

**OIL & GAS DEVELOPMENT COMPANY LIMITED**  
**PROCUREMENT DEPARTMENT, ISLAMABAD**  
**FOREIGN SECTION B**

(To be completed, filled in, signed and stamped by the principal)

**ANNEXURE 'A'**

**Material** PROCUREMENT OF VALVES,BENDS,FITTINGS,ANTI CORROSION TAPE , ISOLATING MATERIAL & ACCESS FITTINGS  
**Tender Enquiry No** ASSEMBLY.  
**Due Date** PROC-FB/CB/PE&FD-4615/2020  
**Evaluation Criteria** GROUP WISE

**SCHEDULE OF REQUIREMENT**

Sr No	Description	Unit	Quantity	Unit Price (FOB)	Total Price (FOB)	Unit Price C & F BY SEA	Total Price C & F BY SEA	Deviated From Tender Spec. If Any
<b>Group A</b>								
1	BALL VALVE 3/4", FLANGED END 1500# RTJ, FULL BORE, LEVER OPERATED, API 6D,NACE MR 0175 COMPLIANCE, FIRE SAFE AS PER API 6FA/607, TRIM MATERIAL & BALL :SS 316, BODY : ASTM A216 GR WCB, WITH COMPANION FLANGES, STUD/NUTS AND GASKETS.	Number	80					
2	BALL VALVE 1/2", FLANGED END 1500# RTJ, FULL BORE, LEVER OPERATED, API 6D,NACE MR 0175 COMPLIANCE, FIRE SAFE AS PER API 6FA/607, TRIM MATERIAL & BALL :SS 316, BODY : ASTM A216 GR WCB, WITH COMPANION FLANGES, STUD/NUTS AND GASKETS.	Number	20					
3	GLOBE VALVE, 1", FLANGED END 1500# RTJ, BODY : ASTM A216 GR WCB, TRIM : SS 316, NACE MR 0175 COMPLIANCE, FIRE SAFE AS PER API 6FA/607, ALONGWITH COMPANION FLANGES, STUD/NUTS AND GASKETS	Number	15					
4	BALL VALVE 1", FLANGED END 1500# RTJ, FULL BORE, LEVER OPERATED, API 6D,NACE MR 0175 COMPLIANCE, FIRE SAFE AS PER API 6FA/607, TRIM MATERIAL & BALL :SS 316, BODY : ASTM A216 GR WCB, WITH COMPANION FLANGES, STUD/NUTS AND GASKETS.	Number	140					
5	GATE VALVE 1", FULL BORE, 1500 #, A-105, NPT FEMALE	Number	15					
6	GATE VALVE, 3/4", FULL BORE, 1500 #, A-105, NPT FEMALE	Number	50					
<b>Group B</b>								
7	BEND 4", SCH-160, 90 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	5					
8	BEND 4", SCH-160, 45 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	5					
9	BEND CS 6", SCH-80, 90 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	20					
10	BEND CS 4", SCH-40, 90 DEGREE, 5D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	40					
11	BEND CS 6", SCH-40, 45 DEGREE, 5D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	25					
12	BEND CS 6", SCH-40, 90 DEGREE, 5D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	50					
13	BEND CS 6", SCH-80, 45 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	10					
14	BEND CS 8", SCH-80, 90 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	80					
15	BEND CS 8", SCH-80, 45 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	30					
16	BEND CS 4", SCH-80, 90 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	45					
17	BEND CS 4", SCH-80, 45 DEGREE, 7D, BE , API 5L-X52 NS, PSL2, 12" TANGENT, NACE MR-0175 COMPLIANCE	Number	22					
<b>Group C</b>								
18	R37 316SS OVAL RING GASKET, ASME B16.20 (For 4" Class 900 Flange)	Number	150					

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*M. Muhammad Amir*  
 Muhammad Amir  
 DCE (Mech.) PE & FD  
 Ext. 2810

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**Group C**

19	ASTM A193 B7 STUDS WITH TWO ASTM A194 2H HEX NUTS SIZE M36 X M265 CADMIUM PLATED, ASME B18.2.2	Number	180
20	CONCENTRIC REDUCER 8" X 6", SCH 80 X 160, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	5
21	CONCENTRIC REDUCER 8" X 4", SCH 80 X 160, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	15
22	SWEDGE NIPPLE CONCENTRIC, 3/4" X 1/2", 4" LONG, 6000#, A 106, NPT, ASME B36.10 EDGE PREPARATION AS PER ASME B16.25, BOTH ENDS MALE THREADED	Number	45
23	ELBOW 4",LR, BE, 45 DEG, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	15
24	REDUCING TEE 4"x3"X4", BE, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	10
25	ELBOW 8",LR, BE, 45 DEG, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	20
26	ELBOW 8",LR, BE, 90 DEG , SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	30
27	REDUCING TEE 8"x6"X8", BE, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE	Number	10
28	FLANGE 4-1/16", API 5000 Psi, RTJ, A-105, SCH-160	Number	6
29	ECCENTRIC REDUCER 6" X 4", SCH 80, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	2
30	R49 316SS OVAL RING GASKET, ASME B16.20 (For 8" Class 900 Flange)	Number	80
31	FLANGE 1", 150#, RF, A-105, SW	Number	10
32	ASTM A193 B7 STUDS WITH TWO ASTM A194 2H HEX NUTS SIZE M30xM175 CADMIUM PLATED, ASME B18.2.2	Number	1600
33	ECCENTRIC REDUCER 2" X 4", SCH 80, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	5
34	ASTM A193 B7 STUDS WITH TWO ASTM A194 2H HEX NUTS SIZE M36 X M225 CADMIUM PLATED, ASME B18.2.2	Number	1440
35	R45 316SS OVAL RING GASKET, ASME B16.21 (For 6" Class 900 Flange)	Number	35
36	FLANGE 2", 150#, RF A-105, WN, SCH-80	Number	10
37	BLIND FLANGE, 8", RTJ, CLASS 900, SCH 80, ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	15
38	CONCENTRIC REDUCER 4" X 3", SCH 160, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	20
39	HEX HEAD SOLID PLUG , 1/2" NPT, RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ASME B16.11	Number	30
40	EQUAL TEE 4", BE, SCH 160, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	20
41	THREADOLET,1" on 4", RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	30
42	THREADOLET, 3/4" on 4", RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	60
43	THREADOLET, 3/4" on 4", RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	15

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*M.A.*  
 27/02/2020  
 Muhammad Arif  
 DCE (Mech.) PE & FD  
 Ext. 2810

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PROCUREMENT DEPARTMENT, ISLAMABAD  
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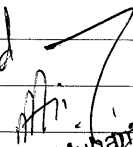
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**Group C**

44	THREDOLET, 3/4" on 6", RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	30
45	EQUAL TEE 8", BE, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 CCOMPLIANCE, ANSI B16.9	Number	30
46	REDUCING TEE 8"x4"X8", BE, SCH 80xSCH 160xSCH80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	5
47	FLANGE, 4", WN, RTJ, CLASS 900, SCH 160, ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	150
48	REDUCING TEE 8"x4"X8", BE, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	5
49	ELBOW 6",LR, BE, 90 DEG, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	20
50	BLIND FLANGE, 6", RTJ, CLASS 900, SCH 80,ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	10
51	FLANGE 3-1/16", API 10,000 Psi, RTJ, A-105, SCH-160	Number	16
52	PIPE NIPPLE 3/4" x 4" LONG, NPT, 6000 PSI A106 GRADE B, ASME B36.10, CONCENTRIC, BOTH ENDS MALE THREADED	Number	90
53	BLIND FLANGE, 4", RTJ, CLASS 900, SCH 80,ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	25
54	BLIND FLANGE, 4", RTJ, CLASS 1500, SCH 80,ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	20
55	WELDOLET 3/4" for 8" LINEPIPE, RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	15
56	CONCENTRIC REDUCER 4" X 6", SCH 160 X 80, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	5
57	CONCENTRIC REDUCER 2" X 4", SCH 80 X 160, BE, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	10
58	PIPE NIPPLE 1/2" x 4" LONG, NPT, 6000 PSI A106 GRADE B, ASME B36.10, CONCENTRIC, BOTH ENDS MALE THREADED	Number	25
59	BLIND FLANGE, 4", RTJ, CLASS 600, SCH 80,ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	20
60	FLANGE, 6", WN, RTJ, CLASS 900, SCH 80, ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	35
61	FLANGE, 4", WN, RTJ, CLASS 900, SCH 80, ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	50
62	ELBOW 4",LR, BE, 90 DEG, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	60
63	EQUAL TEE 4", BE, SCH 80, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ANSI B16.9	Number	50
64	ASTM A193 B7 STUDS WITH TWO ASTM A194 2H HEX NUTS SIZE M30 X M195 CADMIUM PLATED, ASME B18.2.2	Number	420
65	HEX HEAD SOLID PLUG , 3/4" NPT, RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, ASME B16.11	Number	30
66	WELDOLET 2" for 10" LINEPIPE, RATING 6000PSIG, ASTM A860 WPHY 52, NACE MR-0175 COMPLIANCE, MSS SP-97	Number	10
67	FLANGE, 8", WN, RTJ, CLASS 900, SCH 80, ASTM A694 F52, NACE MR 0175 COMPLIANCE, ANSI B-16.5	Number	120
68	ECCENTRIC REDUCER 8" X 4", SCH 80, BE, ASTM A860 WPHY 52,	Number	Page 3

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 Muhammad Anif  
 DCE (Mech.) PE & FD  
 Ext. 2810  
 2020

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**Group C**

NACE MR-0175 COMPLIANCE, ANSI B16.9
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**Group D**

69	THERMOWELL 3/4" for 4" SCH 160 LINEPIPE.	Number	10
70	ANCHOR FLANGE,6", Class 900, SCH 80, A-694, F52, NACE MR 0175 COMPLIANCE, ANSI B16.5	Number	10
71	ANCHOR FLANGE,8", Class 900, SCH 80, A-694, F52, NACE MR 0175 COMPLIANCE, ANSI B16.5	Number	10
72	MONOLITHIC INSULATING JOINT 4" SCH-80 for API 5L X52NS CLASS 900 LINEPIPE, DESIGN CODE: ANSI B31.8 NACE MR-0175 COMPLIANCE	Number	10
73	MONOLITHIC INSULATING JOINT 8" SCH-80 for API 5L X52NS CLASS 900 LINEPIPE, DESIGN CODE: ANSI B31.8, NACE MR-0175 COMPLIANCE	Number	15
74	HIGH PRESSURE ACCESS FITTING ASSEMBLY, FLARE WELD 2" SYSTEM, WITH SOLID PLUG, NON TEE TYPE	Number	15
75	ANCHOR FLANGE,4", Class 900, SCH 80, A-694, F52, NACE MR 0175 COMPLIANCE, ANSI B16.5	Number	5
76	MONOLITHIC INSULATING JOINT 6" SCH-80 for API 5L X52NS CLASS 900 LINEPIPE, DESIGN CODE: ANSI B31.8, NACE MR-0175 COMPLIANCE	Number	10
77	HIGH PRESSURE ACCESS FITTING ASSEMBLY, FLARE WELD 2" SYSTEM, WITH HOLLOW PLUG, NON TEE TYPE	Number	15
78	HIGH PRESSURE ACCESS FITTING ASSEMBLY, FLARE WELD 2" SYSTEM, WITH INJECTION QUILL ASSEMBLY, TEE TYPE	Number	8

**Group E**

79	PVC MECHANICAL PROTECTION TAPE (OUTER WRAP) 100 MM X 10 METERS, MINIMUM THICKNESS 0.5 MM. SPECIFICATIONS AS PER APPENDIX-1	Rolls	550
80	PVC MECHANICAL PROTECTION TAPE (OUTER WRAP) 50 MM X 5 METERS, MINIMUM THICKNESS 0.5 MM. SPECIFICATIONS AS PER APPENDIX-1	Rolls	375
81	VISCOELASTIC ANTI-CORROSION ADHESIVE TAPE (INNER WRAP) 100 MM X 10 METERS, MINIMUM THICKNESS 1.5 MM. SPECIFICATIONS AS PER APPENDIX-1	Rolls	375
82	VISCOELASTIC ANTI-CORROSION ADHESIVE TAPE (INNER WRAP) 50 MM X 5 METERS, MINIMUM THICKNESS 1.5 MM. SPECIFICATIONS AS PER APPENDIX-1	Rolls	250

**Note:** DELIVERY PERIOD FOR THESE ITEMS IS FOUR (04) MONTHS ON C&F BY SEA KARACHI FROM THE DATE OF L/C IS ESTABLISHED.

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 Mi.  
 27/02/2020  
 Muhammad Amir  
 DCE (Mech.) PE & FD  
 Ext. 2810

NOTE:

01: PAYMENT WILL BE MADE AS PER THE FOREIGN PROCUREMENT PAYMENT TERMS AVAILABLE AT OGDCL WEBSITE (TENDERS TAB) EFFECTIVE FROM FEBRUARY 27, 2018.

02: PURSUANT TO TENDER CLAUSE # 2.2, 11.4, 13 & 35.3.2, A BID BOND MUST BE SUBMITTED WITH THE TECHNICAL BID AND IT MUST BE VALID FOR 150 DAYS FROM THE DATE OF OPENING OF THE BID. AMOUNT OF BID BOND FOR EACH GROUP IS MENTIONED BELOW:

GROUP-A: VALVES = US\$ 3,50/-

GROUP-B: BENDS = US\$ 2,000/-

GROUP-C: FITTINGS = US\$ 2,500/-

Group D : ISOLATION MATERIAL & ACCESS FITTINGS ASSEMBLY= US\$ 1,600/-

Group E : ANTI CORROSION TAPE = US\$ 400/-

03. BID BOND, PERFORMANCE BOND ETC. IN SHAPE OF PAY ORDERS (PO) / CASH DEPOSIT RECEIPTS (CDR) / DEMAND DRAFTS (DD) ISSUED BY A PAKISTANI SCHEDULED BANK OR A BRANCH OF A FOREIGN BANK OPERATING IN PAKISTAN (LISTED OR NOT LISTED AT PAKISTAN STOCK EXCHANGE) IRRESPECTIVE OF ITS MARKET PRICE PER SHARE AT PAKISTAN STOCK EXCHANGE SHALL BE ACCEPTED.

HOWEVER, BID BOND AND PERFORMANCE BOND ETC. IN SHAPE OF BANK GUARANTEE SHALL NOT BE ACCEPTABLE WITH THE BANKS WHOSE MARKET PRICE PER SHARE IS QUOTED BELOW THE PAR VALUE AT THE PAKISTAN STOCK EXCHANGE.

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*Arif*

Muhammad Arif  
DCE ( Mech .) PE & FD  
Ext . 2810

**TECHNICAL SPECIFICATIONS  
VISCOELASTIC COATING MATERIAL**

**1. Introduction**

1.1 This specification defines OGDCL minimum requirements for non-crystalline low-viscosity polyolefin (visco elastic) based wrap coating materials to be used for the corrosion protection of steel pipes for a design temperature of 70<sup>o</sup>C. The wrapping materials shall form an effective coating and sealing system. It shall be utilized to coat pipe, joints, service Tees, fittings and other exposed metal surface to protect them from corrosion in conjunction with cathodic protection.

1.2 The coating system shall consist of:

1.2.1 A corrosion protection Inner Wrap tape

1.2.2 A mechanical protection PE Outer Wrap tape

**2. Definitions**

2.1 OWNER – OGDCL, Pakistan

2.2 MANUFACTURER/SUPPLIER/MANUFACTURER – The party which manufacturers and/or supplies equipment, technical documents/drawings and services to perform the duties specified by MANUFACTURER/SUB MANUFACTURER.

**3. Errors or Omissions**

3.1 The review and comment by Owner of any drawings, procedures or documents referred to in this Specification shall only indicate a general requirement and shall not relieve the Manufacturer of his obligations to comply with the requirements of the Standards.

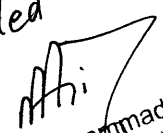
3.2 Any error or omissions noted by Manufacturer shall be immediately brought to the attention of the Owner.

**4. Deviations**

4.1 All deviations to this Specifications, other Specifications or attachments shall be brought to the knowledge of the Owner in the bid. All deviations made during the procurement, design, manufacture, testing and inspection shall be with written approval of the Owner prior to execution of the work. Such deviation shall be shown in the documentation prepared by the Manufacturer. Any technical deviations to the Specifications and its attachments including, but not limited to, the Data Sheets and Narrative Specifications shall be obtained by the MANUFACTURER only through CONCESSION REQUEST format. CONCESSION REQUESTS require the COMPANY's review/approval prior to implementation of the proposed changes. Technical changes implemented prior to the COMPANY approval are subject to rejection.

**5. Conflicting Requirements**

5.1 In the event of conflict, inconsistency or ambiguity between the contract scopes of work, this Specification, National Codes & Standards referenced in this Specification or any other documents, the most stringent requirement shall prevail.

vetted  
MA:   
Muhammad Arif  
DCE (Mech.) PE & FD  
Ext. 2810

## 6. Third Party inspection

6.1 Owner may appoint Inspector's to carry out witness testing of the product manufactured at the manufacturer's facility prior to shipment. Owner may appoint a third party or its own inspector for witnessing of the inspection and test to be carried out at the manufacturer's facility under this specification.

## 7. Quality System

7.1 The MANUFACTURER, which definition shall include Manufacturer's, Sub Manufacturers, and suppliers, shall have in effect at all times a QA/QC program certified according to the latest issue of ISO9000/9001. A copy of the ISO certificate verifying conformance to the ISO standards shall be submitted by MANUFACTURER with his offer. Persons performing quality functions shall have sufficient and well defined authority to enforce quality requirements that initiate, identify, recommend and provide solutions to quality problems and verify the effectiveness of the corrective action.

7.2 A copy of the MANUFACTURER's QA/QC program shall be submitted to the OWNER with its quotation for OWNER'S review and concurrence prior to award. If MANUFACTURER's QA/QC program and facility, where the work is to be performed, is ISO 9000 certified, then only a copy of the MANUFACTURER's ISO 9000 certificate is required. In addition, if MANUFACTURER's facility is ISO certified, MANUFACTURER's QA audit requirements will be waived in favor of ISO 9000 registrar audits, unless the MANUFACTURER's trend analysis program indicates areas of concern.

7.3 The MANUFACTURER shall identify in purchase documents to its SUBMANUFACTURERS all applicable QA/QC requirements imposed by the MANUFACTURER, and shall ensure compliance thereto. On request, MANUFACTURER shall provide objective evidence of its QA/QC surveillance of its SUBMANUFACTURER's activities.

7.4 The MANUFACTURER shall submit certified reports of production tests with the materials delivered.

7.5 The OWNER reserves the right to inspect materials and workmanship at all stages of manufacture and to witness any or all tests. The MANUFACTURER, shall provide the OWNER with a copy of its Manufacturing and Inspection Plan for review and inclusion of any mandatory OWNER witness points 30 days after award but prior to the pre-inspection meeting.

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*M.A.*  
Muhammad Arif  
DCE (Mech.) PE & FD  
Ext. 2810

## **8. CODES, STANDARDS AND SPECIFICATIONS**

8.1 The latest editions of the following Specifications, National or Industry Codes and Standards shall, to the extent specified herein, form a part of this Specification.

8.2 The materials, application, inspection and testing, where relevant, shall meet the requirements of the latest editions of these codes and Standards:

ISO 11357-2      Plastics – Differential scanning calorimetry (DSC) – Part 2: Determination of glass transition temperature and glass transition step height

ISO 11357-3      Plastics – Differential scanning calorimetry (DSC) – Part 3: Determination of of temperature and enthalpy of melting and crystallization

ISO 21809-3:2016 Petroleum and natural gas industries — External coatings for buried or submerged pipelines used in pipeline transportation systems

## **9. Notes:-**

9.1 Bidder must conform to the specified tender terms.

9.2 Brand new and unused Corrosion and Mechanical Pretention Tape. Should be quoted. Reconditioned and refurbished material will not be acceptable.

9.3 The bidder shall clearly indicate names, addresses of manufacturers and country of origin instead of showing group of countries or manufacturers.

9.4 Reservations/clarifications, if any w.r.t tender terms/specifications should be asked by the bidders 7 days prior to the closing date of the tender. }

## **10. GENERAL REQUIREMENT**

Cold applied, Primer-less Visco elastic wrap coating materials based on non-crystalline low viscosity polyolefin tapes with self-healing characteristics along with polymeric tape wrap used for the corrosion prevention of steel pipe network. It should be easily applicable to irregular shape fittings i.e. weld joints, bends and service tees in underground Oil and Gas Piping networks with minimum surface preparation requirement. The coating system shall consist of:

10.1 A corrosion prevention inner wrap, non-toxic that has cold-flow, self-healing, visco-elastic properties.

10.2 A mechanical protection outer wrap that has flexible cold applied tape, self-adhesive and shall have Polyethylene base.

The coating should be compatible with three layers PE coating on steel pipelines.

## **11. Composition:**

11.1 The Viscoelastic Tape should be reinforced with inert fiber matrix. The tape roll must be formulated with a removable plastic film on one sided adhesive part ready for removal during application.

11.2 The properties of the outer wrap for mechanical protection should be such that it should provide additional pressure to support cold flow of the compound tape and self-healing properties of complete coating system.

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Muhammad Arif  
DCE (Mech) PE & FD  
Ext 2810



## 12. APPLICATION

- 12.1 The application should be easier and fast. The coating should be compatible with Asphalt Enamel, Coal tar Enamel and three layers Polyethylene coating on the steel pipelines. The tape should have good resistance to Acids, Alkali, Salts, Fungus, soil Bacteria & Root Pressure and tape should conform to the specifications of this tender.
- 12.2 The tape system shall be applicable in the following ambient conditions:
- Application temperature -10 °C to +70 °C
  - Operating temperature 0 °C to +70 °C

## 13. WRAP DIMENSIONS







The wrapping materials shall be of the dimensions as per SOR.

## 14. TRACK RECORD

- 14.1 The tape wrap system offered shall have a track record of satisfactory performance for a period of at least five years worldwide to at least 05 International customers with at least two from Pakistan. Bidder shall provide details of projects/ customers which have used the specific product. At least five Supply Order copies of international customers with at least two from Pakistan to be attached with bid. The referred customers contact information/email address and letter/certificate of satisfaction should also be attached with the bid.

## 15. CERTIFICATION AND TEST REPORT REQUIREMENT

- 15.1 Bidders shall submit along with his bid, a detailed test report from independent qualified test laboratories listed below confirming that the material supplied to international customers meet the ISO21809-3 standard for viscoelastic coatings and these specifications. Supply Order copy and its test report copy to be submitted with the bid. Failure to submit such test reports with the bid shall be adequate cause for disqualification.
- 15.2 Bidder should also confirm that a detailed test report from one of the independent qualified test laboratories listed below will be provided before shipment of material (in case of award of contract) confirming that the material being supplied meets the ISO21809-3:2016 standard for viscoelastic coatings and these specifications. Failure in submission of this certificate prior to shipment will result in rejection of material.
- 15.3 The following laboratories are among those who are qualified to perform tests and issue certificates of compliance to those technical requirements;

- (a).  Charter coating, Canada. (b).  COT, Haarlem, the Netherlands
- (c).  DVGW-Forschungsstelle (d).  TUV Nord, Europe
- (e).  element Labs (f).  Intertek, Europe/US

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Ext. 2810

**16. STORAGE**

16.1 Material shall be suitable for storage at ambient temperatures ranging up to 55°C with 90% humidity. Under such storage condition of temperature and humidity, the material shall NOT show deterioration of any kind that would render the material unsuitable as an anti-corrosion material.

**17. SAMPLES:**

17.1 The bidder shall submit sample of material offered consisting of one roll of each type and size of tape and third party test reports of the offered product from any laboratory mentioned at Sr. 6 above free of cost with bid. The width and length of tapes and the core size and material and inter leavings of the sample rolls must be in accordance with the specifications given in the tender documents.

**18. Inspection of goods on delivery:**

18.1 In order to ensure that the materials offered is actually as per supplied sample. OGDCL shall have the right at any time to go for Infra-Red Spectroscopy Testing of the material to be supplied or being supplied and have right to reject the supplied lot if found any discrepancy.

18.2 OGDCL will have the right for material inspection of the sample received along with bid offers and of the material supplied against supply order. The results of the test inspections can be compared/certified with Material test report of the supplier (s) in conformance with the applicable standard. OGDCL will have the right to reject the supplied lot if found any discrepancy. The test report of the OGDCL will be firm and final.

18.3 Any deviations reported thereof from field during application shall also be liable of material rejection and the supplier shall be responsible to replace the defective material with the approved material with no financial expenses to OGDCL.

**19. Guarantee:**

19.1 The supplier should submit an under taking confirming that the offered/supplied material "VISCOELASTIC ANTI-CORROSION ADHESIVE TAPE" and "PVC MECHANICAL PROTECTION TAPE" shall perform not less than 20 years.

**20. PACKING AND MARKING:**

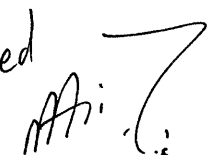
20.1 Tapes shall be packed in weather proof reinforced cartons. Reinforced cartons shall be packed on wooden pallets covered with weather proof covering.

20.2 Each carton and pallet to be clearly marked with the size of tape and the type of tape.

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Ext. 2810

## 21. Technical Specifications (Viscoelastic Inner Wrap)

Property	Test Temp.	Unit	Requirements	Test Method	Value of offered product
Minimum Thickness	23°C	mm	≥1.5mm	ISO 21809-3:2016 Annex B	
Tensile Strength	23°C	N/cm	≥ 40 N/cm	ASTM D-1000	
Density	23°C	g/cm <sup>3</sup>	1.4~1.6	ISO 1183-1	
Glass Transition Temperature		°C	<-30°C	ISO 11357-2	
Melting Point and Crystallization Point		°C	No melting or crystallization point present	ISO 11357-3	
Holiday detection at 5 kV/mm + 5 kV, max. 25 kV			No Holiday	ISO 21809-3:2016 Annex C	
Drip Resistance	T <sub>max</sub> +20°C		No dripping of compound	ISO 21809-3:2016 Annex K	
Adhesion test of reinforced compound with respect to steel and to plant coating before and after thermal ageing and before and after hot water immersion, both for 100 days at T <sub>max</sub> +20°C.	23°C T <sub>max</sub>	N/mm N/mm	≥0.04 ≥0.02 Cohesive Separation mode coverage ≥95%	ISO 21809-3:2016 Annex H, M and I)	
Adhesion test of compound without reinforcement to steel and to plant coating before and after thermal ageing and before and after hot water immersion test both for 100 days at T <sub>max</sub> + 20 °C	23 °C T <sub>max</sub>		The coating shall leave a film of compound on the substrate. There shall be no evidence of adhesive failure	ISO 21809-3:2016 Annex H, M and I)	
Dielectric Strength	23°C	Kv/mm	≥10	ASTM D-149	
Lap Shear Strength	23°C T <sub>max</sub>	N/mm <sup>2</sup> N/mm <sup>2</sup>	≥0.004 ≥0.002 Cohesive failure coverage ≥95%	ISO 21809-3:2016 Annex J	
Specific Electrical Insulation Resistance	23°C	Ω.m <sup>2</sup>	R <sub>s100</sub> ≥10 <sup>8</sup> R <sub>s100</sub> /R <sub>s70</sub> ≥0.8	ISO 21809-3:2016 Annex F	
Moisture Absorption	23°C	%	≤0.03	ASTM D-570	

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## 22. Technical Specifications (Outer Wrap – Polymeric Tape)

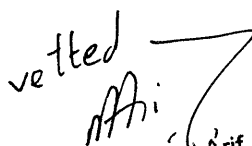
Property	Test Temp	Unit	Requirement	Test Method	Value of Offered Product
Peel Strength of outer wrap to outer wrap.	23°C T <sub>max</sub>	N/mm N/mm	≥ 0.2 ≥ 0.02	ISO 21809-3:2016 Annex-H	
Peel strength (P' <sub>100</sub> / P' <sub>0</sub> ) of outer wrap layer to outer wrap layer after hot water immersion for 100 days at T <sub>max</sub> + 20 °C	T <sub>max</sub> + 20 °C	-	≥ 0.75	ISO 21809-3:2016 Annex L and Annex I	
Elastic Modulus (E <sub>100</sub> /E <sub>0</sub> ) after thermal ageing test for 100 days at T <sub>max</sub> + 20 °C.	T <sub>max</sub> + 20 °C	-	≥ 0.75	ISO 21809-3:2016 Annex M.	
Peel strength ((P' <sub>100</sub> / P' <sub>0</sub> ) of outer wrap layer to outer wrap layer after thermal ageing for 100 days at T <sub>max</sub> + 20 °C	T <sub>max</sub> + 20 °C	-	≥ 0.50	ISO 21809-3:2016 Annex M & I and ISO 527-3:2018	
Moisture Absorption	23°C	%	≤0.03	ASTM D-570	
Impact Resistance		Joule	≥15J,	ISO 21809-3:2016 Annex-D	
Tape thickness			0.5mm +/- 0.055mm		
Tensile strength			>10kg/25mm	ASTM D-1000	
Elongation at Break		%	200-300	ASTM D-1000	
Service temperature			-15 °C to+70 °C		

## 23. Technical Specifications (Complete Coating)

Property	Test Temp	Unit	Requirement	Test Method	Value of Offered Product
Impact Resistance	23 °C	J	≥ 15	ISO 21809-3:2016 Annex-D	
Indentation resistance, pressure	23 °C T <sub>max</sub>	N/mm <sup>2</sup> N/mm <sup>2</sup>	10	ISO 21809-3:2016 Annex E	
Residual thickness		mm	≥ 0.6		
Cathodic disbandment resistance after 28 days	23 °C and T <sub>max</sub>	mm	0 mm, Self healing	ISO 21809-3:2016 Annex G & Annex C	

Note:-

- For the purpose of this specification, T<sub>max</sub> for inner/outer wrap shall be 70°C.
- All test reports of para 21, 22 and 23 to be shared before shipment.

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**Documents submission check List**

Bidder to submit following documents with technical bid for technical evaluation:

Sr.No	Description	Attached (Yes/No)	Page No.
1	Name, address, contact numbers, contact person name, valid email address and website address of Bidder.		
2	Name, address, contact numbers, contact person name, valid email address and website address of Manufacturer.		
3	Authority Letter of bidder in favor of local agent.		
4	Authority Letter of Manufacturer in favor of bidder.		
5	Valid API 5L Certificate with Service Annexure H (API 5L Certificate No. to be mentioned) of Line Pipe Manufacturer for Factory Bends.		
6	Bidder's supply record of quoted material to International E&P companies during last 5 years. (please be specific to provide only the relevant record)		
7	Copies of purchase orders of bidder for supply of quoted material (03Nos.) to International E&P companies.		
8	Copies of third party inspection reports (03 Nos.) of bidder for supply of quoted material (03Nos) to International E&P companies.		
9	Equipment details of Manufacturer.		
10	Audited financial statements for last three years of bidder.		
11	Auditing firm name, address, contact numbers, email address and website address of auditing firm of bidder.		
12	Occupational Health & Safety Management System Certificate of Manufacturer.		
13	Quality Management System Certificate of Manufacturer.		
14	Printed Catalogue of Manufacturer for quoted material.		
15	Business License of Bidder.		
16	Business License of Manufacturer.		
17	Valid API 6D certificate for Ball and Gate Valves Manufacturers.		
18	For globe valves, ASME B 16.34 design standard should be used.		

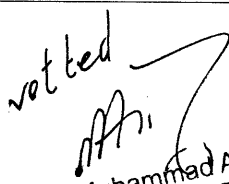
**Note:**

1. Bid documents should be signed and stamped by bidder and should be properly tagged and numbered.
2. Documents submission check list as Annexure "1" duly filled, signed and stamped by bidder should be placed at start of the bid.
3. Bid should be submitted in book binding form.
4. Contents of the authority letter should include the following:
  - a. Contract number.
  - b. Supply of new material as per tender specification.
  - c. Signed / Stamped by manufacturer.
  - d. Contact details (Name, address, telephone numbers, and email).
  - e. Delivery schedule.
  - f. List of documents provided by manufacturer.
5. API 5L scope should include supply of **X52 NS, PSL2**, Annex H pipe.
6. Note : Each document submitted with the bid or in response to clarifications should be in English language or Legally acceptable English Translation clearly readable.

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 AAi  
 Muhammad Arif  
 DCE (Mech.) PE & FD  
 Ext. 2810

**TERMS AND CONDITIONS**

Sr. No.	Description	Bidder's compliance
1	Bid should be submitted in book binding form with page number marked on each page.	
2	The submitted bid should have covering page mentioning detail of documents of the bid along with their page numbers.	
3	Bidders have to quote the material from the manufacturer having manufacturing experience of minimum five years.	
4	Bidder has to provide following documents of their quoted manufacturers. i. Company profile clearly mentioning manufacturing same type of goods for which bid is submitted. ii. Establishment date of company iii. Manufacturing experience iv. Website address: v. Manufacturer's contact person name and his official email address vi. Postal address.	
5	Provision of authority letter from manufacturer in favor of bidder.(if bidder is not the manufacturer of the goods)	
6	Bidder must mention the manufacturer name against each group/item in his bid.	
7	Bidder has to provide the supply record for the last 05 years in following format for each group. i. Name of the company to whom material supplied ii. Year of supply iii. Type of material supplied mentioning sizes and pressure ratings iv. Amount of the consignment v. E-mail and contact No. of the purchaser. vi. Provision of copies of at least 10 Nos. of purchase orders with 02 Nos. of each year from the last 05 years projects as per provided supply record.	
8	Bids of any manufacturer, whose material malfunctioned after installation against any previous contracts awarded by OGDCL, shall be rejected.	
9	All the material has to be compliant with NACE MR 0175. Bidder has to confirm that at the time of delivery, NACE MR 0175 certificate and HIC & SSC tests certificate shall be provided for all the material. Bidder to confirm that NACE MR 0175 shall be embossed on material provided.	
10	Bidder has to provide the valid ISO 9001:2000 quality certificates of the manufacturer.	
11	Bidder to provide the technical literature of manufacturer against each item.	
12	Delivery period shall be Max-120 days after L/c Establishment C & F by sea Karachi.	
13	Bidder has to provide the financial audit report of last 03 years along with technical proposal of bidder and manufacturer.	
14	Bidder to confirm from the manufacturer that all the material shall be brand new and not refurbished.	
15	Bids inclusive of all the documents and correspondence shall be in English language. Other language shall be treated as irrelevant unless the legally acceptable English translation copies are provided in the bid.	
16	Bidder to confirm that material shall be packed prior to shipment in accordance to code and standard.	
17	For the factory bends, bidder must provide valid API-5L certificate with service annexure-H of the line pipe manufacturer.	
18	For Ball and Gate Vales, valid API 6D certificate of manufacturer to be submitted with bid.	
19	Bidder to confirm and provide all the information/documents as asked in Documents Submission List "Annexure-1".	

  
 Muhammad Arif  
 DCE (Mech.) PE & FD  
 Ext. 2810