm. 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.	Tender conditions shall prevail.
40	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 5.3.5		**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.	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. (Please refer Attachment-1 for declaration of Borealis/Borouge for review & acceptance.)	Tender conditions shall prevail.
41	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 5.3.12		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.	Stringent requirement among DIN EN 60052 VDE 0432-9-2003-06 & DIN 30670 shall be followed for holiday detector compliance.
42	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 5.3.12		**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 conditions shall prevail.
43	Doc. No. VPC-SS-PP-2003, Rev.03, :Standard specification for 3LPE coating of line pipes	Cl. 5.6		**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 µg/cm2. Any pipe having salt contamination exceeding 2 µg/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 conditions shall prevail.
44	Doc. No. VPC-SS-PP-2003, Rev.03 :Standard specification for 3LPE coating of line pipes	21 of C211036-00-PP-MR-2001 & Cl. 8.0		Color bands of 50 mm width to be placed at both the ends, inside of Bare Pipes at a distance of 150 mm from the pipe ends and outside of 3LPE Coated Pipes at a distance of 450 mm from the pipe ends.	Please propose below colour band at one end, opposite to marking end. OD (Inch) / OD (mm) / WT (Inch) / WT (mm) / Colour Band 4.50 / 114.3 / 0.252 / 6.4 / Yellow 6.63 / 168.3 / 0.252 / 6.4 / White	Colour band code information shall be provided to the successful bidder(s).
45	Doc. No.: VCS-SS-PP-2027, Rev. 02 : Standard Specification for Repair of Polythylene Coating	Cl. 1.0		**SCOPE** This specification covers the minimum requirements for materials and equipment, application procedure and inspection of repair of dam aged Polyethylene coatings on steel pipes. This specification is applicable for repairing damages less than 100mm x 100 mm for pipe sizes less than 10", 150mm x 150mm for pipe sizes between 12" to 28" and 300mm x 300mm for pipe sizes more than 28".	Bidder understands that repair generated due to tests shall be excluded from the criteria mentioned in the specification for repair of polyethylene coating of line pipe, Doc. No.: VPC - SS - PL - 0043, Rev. 01. Please confirm. Bidder understands that repair criteria shall be as per Doc. No. VPC-SS-PP-2003, Rev.03 Standard specification for 3LPE coating of line pipes).	Bidder to note that there is no document provided in tender document with Doc. No.: VPC-SS-PL-0043. Tender conditions shall prevail.
46	Doc. VPC-ITP-PP-2017, Rev. 02, Dated: 15.05.2020: Inspection and test plan for 3-layer PE coating of line pipes			Doc. VPC-ITP-PP-2017, Rev. 02, Dated: 15.05.2020: 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. VPC-ITP-PP-2017 is for information only. Bidder confirms to follow Doc. No. VPC-SS-PP-2003, Rev.03 (Standard specification for 3LPE coating of line pipes) for all the testing, test frequency and acceptance criteria except the comments / clarification given in this comments sheet.	Bidder to note that minimum inspection and testing requirement of the 3LPE coating shall be governed by attached ITP with Tender. However, vendor shall submit their ITP for approval covering the requirement specified in tender QAP. Same shall be finalized during ITP approval stage after award.

Note:
1. Bidder to submit reply to bidder's queries along with techno-commercial bid documents duly signed and stamped.
2. All other terms and conditions shall remain unchanged as per tender document.