ऑयल इंडिया लिमिटेड
(भारत सरकार का उद्यम)

(A GOVT. OF INDIA ENTERPRISE)
CONTRACTS DEPARTMENT
PIPELINE HEADQUARTERS
GUWAHATI – 781171, ASSAM
E-mail: contracts_phq@oilindia.in

CONTRACT SECTION, PHQ NOONMATI

Date: 24.04.2025

CORRIGENDUM – 3 FOR OIL TENDER NO. GEM/2025/B/6097857

ALL OTHER TERMS AND CONDITIONS SHALL REMAIN UNCHANGED IN THE ABOVE TENDER EXCEPT THE FOLLOWINGS:

1. THIS CORRIGENDUM IS BEING ISSUED AS PER THE FOLLOWING:

a) Description of item against the SI NO-1 of Price Bid Format of BOQ to be read as given below:

SI NO	Amendment in description for SI NO-1 of Price Bid
1	**Tapping and Stopple (16 inch / 406.44 mm): Complete work of single Hot tapping & stoppling without bypass in 16" NB pipeline of 600# rating** PIPELINE LAYING / INSTALLATION Single Hot Tapping & Stoppling Works (without bypass line) for 600# rating underground pipeline Complete work of carrying out single hot tapping and stoppling as per API 2201 in existing pipeline without bypass line after taking shutdown in the line as per the specifications and other provisions of contract document including mobilizing hot tapping machine & stoppling machine with all its accessories such as stopple cutter, stoppler, stopple housing, pilot drill, cutter holder, sandwich valves, lock-O-ring, LOR plus plug holder, plus plugs, nipple plugs, line stopple plugs, Bun-N-seal elements, pressure equalisation fittings, sealing elements, O-ring etc., cutting tools, locating existing underground pipeline using pipeline locator, exposing pipeline, excavation, removal of 3LPE coating on existing underground pipeline as per SOPs, carrying out UT for selection of appropriate location for hot tapping & stoppling, supply, installation & welding of full encirclement split tees on pipeline, installation of cutter housing, supply & installation of temporary sandwich valve / full bore valve, bleed valves, 3-way spool, vents, pipe, elbows and other

	fittings, etc. for hot tapping & stoppling works, hydrotesting the whole assembly prior to hot tapping, carrying out the hot tapping & stoppling operation to block the flow of product in pipeline section, providing positive isolation for hook-up works, blocking the flow of hydrocarbon product till hook-up work is completed by a separate agency, releasing the stoppling after hook-up works have been completed, safely removing machine & temporary fittings, obtaining all permissions, clearances, Hot work permits from Owner/ concerned authorities, submitting all work procedures, WPS for approval, obtaining approval on all the critical fittings before supply, obtaining approval on hot tapping & stoppling procedure, carrying out procedure qualification tests as per API 1104 appendix B (refer note) & obtaining approval thereon prior to start of works, supply of required manpower, tools tackles, equipment, machinery, resources including: Carrying out NDT (i.e., Magnetic Particle test, Ultrasonic testing, DPT etc. as applicable) of all in-service welding including that of Split Tee Joints, etc. Providing Temporary supports, working platform and arranging all materials required for same. Providing Equalization connection in section to be isolated including supply & fabrication of all fittings, valves, pipe etc. as required Venting of product in section to be isolated. Providing Gas bag during cutting/ Welding of pipe, coupon cutting using hot tap machine Fixing of Lock O ring plus in split tee LOR/ LOR plus flanges through sandwich valve Retrieval of stoppling machine, sandwich valve & and installation of LOR plug . Supply of split tee (stopple tee), 3-way spool, fittings, sandwich valve/ full bore valve, other valves, LOR Plug/ Flange, Gas bags etc. as required for completion of all temporary or permanent works Supply & installation of all Blind Flange/ Plugs/ LOR etc. as required. Arranging safety Equipment CO2, DCP, Fire Hydrant, Hoses etc as required during execution. Coating split tee with heat shrink sleeve compatible with existing coating, coating of all buried valve, flanges, fittings nut & bolts suitably with heat-shrink sleeve, high build coal tar epoxy coating of minimum 2 coats of 500 micron DFT (total). Carrying out Hot-Tap & stoppling work, nitrogen testing including supply of nitrogen cylinders, flexible hose, instruments & manifold, insertion of stopple plug and blocking flow in pipeline section, installation of gas bags, installation of LOR plus plugs, testing, air bleeding, and filling the section with product, clearing the area, backfilling, housekeeping, demobilization, etc. as required for completion of job in all respects.

	Scope shall include carrying out risk assessment, preparing risk mitigation plan, contingency plan, disaster management plan, etc. Scope includes carrying out simulations for in-service welding and submitting for review of MECON/ OIL Carrying out all works as per the requirements of specification, other provisions of contract document and instructions of Engineer-in-charge. Final restoration of area to its original to the entire satisfaction of Engineer-in-charge. Notes: The above quantities correspond to 5 no. river locations as mentioned in scope of work. 4 no. river locations are in West Bengal and 1 no. in Assam The cost of providing full encirclement split tee with accessories, temporary sandwich valve/full-bore ball valve, 3-way spool piece, mobilizing Hot tapping & stoppling machine, MS bolts, gaskets, washers, electrodes, nitrogen, cost of straightening the raw materials, cutting of flats from plates and providing splices, paints, tools, plants etc., as required for the completion of work in totality shall be deemed to be included in the quoted rates. All handling and transport charges of raw materials and fabricated structures including double handling, scaffolding, etc. as required, for completion of work in accordance with time schedule, are deemed be included in the quoted rates. Rates shall include cost of all the supporting equipment required by hot tapping & stoppling vendor such as hydra, crane, excavator, d-shackle, slings, welding machines, UT machine, etc. The contractor shall arrange all the equipment themselves. The rates are inclusive of all the ancillary works required to complete the job but not specifically mentioned above. The rate is inclusive of supply of all the accessories and fittings required for stoppling operation The rates are inclusive of all temporary/ permanent works, machine, unskilled/ semi-skilled/ skilled manpower, equipment, tools, tackles, lifting equipment, supplies of all materials & consumables (such as nitrogen cylinders, etc.) required to complete the job to the satisfaction of EIC. All materials shall be supplied after obtaining approval from MECON/ OIL INDIA Drain, vent & gas bags shall be considered for each stopple head The contractor shall have the option to use already qualified WPS as per API 1104 Appendix B only if it has been qualified for similar or higher diameter within last 1 year. Else they shall be required to qualify WPS as per API 1104 Appendix B. The quoted rates shall be deemed inclusive of all the costs associated with mobilization and demobilization of manpower, equipment, machinery, etc.

b) Revised Format-18 and Format-19 both of BEC/BRC/PQC are required to be submitted by bidder as per the following:

ANNEXURE-A **BEC/BRC/PQC**

FORMAT-18

FORMAT FOR CERTIFICATE BY CHARTERED ACOUNTANT FOR OWNED EQUIPMENT

Project Name: Pipeline Project Date: DD.MM.YYYY

To whom-so-ever it may concern

This is to certify that M/s. **(Bidder's Name),** having their registered office at **(Address)**, is the owner of the equipment mentioned below(or in the attachment) as per our inspection of records/books of accounts/documents of M/s. **(Bidder's Name)** on **Date**

S.No.	Equipment	Make/Model	Capacity	Qty.	Year of Manufacture	Present Location of Equipment

Further, these equipment will be deployed for (Project Name) in case M/s. (Bidder's Name) is awardedwith the job.

Signature of Chartered Accountant :

Place:

Membership No. ~~of CE~~:

Date:

Firm Registration No.:

Note: The above certificate shall be issued in the letter head of Chartered ~~Engineer~~. Accountant

ENGINEER **FORMAT-19**

FORMAT FOR CERTIFICATE BY CHARTERED ~~ACOUNTANT~~ FOR OWNED EQUIPMENT

Project Name: Pipeline Project Date: DD.MM.YYYY

To whom-so-ever it may concern

During our visit to various storage yards and project sites of M/s**(Bidder's Name)**,from **(Date)** to **(Date)**, we have inspected the condition of equipment mentioned below (or in attachment).

We certify that the below mentioned equipment are in good health and working condition presently. Further, these equipment are fit to be deployed in **Project Name.**

S.No.	Equipment	Make/Model	Capacity	Qty.	Year of Manufacture	Present Location of Equipment

Signature:

Place:

Membership No. of CE:

Date:

Firm Registration No.:

Note: The above certificate shall be issued in the letter head of Chartered Engineer.

End of PQC/BEC/BRC

c) **EXTENSION OF SUBMISSION DEADLINE: 30.04.2025 (14:00 HRS.)**
d) **EXTENSION OF TECHNICAL RESPONSE OPENING DATE:30.04.2025 (14:30 HRS.)**
e) **This corrigendum is being issued to incorporate the undermentioned additional clause in the SCC & SOW of the referred tender document as per the following attachment:**

INSPECTION AND TEST PLAN

FOR

ASSORTED PIPES

Rev. No.	Date	Purpose	Prepared	Checked by	Approved by
1	26.02.2020	ISSUED FOR IMPLEMENTATION	Sachin Kumar	Sachin Singhal	A K Gupta

SL.NO.	STAGE	COMPONENT	CHARACTERISTICS	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	SCOPE OF INSPECTION	
									Manufacturer	TPIA/OIL
1.0	Raw material inspection	Plate/Sheet/ Strip	(i)Chemical Composition: CE	Testing	One sample per heat	Relevant Code & Technical Specification	As per code & Technical Specification	Mill test Certificate/ report	H	R
			(ii)Mechanical properties YS,UTS,EL	Testing	One sample per heat	Relevant Code & Technical Specification	As per code & Technical Specification	Inspection report	H	R
2.0	Manufacturing, welding (HFW & SAW)	Pipe	Welding Speed, Current, Voltage, Frequency, Offset, Height of Flash & Trim	Record of Parameter	100% by Vendor	Relevant Code & Technical Specification	Approved WPS	Internal report	P	R
3.0	**Product Testing**									
3.1	Destructive Testing	Pipe	Mechanical Properties	Tensile, Flattening, Reverse Bend, Hardness, Impact & Macro	One sample per heat	Relevant Code & Technical Specification	As per code & Technical Specification	Lab Report	W	W
			Chemical Properties	Chemical Composition						
3.2	Non Destructive Testing	Pipe	Surface & Internal Inspection	UT/RT or as per code & specification	100% by Vendor	Relevant Code & Technical Specification	As per code & Technical Specification	Inspection Report/ Internal Record	W	R

SL.NO.	STAGE	COMPONENT	CHARACTERISTICS	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	SCOPE OF INSPECTION	
									Manufacturer	TPIA/OIL
3.3	Heat Treatment (As Applicable)	Pipe	Stress Relieving, Normalizing, Tempering, Solution Annealing etc.	Temperature Recording	Each Pipe	Relevant Code & Technical Specification	Relevant Code & Technical Specification	HT Chart	P	R
4.0	Hydrostatic test	Pipe	No leak	Visual	Each Pipe	Relevant Code & Technical Specification	As per code & Technical Specification	Inspection Report, Hydraulic Graph	W	W
5.0	Final inspection	Pipe	Straightness, Outer Diameter (Pipe Body, Pipe Ends), Out of Roundness, Thickness, Length, Surface Lamination, Root Face, Bevel Angle	Visual, dimensional	100% by vendor	Relevant Code & Technical Specification	As per code & Technical Specification	Inspection Report	W	W
6.0	Galvanizing (If Applicable)	Pipe	Integrity of Galvanized Coating	---	Each Pipe	Relevant Code & Technical Specification	As per code & Technical Specification	Inspection Report	P	R
	Legends/Notes:									
.	W-witness, R-Review, RW- Minimum 10% witness and 100% Review ,									

CONTRACTOR		**QUALITY ASSURANCE PLAN FOR** STRUCTURAL AND MECHANICAL EQUIPMENT	PROJECT :
ORDER NO. & DATE			PACKAGE NO. :
SUB-CONTRACTOR			PACKAGE NAME : **FASTNERS**
ORDER NO. & DATE			MR NO. : TS No.: **MEC/S/05/21/19**

INSTRUCTIONS FOR FILLING UP :

1. QAP shall be submitted for each of the equipment separately with break up of assembly/sub-assembly & part/component or for group of equipment having same specification.
2. Use numerical codes as indicated for extent of inspection & tests and submission of test certificates & documents. Additional codes & description for extent of inspection & tests may be added as applicable for the plant and equipment
3. Separate identification number with quantity for equipment shall be indicated wherever equipment having same specifications belonging to different facilities are grouped together.
4. Weight in kilograms must be indicated under Column-5 for each item. Estimated weights may be indicated wherever actual weights are not available.

ABBREVIATIONS USED :

CONTR : CONTRACTOR
MFR : MANUFACTURER
H : HOLD
R : REVIEW
W : WITNESS

KEY TO SYMBOLS :

* - If applicable
# - As applicable

CODES FOR EXTENT OF INSPECTION, TESTS, TEST CERTIFICATES & DOCUMENTS :

Code Description
1. Visual
2. Dimensional
3. Fitment & Alignment
4. Physical Test (Sample)
5. Chemical Test (Sample)
6. Ultrasonic Test
7. Magnetic Particle Test (MPI)
8. Radiography Test
9. Dye Penetration Test
10. Metallographic Exam.
11. Welder's Qualification & Weld Procedure Test
12. Approval of Test and Repair Procedure
13. Heat Treatment
14. Pressure Test
15. Leakage Test
16. Balancing
17. Vibration Test

Code Description
18. Amplitude Test
19. Sponge Test
20. Dust/ Water Ingress Test
21. Friction Factor Test
22. Adhesion Test
23. Performance Test/Characteristic Curve
24. No Load/ Free Running Test
25. Load/ Overload Test
26. Measurement of Speeds
27. Accoustical Test
28. Geometrical Accuracy
29. Repeatability and Positioning Accuracy
30. Proving Test
31. Surface Preparation
32. Manufacturer's Test Certificates for bought-out items
33. IBR/ Other Statutory agencies compliance certificate
34. Internal Inspection Report by Contractor

Code Description
35. Hardness Test
36. Spark Test for Lining
37. Calibration
38. Safety Device Test
39. Ease of Maintenance
40. Fire Test (Type Test)
41. Charpy V-Notch Test
42. Operational Torque Test
43. ENP (Electroless Nickel Plating) Execution
44. Painting
45. Anti-Static Test
46. Hydrostatic Double Block & Bleed Test
47. Functional Test
48. Pneumatic Double Block & Bleed Test
49. Proof Test (Type Test)
50. Dielectric Test
51. Bending parameter
52. PMI Check

Code DOCUMENTS:
D1. Approved GA drawings
D2. Information and other reference drg/ stamped drgs released for mfg.
D3. Relevant catalogues
D4. Bill of matl./Item no./ Identification
D5. Matchmarks details
D6. Line/ Layout diagram
D7. Approved erection procedures
D8. Unpriced sub P.O. with specification and amend-ments, if any
D9. Calibration Certificate of all measuring instruments and gauges
D10. X-Ray Reports

EQUIPMENT DETAILS							INSPECTION AND TESTS						Test Certificates & Documents to be submitted to MECON	Acceptance Criteria Standards/ IS/ BS/ ASME/ Norms and Documents	REMARKS/ SAMPLING PLAN
							Raw Material and In-Process Stage Inspection			Final Inspection/ Test by					
Sl. No.	Description (with equipment heading, place of use and brief specifications)	Identification No. (MR Item No.)	Quantity No./M	Unit Weight (Kg)	Manufacturer's Name and Address	Expected Schedule of Final Inspn.	MFR (P)	TPIA/OIL (W)		MFR (P)	TPIA/OIL (RW)				
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.0	FASTNERS		As per SOR/ MTO				1,2,4,5, 6/7#, 13, 35, 41	1,2,4,5, 6/7#, 13, 35, 41	#,	1, 2, 44, 51*	1, 2, 44, 51*		1,2,4,5,6, 13,15, 41,51,D9	D1, D2 , MECON's T.S. & Relevant Standards mentioned therein	100%
					P - Perform, W - Witness R - Riview RW - Random Witness										

For MECON (Stamp & Signature)

For CONTRACTOR/ SUB-CONTRACTOR (Stamp & Signature)

QAP NO. MEC/U999/05/21/M/001/QAP-019F REV 0

SHEET **1 OF 1**

FORM NO. 11.20(4.4)F-09 REV-0

CONTRACTOR		**QUALITY ASSURANCE PLAN FOR** STRUCTURAL AND MECHANICAL EQUIPMENT	PROJECT :
ORDER NO. & DATE			PACKAGE NO. :
SUB-CONTRACTOR			PACKAGE NAME : **GASKETS**
ORDER NO. & DATE			MR NO. : TS No.: **MEC/S/05/21/19**

INSTRUCTIONS FOR FILLING UP :

1. QAP shall be submitted for each of the equipment separately with break up of assembly/sub-assembly & part/component or for group of equipment having same specification.
2. Use numerical codes as indicated for extent of inspection & tests and submission of test certificates & documents. Additional codes & description for extent of inspection & tests may be added as applicable for the plant and equipment
3. Separate identification number with quantity for equipment shall be indicated wherever equipment having same specifications belonging to different facilities are grouped together.
4. Weight in kilograms must be indicated under Column-5 for each item. Estimated weights may be indicated wherever actual weights are not available.

ABBREVIATIONS USED :

CONTR : CONTRACTOR
MFR : MANUFACTURER
H : HOLD
R : REVIEW
W : WITNESS

KEY TO SYMBOLS :

* - If applicable (For RTJ Joints)
# - As applicable (compressibility & Sealability)

CODES FOR EXTENT OF INSPECTION, TESTS, TEST CERTIFICATES & DOCUMENTS :

Code Description
1. Visual
2. Dimensional
3. Fitment & Alignment
4. Physical Test (Sample)
5. Chemical Test (Sample)
6. Ultrasonic Test
7. Magnetic Particle Test (MPI)
8. Radiography Test
9. Dye Penetration Test
10. Metallographic Exam.
11. Welder's Qualification & Weld Procedure Test
12. Approval of Test and Repair Procedure
13. Heat Treatment
14. Pressure Test
15. Leakage Test
16. Balancing
17. Vibration Test

Code Description
18. Amplitude Test
19. Sponge Test
20. Dust/ Water Ingress Test
21. Friction Factor Test
22. Adhesion Test
23. Performance Test/Characteristic Curve
24. No Load/ Free Running Test
25. Load/ Overload Test
26. Measurement of Speeds
27. Accoustical Test
28. Geometrical Accuracy
29. Repeatability and Positioning Accuracy
30. Proving Test
31. Surface Preparation
32. Manufacturer's Test Certificates for bought-out items
33. IBR/ Other Statutory agencies compliance certificate
34. Internal Inspection Report by Contractor

Code Description
35. Hardness Test
36. Spark Test for Lining
37. Calibration
38. Safety Device Test
39. Ease of Maintenance
40. Fire Test (Type Test)
41. Charpy V-Notch Test
42. Operational Torque Test
43. ENP (Electroless Nickel Plating) Execution
44. Painting
45. Anti-Static Test
46. Hydrostatic Double Block & Bleed Test
47. Functional Test
48. Pneumatic Double Block & Bleed Test
49. Proof Test (Type Test)
50. Dielectric Test
51. Bending parameter
52. PMI Check

Code DOCUMENTS:
D1. Approved GA drawings
D2. Information and other reference drg/ stamped drgs released for mfg.
D3. Relevant catalogues
D4. Bill of matl./Item no./ Identification
D5. Matchmarks details
D6. Line/ Layout diagram
D7. Approved erection procedures
D8. Unpriced sub P.O. with specification and amend-ments, if any
D9. Calibration Certificate of all measuring instruments and gauges
D10. X-Ray Reports

EQUIPMENT DETAILS							INSPECTION AND TESTS						Test Certificates & Documents to be submitted to MECON	Acceptance Criteria Standards/ IS/ BS/ ASME/ Norms and Documents	REMARKS/ SAMPLING PLAN
							Raw Material and In-Process Stage Inspection			Final Inspection/ Test by					
Sl. No.	Description (with equipment heading, place of use and brief specifications)	Identification No. (MR Item No.)	Quantity No./M	Unit Weight (Kg)	Manufacturer's Name and Address	Expected Schedule of Final Inspn.	MFR (P)	TPIA (W)	MECON (R)	MFR (P)	TPIA (RW)				
1		3	4	5	6	7	8	9	10	11	12	13	14	15	16
1.0	GASKETS		As per SOR/ MTO				1, 2, 4#, 13*, 35*	1, 2, 4#, 13*, 35*	1, 2, 4#, 13*, 35*	1, 2, 44, 51* & Stamping	1, 2, 44, 51* & Stamping		1,2,4,5,6, 13,15, 41,51,D9	D1, D2 , MECON's T.S. & Relevant Standards mentioned therein	100%
					P - Perform, W - Witness R - Riview RW - Random Witness										

For MECON (Stamp & Signature)

For CONTRACTOR/ SUB-CONTRACTOR (Stamp & Signature)

QAP NO. MEC/U999/05/21/M/001/QAP-019G REV 0

SHEET **1 OF 1**

QUALITY ASSURANCE PLAN
FOR
FITTINGS

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/011A									SCOPE OF INSPECTION	
S. NO.	STAGE	COMPONENT	CHARACTERI-STICS	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
1.	Material	FITTINGS	Fully killed steel	MTC	100%	PO & Std. Spec.	PO QAP & Std. Spec.	MTC	P	R
2.	Inspection	FITTINGS								
i)	Visual Inspection	FITTINGS	Visual Imp.	Visual Internal & External Surface	100%			Inspection Report	P	W
ii)	NDT	FITTINGS	Soundness of Tee & Butt Welds	UT, RT & MPI	100%	PO & Std. Spec.	PO QAP & Std. Spec.	Inspection Report	P	W & Evaluation of RT Films
iii)	NDT	FITTINGS	Forgings	WET MPI	100%	PO & Std. Spec.	To comply with MSS-SP-53	Inspection Report	P	W
iv)	NDT	FITTINGS	End Laminations	UT for Distance of 25 mm on ends.	100%	PO & Std. Spec.	Any lamination than 6.35 mm not accepted	Inspection Report	P	W
v)	Testing Destructive	FITTINGS	Properties of Mech. / Chemical & Impact Test	Chemical by Spectro and other test as per ASTM A - 370	As per Heat / Lot	PO & Spec.	MSS-SP-75	IMP Lab Report	P	W

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/011A									SCOPE OF INSPECTION	
S. NO.	STAGE	COMPONENT	CHARACTERI-STICS	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
3.	Final Inspection	FITTINGS	Dimensional	-	As per lot	PO & Spec.	PO & Spec.	Inspection Report	P	W
4.	Marking	FITTINGS	Identification manufacturer's Name, nominal diameter end thickness malts & Tag No.	By painting	100%	PO & Spec.	-	-	P	W
5.	Certification	FITTINGS	As per EN 10204 Type 3.2	Verification of PO Spec. & QAP	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	TC & Reports	P	C
6.	Release Notes	FITTINGS	Inspection Release Note	Verification of PO Spec. & QAP	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Release Note	H	-

MECON Limited
(A Govt. of India Enterprise)

QUALITY ASSURANCE PLAN
FOR
FITTINGS

PROJECT: HOT TAPPING & STOPPLING WORKS WITHOUT BYPASS OF 5 NO. RIVERS IN THE STATE OF ASSAM & WEST BENGAL
PACKAGE NO. : 05/51/Q7U2/OIL/026
PACKAGE NAME : Fittings
QAP NO.: MEC/Q7U2/05/21/M/001/S026/QAP/B

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/011A									SCOPE OF INSPECTION	
S. NO.	STAGE	COMPONENT	CHARACTERI-STICS	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
7.	Shipping	FITTINGS	Verification of surface coating / type of packing	-	-	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Shipping documents	H	R

For CONTRACTOR/ SUB-CONTRACTOR

(Stamp & Signature)

QUALITY ASSURANCE PLAN
FOR
FLANGES

MECON Limited
(A Govt. of India Enterprise)

QUALITY ASSURANCE PLAN
FOR
FLANGES

PROJECT: HOT TAPPING & STOPPLING WORKS WITHOUT BYPASS OF 5 NO. RIVERS IN THE STATE OF ASSAM & WEST BENGAL
PACKAGE NAME : FLANGES & FITTINGS
QAP NO.: MEC/Q7U2/05/21/M/001/S026/QAP/A

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/025, R-0 WITH AMENDMENTS									SCOPE OF INSPECTION	
S. NO.	STAGE	CHARACTERISTICS	CATEGORY	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
1.	Review of PO / Drg.	Review of PO Doc. / Drg.	Critical	Scrutiny / Verification	Each doc. of P.O.	Appl. Spec. / STD	-	-	W	R
2.	Raw Material	1. Manufacturing process of steel 2. Visual 3. Dimensional 4. Chemical Composition	Critical	Verification with M.T.C. Spectro Analysis	Each Heat Each Heat	Appl. Material Specification / STD	As per tender document / Material Specification / STD	Material Test Certificate and MI Register	W	R
3.	Forgins	1. Reduction Ratio 2. Temperature During Forging 3. Forging Dimensions	Critical	Measurement Optical Pyrometer Measurement	Minimum 1 per size	Standard Manufacturing Procedure	Std. Procedure As per Std. AMSE B16.5	Forging process record / internal Register	W	R
4.	Heat Treatment (as applicable)	Heat Treatment Cycle	Major	Verification of Heat Treatment Cycle	Each Heat / HT Lot	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	T.P.M. Sheet, Heat Treatment Graph	W	W
5.	Mechanical Testing (as applicable)	1. Tensile Test (TS, YS, RA%, EL%) 2. Hardness	Major	Tensile Testing IMPACT Testing	One / HT / Lot / Group	As per Tender Doc. / Material Specification / STD	Std. Procedure As per Tender Doc. / Material Specification / MECON Std	Mechanical Test Report & T.C.	W	W

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/025, R-0 WITH AMENDMENTS									SCOPE OF INSPECTION	
S. NO.	STAGE	CHARACTERISTICS	CATEGORY	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
		3. Charpy V-Notch Test								
6	NDT	1. DP 2. UT 3. MPI	Major	DP Testing Ultrasonic Flaw Detector MPI Testing	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Mechanical Test Report & T.C.	W	W
7.	Final Inspection	Visual & Dimensions	Major	Visual / Measurement	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Dimension Report Format	W	W
8.	Making, Colour Coding, Rust Prevension & Packing	Making, Colour Coding, Rust Prevension & Packing	Major	Visual	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Packing List	W	W
9.	Certification	As per EN 10204 Type 3.2	Major	Verification of PO Spec. & QAP	100%	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	TC & Reports	W	C
10.	Release Notes	Inspection Release Note	Major	Verification of PO Spec. & QAP	100%	As per Tender Doc. / Material Specification /	As per Tender Doc. / Material Specification /	Release Note	H	-

APPLICABLE CODES AND SPECIFICATIONS : MEC/TS/05/21/025, R-0 WITH AMENDMENTS									SCOPE OF INSPECTION	
S. NO.	STAGE	CHARACTERISTICS	CATEGORY	METHOD OF CHECK	QUANTUM OF CHECK	REFERENCE DOCUMENTS	ACCEPTANCE NORMS	RECORD	Vendor	TPI/OIL
						STD	MECON Std			
11.	Shipping	Verification of surface coating / type of packing	Major	-	-	As per Tender Doc. / Material Specification / STD	As per Tender Doc. / Material Specification / MECON Std	Shipping documents	H	R

For CONTRACTOR/ SUB-CONTRACTOR

(Stamp & Signature)

Edition : 1

SPECIFICATION
FOR
SEAMLESS FITTINGS & FLANGES
[SIZE UPTO DN 400 mm (16") NB]

SPECIFICATION NO.: MEC/TS/05/21/025

(OIL & GAS SBU)
MECON LIMITED
DELHI 110 092

CONTENTS

SL.NO.	DESCRIPTION
1.0	SCOPE
2.0	REFERENCE DOCUMENTS
3.0	MANUFACTURER'S QUALIFICATION
4.0	MATERIALS
5.0	DESIGN AND MANUFACTURE
6.0	INSPECTION AND TESTS
7.0	TEST CERTIFICATES
8.0	PAINTING, MARKING AND SHIPMENT
9.0	DOCUMENTATION

1.0 SCOPE

This specification covers the minimum requirements for the design, manufacture and supply of following carbon steel flanges and fittings of size upto DN 400 mm (16") to be installed in onshore pipeline systems handling non-sour hydrocarbons in liquid or gaseous phase including Liquefied Petroleum Gas (LPG) :

- Flanges such as welding neck flanges, blind flanges, spectacle blinds, spacers and blinds etc.

- Seamless fittings such as tees, elbows, reducers, caps, outlets etc.

2.0 REFERENCE DOCUMENTS

2.1 Reference has been made in this specification to the latest edition (edition enforce at the time of issue of enquiry) of the following Codes, Standards and Specifications :

ASME B31.4	-	Pipeline Transportation Systems for Liquid Hydrocarbons and Other Liquids
ASME B31.8	-	Gas Transmission and Distribution Piping Systems
ASME B16.5	-	Pipe Flanges and Flanged Fittings
ASME B16.9	-	Factory Made Wrought Steel Butt Welding Fittings
ASME B 16.11	-	Forged Steel Fittings, Socket Welding and Threaded
ASME B 16.48	-	Steel Line Blanks
ASME Sec VIII	-	Boiler and Pressure Vessel Code - Rules for Construction of Pressure Vessels
ASME Sec IX	-	Boiler and Pressure Vessel Code - Welding and Brazing Qualifications
ASTM A 370	-	Standard Test Methods and Definitions for Mechanical Testing of Steel Products.
MSS-SP-25	-	Standard Marking System for Valves, Fittings, Flanges and Unions

MSS-SP-97 - Forged Carbon Steel Branch Outlet Fittings - Socket Welding, Threaded and Butt welding Ends.

2.2 In case of conflict between the requirements of this specification and the requirements of above referred Codes and Standards, the requirements of this specification shall govern.

3.0 **MANUFACTURER'S QUALIFICATION**

Manufacturer who intends bidding for fittings must possess the records of a successful proof test, in accordance with the provisions of ASME B16.9 / MSS-SP-75 as applicable.

4.0 MATERIAL

4.1 The Carbon Steel used in the manufacture of flanges and fittings shall be fully killed. Material for flanges and fittings shall comply with the material standard indicated in the Purchase Requisition. In addition, the material shall also meet the requirements specified hereinafter.

4.2 Each heat of steel used for the manufacture of flanges and fittings shall have Carbon Equivalent (CE) not greater than 0.45 calculated from check analysis in accordance with the following formula:

$$CE = C + \frac{Mn}{6} + \frac{Cr + Mo + V}{5} + \frac{Ni + Cu}{15}$$

Carbon contents on check analysis shall not exceed 0.22%.

4.3 For flanges and fittings specified to be used for Gas service or LPG service, Charpy V-notch test shall be conducted on each heat of steel. Unless specified otherwise, the Charpy V-notch test shall be conducted at 0°C in accordance with the impact test provisions of ASTM A 370 for flanges and fittings.

The average absorbed impact energy values of three full-sized specimens shall be 27 joules. The minimum impact energy value of any one specimen of the three specimens analysed as above, shall not be less than 22 Joules.

When Low Temperature Carbon Steel (LTCS) materials are specified for flanges and fittings in Purchase Requisition, the Charpy V-notch test requirements of applicable material standard shall be complied with.

4.4 For flanges and fittings specified to be used for Gas service or LPG service, Hardness test shall be carried out in accordance with ASTM A 370. Hardness testing shall cover at least 10% per item, per size, per heat, per manufacturing method. A full thickness cross section shall be taken for this purpose and the maximum hardness shall not exceed 248 HV_{10}.

4.5 In case of RTJ (Ring Type Joint) flanges, the groove hardness shall be minimum 140 BHN. Ring Joint flanges shall have octagonal section of Ring Joint.

5.0 DESIGN AND MANUFACTURE

5.1 Flanges such as weld neck flanges and blind flanges shall conform to the requirements of ASME B16.5.

5.2 Spectacle blind and spacer & blind shall conform to the requirements of ASME B 16.48.

5.3 Fittings such as tees, elbows, reducers, etc. shall be seamless type and shall conform to ASME B16.9 for sizes DN 50 mm (2") to DN 400 mm (16") (both sizes included) and ASME B 16.11 for sizes below ON 50 mm (2").

5.4 Fittings such as weldolets, sockolets, nippolets, etc. shall be manufactured in accordance with MSS-SP-97.

5.5 Type, face and face finish of flanges shall be as specified in Purchase Requisition.

5.6 Flanges and fittings manufactured from bar stock are not acceptable.

5.7 All butt weld ends shall be bevelled as per ASME B 16.5 / ASME B 16.9 / MSS-SP-97 as applicable.

5.8 Repair by welding on flanges and fittings is not permitted.

5.9 Stub-in or pipe to pipe connection shall not be used in the manufacture of tees. Tees shall be manufactured by forging or extrusion methods. The longitudinal weld seam shall be kept at 90° from the extrusion. Fittings shall not have any circumferential joint .

6.0 INSPECTION AND TESTS

6.1 The Manufacturer shall perform all inspections and tests as per the requirement of this specification and the relevant codes, prior to shipment at his works. Such inspections and tests shall be, not but limited to the following :

a) All flanges and fittings shall be visually inspected. The internal and external surfaces of the flanges and fittings shall be free from any strikes, gauges and other detrimental defects.

b) Dimensional checks shall be carried out on finished products as per ASME B16.5 for flanges, ASME B16.48 for spacers and blinds and ASME B16.9 / MSS-SP-97 as applicable for fittings and as per this specification.

c) Chemical composition and mechanical properties shall be checked as per relevant material standards and this specification, for each heat of steel used.

d) All finished wrought weld ends subject to welding in field, shall be 100% tested for lamination type defects by ultrasonic test. Any lamination larger then 6.35 mm shall not be acceptable.

6.2 Purchaser's Inspector reserves the right to perform stage wise inspection and witness tests, as indicated in clause 6.1 of this specification at Manufacturer's Works prior to shipment. Manufacturer shall give reasonable notice' of time and shall provide, without charge, reasonable access and facilities required for inspection, to the Purchaser's Inspector.

Inspection and tests performed / witnessed by Purchaser's Inspector shall in no way relieve the Manufacturer's obligation to perform the required inspection and tests.

7.0 TEST CERTIFICATES

Manufacturer shall furnish the following certificates:

a) Test certificates relevant to the chemical analysis and mechanical properties of the materials used for manufacture of flanges and fittings as per relevant standards and this specification.

b) Test Reports on non destructive testing.

c) Certificates for each fitting stating that it is capable of withstanding without leakage a test pressure, which results in a hoop stress equivalent to 100 % of

the specified minimum yield strength for the pipe with which the fitting is to be attached without impairment of serviceability.

8.0 PAINTING, MARKING AND SHIPMENT

8.1 After all inspection and tests required have been carried out; all external surfaces shall be thoroughly cleaned to remove grease, dust and rust and shall be applied with standard mill coating for protection against corrosion during transit and storage. The coating shall be easily removable in the field.

8.2 Ends of all fittings and weld neck flanges shall be suitably protected to avoid any damage during transit. Metallic or high impact plastic bevel protectors shall be provided for fittings and flanges. Flange face shall be suitably protected to avoid any damage during transit.

8.3 All flanges and fittings shall be marked as per applicable dimension / manufacturing standard.

9.0 DOCUMENTATION

Documentation to be submitted by Manufacturer to Company is summarized below. Number of Copies (Hard copies / soft copies etc.) shall be as indicated in CONTRACT document / Material Requisition.

9.1 At the time of bidding, Manufacturer shall submit the following documents:

a) Reference list of previous supplies of similar fittings of similar specification.
b) Clausewise list of deviations from this specification, if any.
c) Brief description of the manufacturing and quality control facilities at Manufacturer's works.
d) Manufacturer's qualification requirement as per clause 3.0 of this specification.
e) Quality Assurance Plan (QAP) enclosed with this tender duly signed, stamped and accepted.

9.2 Prior to shipment, the Manufacturer shall submit test certificates as listed in clause 7.0 of this specification.

9.3 All documents shall be in English Language only.

PROCESS & PIPING DESIGN SECTION
MECON LIMITED
DELHI 110 092

मेकॉन

TECHNICAL SPECIFICATION
FOR
ASSORTED PIPES

SPECIFICATION NO. : MEC/TS/05/62/59A, R-0

CONTENTS

Sl.No.	Description	Page No.
1.0	GENERAL	2
2.0	IBR PIPES	4
3.0	HYDROSTATIC TEST	5
4.0	MARKING & DESPATCH	5
ANNEXURE-I :	HYDROSTATIC TEST	7

Prepared By :	Checked By :	Approved By :

1.0 GENERAL

1.1 All pipes and their dimensions, tolerances, chemical composition, physical properties, heat treatment, hydrotest and other testing and marking requirements shall conform to the latest codes and standards specified in the Material Requisition (MR). Deviation(s), if any, shall be clearly highlighted in the offer.

1.2 Testing

1.2.1 Test reports shall be supplied for all mandatory tests as per the applicable material specifications. Test reports shall also be furnished for any supplementary tests as specified in the MR & Clauses 1.10 & 1.11.

1.2.2 Material test certificates (physical property, chemical composition & treatment report) shall also be furnished for the pipes supplied.

1.3 Manufacturing Processes

1.3.1 Steel made by Acid Bessemer Process shall not be acceptable.

1.3.2 All longitudinally welded pipes other than IS:3589 should employ automatic welding.

1.4 Pipe shall be supplied in single or double random length of 4 to 7 and 7 to 14 meters, respectively.

1.5 a) Seamless and E.R.W. pipes shall not have any circumferential seam joint in a random length. However, in case of E.FS.W. pipe, in one random length one welded circumferential seam of same quality as longitudinal weld is permitted. This weld shall be at least 2.5 m from either end. The longitudinal seams of the two portions shall be staggered by 90°. Single random length in such cases shall be 5 to 7m.

b) Unless otherwise mentioned in the respective material code, E.FS.W. pipes < 36" shall not have more than one longitudinal seam joint and E.FS.W. pipes ≥ 36" shall not have more than two longitudinal seam joints.

1.6 Pipe with screwed ends shall have NPT external taper pipe threads conforming to ASME/ ANSI B1.20.1 upto 1.5" NB & IS:554 for 2" to 6" NB.

1.7 Pipe with bevelled ends shall be in accordance with ASME B16.25. Weld contours shall be as follows:

Material	Wall Thickness	Weld Contour
Carbon Steel (Except Low Temp. Carbon Steel)	Upto 22mm	Figure 2 Type A
	> 22mm	Figure 3 Type A
Alloy Steel Stainless Steel & Low Temp. Carbon Steel	Upto 10 mm	Figure 4
	>10 mm & Upto 25 mm	Figure 5 Type A
	> 25 mm	Figure 6 Type A

1.8 Gavanished pipes shall be coated with zinc by hot dip process conforming to IS:4736/ ASTM A 153.

1.9 All austenitic stainless steel pipes shall be supplied in solution annealed condition.

1.10 **I.G.C. Test for Stainless Steels**

1.10.1 For all austenitic stainless steel pipes, intergranular corrosion test shall have to be conducted as per following:

ASTM A262 practice " B " with acceptance criteria of "60 mils/ year (max.)"

OR

ASTM 262 practice " E" with acceptance criteria of " No cracks as observed from 20X magnification" & "Microscopic structure to be observed from 250X magnification".

1.10.2 When specifically asked for in MR for high temperature application of some grades of austenitic stainless steel (eg.SS 309, 310, 316, 316H etc.), ASTM A262 practice "C" with acceptance criteria of "15 mils/ year (max.)" shall have to be conducted.

1.10.3 For the IGC test as described in 1.10.1 & 1.10.2, two sets of samples shall be drawn from each solution annealing lot; one set corresponding to highest carbon content and the other corresponding to the highest pipe

thickness. When testing in is conducted as per Practice "E", photograph of microscopic structure shall be submitted for record.

1.11 All welded pipes indicated as 'CRYO' & 'LT' in MR shall be impact tested per requirement and acceptance criteria of ASME B31.3. The impact test temperature shall be –196° C & -45° C for stainless steel and carbon steel, respectively, unless specifically mentioned otherwise in MR.

1.12 Pipes under 'NACE' category shall meet the requirements given in MR-01-75.

1.13 Specified heat treatment for carbon steel & alloy steel and solution annealing for stainless steel pipes shall be carried out after weld repairs. Number of weld repairs at the same spot shall be restricted to maximum two by approved repair procedure.

1.14 For black or galvanised pipes to IS:1239, the minimum percentage of elongation shall be 20%.

2.0 IBR PIPES

2.1 IBR Documentation

2.1.1 Pipes under purview of IBR shall be accompanied with IBR certificate original in Form IIIA, duly approved and countersigned by IBR authority/ local authority empowered by the Central Boiler Board of India. Photocopy of the original certificate duly attested by the local boiler inspector where the supplier is located is the minimum requirement for acceptance.

2.1.2 For materials 1 ¼ Cr- ½ Mo (ASTM A335 Gr. P11/ A691 Gr. 1 ¼ Cr) & 2 ¼ Cr-1Mo (ASTM A335 Gr.P22/ A691 Gr. 2 ¼ Cr.), from III-A approved by IBR shall include the tabulation of E_t , S_c & S_r values for the entire temperature range given below. E_t , S_c & S_r values shall be such that throughout the temperature range

$$\left.\begin{array}{l} E_t / 1.5 \\ S_r / 1.5 \\ S_c \end{array}\right\} \geq S_a$$

where,

S_A : Allowable stress at the working metal temperature.

E_t : Yield point (0.2% proof stress at the working metal temperature).

S_c : The average stress to produce elongation of 1% (creep) in 1,00,000 hrs at the working metal temperature.

S_r : The average stress to produce rupture in 1,00,000 hrs. at the working metal temperature and in no case more than 1.33 times the lowest stress to produce rupture at this temperature.

S_A (psi)	Temperature (°F)											
Material	500	600	650	700	750	800	850	900	950	1000	1050	1100
A335 Gr. P11	*17200*	*16700*	*16200*	*15600*	*15200*	*15000*	*14500*	*12800*	*9300*	*6300*	*4200*	*2800*
A 691 Gr. 1½ Cr	*18900*	*18300*	*18000*	*17600*	*17300*	*16800*	*16300*	*15000*	*9900*	*6300*	*4200*	*2800*
A335 Gr. P2/ A691 Gr. 2 ¼ Cr	*17900*	*17900*	*17900*	*17900*	*17900*	*17800*	*14500*	*12800*	*10800*	*7800*	*5100*	*3200*

Note: S_A values given above are as per ASME B31.3-1999. Values shall be as per the latest edition prevailing.

2.2 For carbon steel pipes under IBR, the chemical composition shall conform to the following;

Carbon (max.) : 0.25%
Others (S, P, Mn) : As prescribed in IBR regulation.

The chemical composition as indicated in this clause is not applicable for pipes other than IBR services.

3.0 HYDROSTATIC TEST

Refer Annexure – I.

4.0 MARKING AND DESPATCH

4.1 All pipes shall be marked in accordance with the applicable codes, standards and specifications. In addition, the purchase order number, the item code & special conditions like "IBR", " CRYO", "NACE", etc., shall also be marked.

4.2 Pipes under "IBR", "CRYO", & "NACE" shall be painted in red stripes, light purple brown stripes & canary yellow stripes, respectively, longitudinally throughout the length for easy identification.

4.3 Paint or ink for marking shall not contain any harmful metal or metallic salts such as zinc, lead or copper which cause corrosive attack on heating.

4.4 Pipes shall be dry, clen and free from from moisture, dirt and loose foreign materials of any kind.

4.5 Pipes shall be protected from rust, corrosion and mechanical damage during transportation, shipment and storage.

4.6 Rust preventive used on machined surfaces to be welded shall be easily removable with a petroleum solvent and the same shall not be harmful to welding.

4.7 Both ends of the pipe shall be protected with the following material:

Plain end	:	Plastic cap
Bevel end	:	Wood, Metal or Plastic cover
Threaded end	:	Metal or Plastic threaded cap

4.8 End protectors to be used on bevelled ends shall be securely and tightly attached with belt or wire.

4.9 Steel end protectors to be used on galvanised pipes shall be galvanised.

ANNEXURE–I

3.0 HYDROSTATIC TEST

3.1 All pipes shall be hydrostatically tested.

3.2 The mill test pressure shall be as follows:

3.2.1 **Seamless, E.R.W. & Spiral Welded**

a) Carbon Steel

Material Standard	Test Pressure Standard
ASTM A 106 Gr. B	ASTM A 530
API 5L Gr. B, Seamless	API 5L
API 5L, E.R.W.	API 5L
API 5L, Spiral	API 5L
ASTM A333 Gr.3 & 6, Seamless	ASTM A 530
ASTM A 333 Gr. 3 & 6, E.R.W.	ASTM A 530

b) Seamless Alloy Steel

Material Standard	Test Pressure Standard
ASTM A335 GR.P1, P12, P11, P22, P5, P9	ASTM A 530
ASTM A268 TP 405, TP410	ASTM A530

c) Seamless Stainless Steel

Material Standard	Test Pressure Standard
ASTM A312 Gr.TP304, 304L, 304H, 316, 316L, 316H, 321, 347	ASTM A 530

d) Seamless Nickel Alloy

Material Standard	Test Pressure Standard
ASTM B161 UNS No.2200	ASTM B161
ASTM B165 UNS No.4400	ASTM B165
ASTM B167 UNS No.6600	ASTM B167
ASTM B407 UNS No.8800	ASTM B407

e) Welded Nickel Alloy

Material Standard	Test Pressure Standard
ASTM B725 UNS No.2200, 4400	ASTM B725
ASTM B517 UNS No.6600	ASTM B517
ASTM B514 UNS No.8800	ASTM B514

3.2.2 Electric Fusion Welded

a) Carbon Steel & Alloy Steel E.FS.W. (16" & above)

Material Standard	Test Pressure Standard
API 5L Gr.B ASTM A 671 Gr.CC65, 70 (Cl.32) ASTM A 672 Gr.C60, 65, 70 (Cl.12,22) ASTM A 671 Gr.CF60, 65, 66, 70 (Cl.32) ASTM A 691 Gr. ½ Cr, 1Cr, 1 ¼Cr, 2 ¼Cr, 5Cr, 9Cr (Cl.42)	P=2ST/ D S=90% of SMYS (except for API 5L Gr.B) S=85% of SMYS for API 5L Gr.B T=Nominal Wall Thickness D=O.D. of Pipe

b) Stainless Steel E.FS.W. (2" to 6")

The hydrostatic test pressure in kg/ cm^2 for the following materials shall be as given below:

Material Gr.1: ASTM A312 TP304/ 304H/ 316/ 316H/ 321/ 347 welded

Material Gr.2: ASTM A312 TP 304L/ 316L welded

Size	Pipe Schedule: S10		Pipe Schedule : S40		Pipe Schedule : S80	
	Material Gr.1	Material Gr.2	Material Gr.1	Material Gr.2	Material Gr.1	Material Gr.2
2"	100	80	155	130	230	190
3"	80	60	155	130	230	190
4"	80	50	155	130	230	190
6"	65	35	90	75	155	130

c) Stainless Steel E.FS.W. (8" and above).

Material Standard	Test Pressure Standard
ASTM A358 TP 304L, 304, 304H, 316L, 316, 316H, 321, 347 (Classes 1, 3 & 4)	P = 2ST/D S = 85% of SMYS T = Nominal Wall Thickness D = O.D. of Pipe
ASTM A358 TP 304L, 304, 304H, 316L, 316, 316H, 321, 347 (Classes 2 & 5)	P = 2ST/D S = 72% of SMYS T = Nominal Wall Thickness D = O.D. of Pipe

3.2.3 Carbon Steel Pipes to IS Standards

Material Standard	Test Pressure Standard
IS :1239	IS :1239
IS :3589	IS :3589

AMENDMENT TO TECHNICAL SPECIFICATION

AMMENDMENT TO TECHNICAL SPECIFICATION FOR ASSORTED PIPES No. MEC/TS/05/62/59A

1) Refer Page no. 4 of 9:

Clause No. 2.1.1 shall be read as "Pipes under purview of IBR shall be accompanied with IBR certificate original in Form IIIA/ IIID, duly approved and countersigned by IBR authority/ local authority empowered by the Central Boiler Board of India. Photocopy of the original certificate duly attested by the local boiler inspector where the supplier is located is the minimum requirement for acceptance."

1			**23-04-2025**
2	**REPLIES TO PRE-BID QUERIES- OIL INDIA - GeM ID-GEM/2025/B/6097857 Hiring Services for Single Hot Tapping & Stoppling Works (without bypass line) for 600# rating underground pipeline**		
3	S. No.	Pre-bid queries	Reply
4	1	Kindly provide us the MOC and technical specification of WNRF Flanges, BLRF Flanges, metallic Gaskets, Fasteners, Pipe, and Plates.	MOC shall be as suitable & matching to pressure rating of each pipeline. In general, MOC shall be as follows: a. Flanges (WNRF) - ASTM A 694 Gr. F-52 (Charpy), 600#, End thickness to match with split tee thickness b. Blind Flanges (BLRF)- ASTM A105, 600# c. Gasket- Spiral 600#, Sp. Wnd SS316+Graphite Filled, B-16.20, ANSI 16.5 d. Bolts- A 193 Gr. B7 (Galv.), B-18.2 e. Nuts- A 194 Gr. 2H (Galv.), B-18.2 f. No pipe is envisaged as no by-pass is required. However, in case of any requirement, it shall match with existing pipeline
5	2	All the raw materials required for Fabrication of Line stop fittings & TOR fittings will be as per 3.1 OR 3.2 Certification. Kindly confirm	All the raw materials shall be as per 3.2 certification
6	3	Is there is any requirement of TPI inspection for the Line stop Fittings at our works. If yes kindly provide TPI details.	Contractor shall appoint anyone of the following TPIA for inspection purpose, wherever required as per tender document. Contractor has to propose minimum 4 nos. of below listed agencies to be approved by MECON: i. M/s. RINA India Pvt. Ltd. ii. M/s. Dr. Amin Controller Pvt. Ltd. iii. M/s. Germanischer Llyod Industrial Services GmbH (DNV GL- Oil & Gas) iv. M/s. TÜV SÜD South Asia Pvt. Ltd. v. M/s. IRCLASS Systems and Solutions Private Limited vi. M/s. Gulf Llyods Industrial Services (India) Pvt. Ltd. vii. M/s. TUV India Private Limited viii. M/s. TÜV Rheinland (India) Pvt. Ltd. ix. M/s. Bureau Veritas (India) Private Limited Apart from inspection by TPIA, inspection may also be performed by MECON / OIL'spersonnel.
7	4	Does OIL have any specific requirement of welding electrodes? If yes kindly provide the Details.	Only low hydrogen electrodes (such as xx18 type etc) of approved brands may be used with prior approval from OIL/ MECON.
	5	Kindly provide approved vendor list for WNRF Flanges, BLRF Flanges, metallic Gaskets, Fasteners, Pipe, and Plates.	1. For procuring bought out items from vendors other than those listed in tender/ registered with OIL/ MECON, the same may be acceptable subject to the following: - a) The vendor/ supplier of bought out item(s) is a manufacturer/ supplier of said item(s) for intended services and the sizes being offered is in their regular manufacturing/ supply range. b) The vendor / supplier should not be in the Holiday list of OIL / MECON / other PSU. The bidder should enclose documentary evidences i.e., PO copies, Inspection Certificate etc. for the above for approval of vendors. 2) For any other item(s) for which the vendor list is not provided, bidders can supply those item(s) from vendors/ suppliers who have earlier supplied same item(s) for the intended services in earlier projects and the item(s) offered is in their regular manufacturing/ supply range.
	6	Kindly provide the delivery time for supply of Line stop fittings after approvals, as we require min if 8-10 weeks for 3.1 Certification & 12-14 weeks for 3.2 certification.	No separate delivery time for supply. However, contractor to maintain timeline of complete work including supply as defined in tender document.
	7	Kindly provide the QAP for the Line stop tees, Flanges, metallic Gaskets, and Fasteners.	No separate QAP for line stop tees. QAP for other items is attached.
	8	Kindly confirm the scope Hook Up welding after the line stopple works.	Hook-up welding shall be done by separate vendor engaged by OIL. Please note all civil works (related to stopple) and works related to stopple, as already mentioned in the tender will be in the scope of the stopple contractor.
	9	Kindly Confirm the scope of product Draining OR Product collection and Transportation to Safe location.	Product draining or product collection shall be done by separate vendor engaged by OIL
	10	Kindly Provide the Pipeline parameters such as Design Pressure, Design temperature, design code, Corrosion allowance, and Design factor, MOC of Pipeline & thickness of Pipeline.	Already available in the tender document.
	11	Kindly provide the hot tap data sheet.	Already available in the tender document.
	12	Is there any scope of Cold cutting works After Line stopple for removal of Dead Section?	Not in the scope of present tender. Shall be done through separate contractor
	13	What is the scope of 3- way spool piece in single Line stopple works without bypass?	No scope of 3-way spool. The same may be considered deleted

14	Kindly confirm the scope of providing Work permit, Right of Use or Right of Way of land/field and any kind of compensation as/if applicable.	Work permit from O&M deptt of OIL is to be arranged by Contractor. No scope of ROU/ ROW compensation. ROU/ ROW shall be arranged by OIL. However, contractor may have to arrange access to ROU as required. Further, contractor may have to arrange temporary storage for contractor supplied bought-out items.
15	Kindly confirm the scope of providing Temporary or Permanent access / approach Road to the Hot Tap Location.	In general, access is available to all the hot tap locations and the work of microtunneling is already in progress at the said locations. However, contractor to visit site and make themeselves familiar with the site situations. Further, wherever required contractor may have to arrange temporary access to hot tap location.
16	Kindly confirm the scope of Providing fire-fighting equipment/s i.e. fire tender, tanker etc.,	Company shall supply safety material such as DCP cylinders, fire tender, Foam cans as required. Kindly refer PJS clause 4.1. No other material, equipment, tools, tackles shall be supplied to the contractor. All the other materials required for this project shall be in scope of contractor.