OIL INDIA LIMITED
(A Govt. of India Enterprise)
P.O. Duliajan-786602, Assam.
Fax No. 91-374-2800533, E-mail:material@oilindia.in

Tender No. & Date : DFD4727L15/06 30.08.2014

Bid Security Amount : INR 0.00 OR USD 0.00
(or equivalent Amount in any currency)

Bidding Type : Single Bid (Composite Bid)

Bid Closing On : 10.12.2014 at 13:00 hrs. (IST)
Bid Opening On : 10.12.2014 at 13:00 hrs. (IST)

Performance Guarantee : Not Applicable

OIL INDIA LIMITED have issued Limited tenders to following parties for items detailed below. For General Terms & Conditions, please refer to Document No. MM/GLOBAL/01/2005 available in OIL's web site:

Item No./ Mat. Code	Material Description	Quantity	UOM
10 0C000001	Launcher Barrel for 200mm NB(8") Pipeline (Specification is As per Attachment A)	2	NO
20 0C000001	Receiver Barrel for 200mm NB(8") Pipeline (Specification is As per Attachment B)	2	NO
30 0C000001	"Flow tee (8x8x8) inch as per,Design code-ASME B 31.8,Suitability of Flow Tee FOR ALL TYPES OF PIGS INCLUDING INTELLIGENT PIG / SPHERES, Specification: Service Natural Gas Operating Pressure 30.0 kg/cm2 Design Temperature, oC -28 to 65.0 Design code ASME B 31.8 ANSI rating 300 class .Hydrostatic Test Pressure 50.0 kg/cm2 Suitability of Flow Tee FOR ALL TYPES OF PIGS INCLUDING INTELLIGENT PIG / SPHERES Flow Direction BI-DIRECTIONAL Internal sleeve-API 5L Grade X-46 Welding Ends: As per API 5L Grade X-46 31.08.2014	6	NO

Special Notes : 1. The items shall be brand new, unused & of prime quality. Bidder shall warrant (in the event of an order) that the product supplied will be free from all defects & fault in material, workmanship & manufacture and shall be in full conformity with ordered specifications. This clause shall be valid for 18 months from date of despatch/shipment or 12 months from date of receipt of the items at site whiever is earlier. The defective materials, if any, rejected by us shall be replaced by the supplier at their own expense. Bidders must confirm the same while quoting.

2. The minimum FOB/FCA charges in case of partial order for reduced quantity/ items shall have to be indicated by the bidder. In case this is not indicated specifically, the charges quoted would be prorata calculated and the same will be binding on the bidder.

3. Following commissioning spares to be supplied along with the items.
- Gasket for QOC, 12#, #300# = 3 Nos.
- Gasket for QOC, 14#, #300# = 3 Nos.
- Seal for Pig Signaler = 3 Nos.

- Extraction tool for Pig Signaler = 2 Nos.

4. The QOC, intended to be in the Scrapper barrels are to be designed as per ASME-VIII, Div-1, 35-a and these shall have credential of supplying to International Oil and Gas Companies.

5. Bidder shall provide test plan for all three items as per International standards.

6. Working drawings shall be submitted to us for approval within 1 month of issue of P.O.

7. The requirement of the material against this tender is urgent. Accordingly bidder shall quote their best delivery schedule.

8. Validity of the offers should be 120 days from the date of bid opening. Bids with lesser validity shall be rejected.

9. Quotation must be submitted in triplicate.

10. The items covered by this tender shall be used by Oil India Limited in the PEL/ML areas which are issued/renewed after 01/04/99 and hence Nil Customs Duty during import will be applicable. Indigenous bidder shall be eligible for Deemed Export Benefit against this purchase. Details of Deemed Export are furnished vide Addendum to MM/GLOBAL/01/2005 enclosed.

Note 1 (page 2 to 8)- STANDARD SPECIFICATION FOR SCRAPER TRAPS (ONSHORE)

CONTENTS

1.0 SCOPE :

This specification covers the basic requirements for design, manufacture and testing of scraper launching and receiving traps to be installed in pipeline system transporting non-sour hydrocarbons in liquid or gaseous phase including Liquefied Petroleum Gas (LPG).

2.0 REFERENCE DOCUMENTS :

2.1 Reference has been made in this specification to the latest edition of the following codes, standards and specifications :

a) ASME B 31.4 - Pipeline Transportation System for liquid hydrocarbons and other Liquids.

b) ASME B 31.8 - Gas Transmission and Distribution Piping Systems.

c) ASME B 16.5 - Steel Pipe Flanges and Flanged Fittings

d) ASME B 16.9 - Factory mad Wrought Steel Butt Welding Fittings.

e) ASME B 16.11 - Forged Steel Fittings, Socket # Welding and Threaded.

f) ASME B 16.25 - Butt-welding Ends.

g) ASME B 16.47 - Large Diameter Steel Flanges

h) MSS-SP-53 - Quality Standard for steel Castings and Forgings for Valves, Flanges and Fittings and other Piping Components # Magnetic Particle Examination Method.

i) MSS-SP-75 - Specification for High Test Wrought Welding Fittings.

j) MSS-SP-97 - Integrally Reinforced forged Branch outlet Fittings Socket Welding Threaded Butt Welding Ends.

k) SSPC-VIS-I - Steel Structures Painting Council-Visual Standard.

l) ASME SEC.VIII and IX - Boiler and Pressure Vessels Code.

m) API 1104 - Specification for Welding Pipeline and Related Facilities.

n) ASTM A 23 A - Specification for Piping Fittings of Wrought Steel and Alloy Steel for Moderate and Elevated Temperature.

o) ASTM A 370 - Mechanical testing of steel products

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

3.0 MATERIALS

3.1 Materials and thicknesses of main components used in manufacture of traps shall be indicated by Manufacturer and shall be suitable for the service conditions indicated in the data sheets. These shall be subject to approval by Purchaser. [The steel used shall have specified Minimum Yield Strength (SMYS) of 35,000 psi (Minimum).]

3.2 Fully killed carbon steel shall be used.

3.3 Materials of the ends to be field welded by Purchaser shall have carbon equivalent less than or equal to 0.45, based on check analysis for each heat of steel, calculated according to the following formula :

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

3.4 For Scraper Traps, specified to be used for Gas service or High Vapour Pressure (HVP) liquid service, Charpy V-notch test shall be conducted on each heat of steel used in the manufacture of pressure containing parts of Scraper Traps. The test procedure shall conform to ASTM A 370. Unless specified otherwise, the Charpy V-notch test shall be conducted at 0o C. The Charpy V-notch test specimens shall be taken in the direction of principal grain flow and notched perpendicular to the original surface of the plate or forging.

The minimum average absorbed impact energy values of three full-sized specimens of base metal, weld metal and HAZ shall be 27 joules, unless otherwise indicated in the Data Sheet. The minimum impact energy value of any one specimen of the three specimens analyzed as above, shall not be less than 80%of the above mentioned average value.

For Scraper Traps, specified to be used for other hydrocarbon service, the Charpy V-notch test requirements as stated above are not applicable.

3.5 For Scraper Traps, specified to be used for Gas service or High Vapour Pressure (HVP) liquid service, hardness test shall be carried out as per ASTM A 370 for each heat of steel used. A full thickness cross section shall be taken for this purpose and the maximum hardness of base metal, weld metal and HAZ of all the pressure containing parts shall not exceed 248 HV10.

The maximum difference in hardness of Base Metal, Weld Metal and Heat Affected Zone (HAZ) of pressure containing parts of the traps shall less than 80 points Vicker#s HV10.

For Scraper Traps, specified to be used for other hydrocarbon services, the hardness requirements stated above are not applicable.

4.0 DESIGN AND CONSTRUCTION

4.1 The cylindrical portion of the trap shall be designed as per design code and design factor indicated in the data sheets. Quick end closure shall be designed as per ASME Sec. VIII Div. I for design conditions indicated in data sheets. A corrosion allowance, as provided for the pipeline (refer data sheets) shall be considered in design of the traps also. Quality of welding shall be such that weld efficiency factor of 1.0 is achieved.

4.2 The trap shall be suitable for handling instrumented pigs and shall conform to the dimensions given in scraper trap data sheets. Dimensions not shown specifically, shall however be as per manufacture#s standard. Circumferential weld on scraper trap body and neck shall not be permitted.

4.3 Concentric or eccentric reducer, as indicated in data sheets, used in the manufacture of traps shall conform to MSS-SP-75.

4.4 Vents and drains shall be provided on each trap. The traps shall be provided with a suitable slope and the drain location shall be such that complete drainage of the trap is possible. Location and sizes for vents and drains shall be as indicated in data sheets.

4.5 All branch connections shall be made by weldolet / nippolet or by extrusion as indicated in Scraper Trap Data Sheet. All weldolets shall conform to MSS-SP-97 and all nippolets shall be as per Manufacturer#s Standard. The extruded openings shall be adequately heat-treated and stress relieved.

4.6 End connections of traps shallbe flanged or butt-welded as indicated in data sheets.

c) Flanged ends, if specified, shall have dimensions as per ASME B 16.5 for sizes upto 24 and above. Flange facing shall be as indicated in data sheets.

d) Butt weld ends, if specified, shall have ends prepared as per ASME B 16.25. However, end preparation for butt-welding ends having unequal thicknesses with respect to connecting pipe shall be as per ASME B 31.4, as applicable.

4.7 The quick opening end closure shall be of clamp ring / band-lock type or equivalent design and shall consists of a safety system allowing the opening only when there is no pressure in the trap. End closure shall be hand operated and operable by one operator. End closures of size 24 NB and above shall be fitted with work gear operator for the opening of the closure. Hinge of the closure shall be so designed that the weight of the end closure is fully supported without sagging. Screwed type or plug-in type of end closures are not permitted.

4.8 Receiving traps shall be provided with a pig indicator at a location indicated in the Scraper Trap Data Sheet. Pig indicator shall be suitable for bi-directional operation and shall have visual flag and manual reset. The same shall also have provision for remote indication as indicated in Pig Signaler Data Sheet. The pig indicator shall conform to the relevant pig indicator specification and data sheet.

4.9 When specified in the data sheet, handling system for inserting and retracting the scraper and instrumented pigs from the trap shall be provide with each trap. The system shall be of self contained complete with handling devices.

4.10 Fabricated steel supports, minimum two numbers at suitable spacing shall be provided with traps for mounting on concrete blocks. These supports will not be subjected to pipeline anchorage forces. The material of support shall be compatible with trap material for welding purposes. All welds shall be examined by magnetic particle method.

4.11 Completed assembly shall be stress relieved as per the provisions of the design codes.

4.12 All welds shall be made by welders and welding procedures qualified in accordance with the provisions of ASME Sec. IX. The procedure qualification shall also include impact test and hardness test when required as per Clause 3.4 and 3.5 of this specification and shall meet the requirements as specified therein.

4.13 Repair by welding on parent metal is not allowed. Repair of welds shall be carried out only after specific approval by Purchaser#s Inspector for each repair.

The repair welding shall be carried out by the welders and welding procedures duly qualified as per ASME Sec. IX and records for each repair shall be maintained. The repair welding procedure qualification shall also include impact test and hardness test when required as per Clause 3.4 and 3.5 of this specification and shall meet the requirements as specification.

4.14 The traps shall be equipped with a half internal removable filtering basket consisting of a punched plate with at least five rows of drain holes.

4.15 The tolerance on internal diameter and out of roundness at the ends for the welding end of the neck (at the end where connecting pipeline will be welded) shall be as per applicable connected pipe specification as indicated in the Data Sheet.

5.0 INSPECTION AND TESTS

5.1 The manufacturer shall perform all inspection and tests as per the requirements of this specification and the relevant codes, prior to shipment at his works. Such inspections and tests shall be, but not limited to, the following.

5.1.1 All traps shall be visually inspected.

5.1.2 Dimensional check shall be carried out as per the approved drawings.

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

5.1.4 Hydrostatic test shall be conducted for all scraper traps complete in all respects including mounting of pig indicators at a pressure as indicated in the data sheets. The test pressure shall be maintained and held for a minimum period of the hour.

5.1.5 All butt welds shall be 100% radio graphically inspected. Procedure and acceptance criteria shall be as per API 1104.

5.1.6 Ultrasonic or magnetic particle inspection shall be carried out on all welds, which in Purchaser Inspector#s opinion cannot be radio graphically inspected. Procedure and acceptance criteria shall be as per ASME Sec. VIII, Appendix U and Appendix VI respectively.

5.1.7 All finished wrought weld ends hall be 100% ultrasonically inspected for lamination type defects for a distance of 50 mm from the end. Any laminations larger than (1/4#) 6.35 mm shall not be acceptable.

5.1.8 All forgings shall be wet magnetic particle examined on 100% of the forged surfaces. Method and acceptance shall comply with MSS-SP-53.

5.1.9 A minimum of two closing and opening cycles shall be performed and correct operation of both quick opening closure and safety system shall be ascertained.

5.2 Purchaser#s Inspector reserves the right to perform stage wise inspection and witness tests, including hydrostatic test, as indicated in 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 of specific integrity of the scraper traps.

6.0 TEST CERTIFICATES
Manufacturer shall furnish the following certificates :

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

b) Hydrostatic test certificates.

c) Test Reports on radiography, ultrasonic inspection and magnetic particle examination.

d) Test Reports on heat treatment carried out, if any.

The certificates shall be considered valid only when signed by Purchaser#s Inspector.

7.0 PAINTING, MARKING AND SHIPMENT

7.1 After all inspection and tests required have been carried out; all external surfaces shall be thoroughly cleaned to remove grease, dust and rust. Surface preparation shall be carried out by shot blasting to SP-6 in accordance with #Steel Structures Painting Council Visual Standard-SSPC-VIS-1#. Machined parts shall be coated with anti-rust removable paint and non-machined parts shall be applied with two coats of protective paint. Manufacturer shall indicate the type of paint used in the drawings submitted for approval.

7.2 Marking shall be done on a stainless steel plate and affixed to the trap body by means of corrosion resistant fasteners. Marking shall include the following :

a) Manufacturer#s Name

b) Trap / Neck diameter, thickness

c) ASME Class Rating

d) Tag Number

e) Design pressure

f) Design Pressure & Design Temperature

g) Year of manufacture

h) Empty weight of the trap assembly.

7.3 Before shipment, traps shall be properly packed against damage during transportation. All machined surfaces subject to corrosion during transit shall be well protected by coat of grease or other suitable material. All traps shall be provided with suitable protectors, for flange faces, securely attached to the traps. Bevel ends shall be protected with metallic or high impact plastic bevel protectors.

7.4 Only those traps, which have been inspected and certified by the Purchaser#s Inspector, shall be shipped.

8.0 SPARES

8.1 Manufacturer shall furnish list of recommended spares and accessories for Scraper Traps required during start up and commissioning. As a minimum, the commissioning spares shall include 200% extra consumable spares viz. gaskets / o-rings / seals etc. for each trap. Cost of such spares shall be loaded by the Manufacturer in the item rates quoted by them.

8.2 Manufacturer shall furnish separately a list of recommended spares and accessories required for two years of normal operation and maintenance of Scraper Traps.

9.0 DOCUMENTATION

9.1 Manufacturer shall furnish at the time of bidding, the following documents :

a) General arrangement drawing of scraper trap, quick opening end closure and pig signalers with overall dimensions.

b) Clause wise list of deviations from this specifications, if any, listed at one place in the document, with specific declaration if none.

c) Reference list of similar supplies for the past five years including project, client, years of supply and contract person.

d) Quality assurance plan.

e) List of recommended spares and accessories for scraper traps required during start up and commissioning.

f) List of recommended spares and accessories required for two years of normal operation and maintenance of scraper traps.

9.2 Within three weeks of placement of order, the Manufacturer shall submit for copies of but not limited to, the following drawings, documents and specifications for approval :

a) Calculations according to the relevant codes for the body and neck including branch connections and quick end closure.

b) Trap assembly and sectional drawings showing all parts and accessories with materials and dimensions.

c) Support Assembly drawing.

d) Arrangement & details of foundation bots for pig handling and lifting system, where applicable.

e) Welding procedure and method of manufacture.

g) Record of successful proof test in accordance with provisions of ASME B 16.9, MSS-SP 75, MSS-SP 97 as applicable.
Manufacturing of traps shall commence only after approval of above mentioned documents. Once the above mentioned documents have been approved by the Purchaser, any changes in design, material and method of manufacture shall be notified to the Purchaser, whose approval in writing of all changes shall be obtained before the traps are manufactured.

9.3 Within four weeks from the approval date Manufacturer shall submit one reproducible and six copies of all approved drawings, documents and specifications as listed in clause 9.2 above.

9.4 Prior to shipment, the Manufacturer shall submit one reproducible and six copies of the following :

a) Test certificate as listed in clause 6.0 of this specification.

b) Manual for installation, erection instructions, maintenance and operations instructions.

9.5 All documents shall be in English Language.

DATA SHEET # 1
PIPELINE DETAILS
Nominal Diameter, mm

(inch) 200 (8#) NB
Wall Thickness, mm 6.4

Material API 5L Gr. X 46, PSL 2, ERW/LSAW / HSAW
Design
Temperature (oC) MAX. 65 Service Natural Gas
MIN. -28 Design code ASME B 31.8 ANSI rating 300 class
SCRAPER DETAILS
Type of Scraper Trap Scraper Launcher
Corrosion Allowance 3.0 mm
Operating pressure 30.0 kg/cm2 g
Hydro test Pressure (kg/cm2 g) 50.0 kg/cm2 g
Part No.

Description
Item
Ends / Type
Material
(Equv. / Sup.)
Nom. Dia. mm (inch)/ Thk., mm (Inch) or Schedule

1. Body Pipe BE API 5L Gr. X-42 300 (12#)
2. Neck Pipe BE API 5L Gr. X-42 200 (8#)
3. Reducer ECC.(FSD) BW, Welded MSS-SP-75 Gr.
WPHY 42 300 (12#) x 200 (8#)
4. Kicker conn. Weldolet+
Flange Flanged, WNRF, 300 # ASTM A 105 150 (6#) / S 160
5. Drain conn. Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 50 (2#) / S 160
6. Utility conn. Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 50 (2#) / S 160
7. Vent Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 50 (2#) / S 160
8. Pr. Balancing Not Required
9. Pr. Gauge conn. Nippolet Forged, PE ASTM A 105 20(3/4#) / S 160
10. TSV conn. Nippolet Forged, PE ASTM A 105 20(3/4#) X S 160
11. End Closure Quick
Opening ASTM A 105 300(12#) X 300 class
12. Support Plate Welded ASTM A 36 AS required

13. Pig Signaler As per note 2 and data sheet-3
BE : BEVELLED END, PE:PLAIN END, BW:BUTT WELDED, RF:RAISED FACE

DRAWING NO.-1

DIMENSION DETAILS

Marking	Dimension (mm)	Marking	Dimension (mm)
A	500	H	1500
B	3630	I	300
C	508	J	300
D	800	K	800
E	As per Std.	L	300
F	3440	N	200
G	450		

NOTE :

1. Orientation of all the nozzles is indicative and shall be confirmed during drawing approval stage.

2. Thickness for body & neck indicated are minimum. Manufacturer shall check same based on pipeline design conditions and manufacturing requirements, and submit necessary calculations to Company for approval.
3. Flanges welded on Scraper Launcher shall have smooth face finish to 125-250 AARH.
4. Scraper Launcher shall be provided with suitable handling system for insertion / or retraction of pigs (such as basket / tray inserting / retracting rod / mechanism). However, lifting devices (davit etc.) are not required.
5. All carbon steel fittings / flanges made from ASTM A 105 material shall be heat treated by normalizing in accordance with ASTM A 961. All carbon steel fittings and flanges made from ASTM A 105 material shall be finish forged i.e. forged to be the required shape. Machined fittings and flanges are not acceptable.
6. For the welding end, the out of roundness (i.e. difference between maximum and minimum ID at pipe end) shall be 3.0 mm and tolerance on internal diameter at pipe ends shall be same as diameter tolerance for the pipe ends indicated in API 5L Table 8.

DATA SHEET # 2
PIPELINE DETAILS
Nominal Diameter, mm
(inch) 200 (8#)
Wall Thickness, mm 6.4

Material API 5L Gr. X 46, PSL 2, ERW/LSAW /HSAW
Design
Temperature (oC) MAX. 65 Service Natural Gas
MIN. -28 Design code ASME B 31.8 ANSI rating 300 class
SCRAPER DETAILS
Type of Scraper Trap Scraper Receiver
Corrosion Allowance 3.0 mm
Operating pressure 30.0 kg/cm2 g
Hydro test Pressure (kg/cm2 g) 50.0 kg/cm2 g
Part No. Description
Item
Ends / Type
Material
(Equv. / Sup.) Nom. Dia. / Thk., mm (Inch) or Schedule
1. Body Pipe BE API 5L Gr. X-42 350 (14#)
2. Neck Pipe BE API 5L Gr. X-42 200 (8#)
3. Reducer Concentric BW, Welded MSS-SP-75 Gr.
WPHY 42 350 (14#) x 200 (8#)
4. Bypass conn. Weldolet+
Flange Flanged, WNRF, 300 # ASTM A 105 150 (6#) / S 160
5. Drain conn. Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 100 (4#) / S 160
6. Utility conn. Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 50 (2#) / S 160
7. Vent Weldolet + Flange Flanged,
WNRF, 300# ASTM A 105 50 (2#) / S 160
8. Pr. Balancing Not Required
9. Pr. Gauge conn. Nippolet Forged, PE ASTM A 105 20(3/4#) / S 160
10. TSV conn. Nippolet Forged, PE ASTM A 105 20(3/4#) X S 160
11. End Closure Quick
Opening ASTM A 105 350(14#) X 300 class
12. Supports Plate Welded ASTM A 36 AS required

13. Filtering Basket ASTM A 36
14. Pig signaler As per note # 2 & data sheet 3

BE : BEVELLED END, PE:PLAIN END, BW:BUTT WELDED, RF:RAISED FACE

DRAWING NO. -3

DIMENSION DETAILS

Marking	Dimension (mm)	Marking	Dimension (mm)
A	2500	H	300
B	500	I	300
C	508	J	300
D	3620	K	800
E	1500	L	As per standard
F	4100	M	200
G	700		

NOTE :

1. Orientation of all the nozzles is indicative and shall be confirmed during drawing approval stage.
2. Thickness for body & neck indicated are minimum. Manufacturer shall check same based on pipeline design conditions and manufacturing requirements, and submit necessary calculations to Company for approval.
3. Flanges welded on Scraper Launcher shall have smooth face finish to 125-250 AARH.
4. Scraper Receiver shall be provided with suitable handling system for insertion / or retraction of pigs (such as basket / tray inserting / retracting rod / mechanism). However, lifting devices (davit etc.) are not required.
5. All carbon steel fittings / flanges made from ASTM A 105 material shall be heat treated by normalizing in accordance with ASTM A 961. All carbon steel fittings and flanges made from ASTM A 105 material shall be finish forged i.e. forged to be the required shape. Machined fittings and flanges are not acceptable. Machining is permitted for weld end preparation and flange face finish preparation.
6. For the welding end, the out of roundness (i.e. difference between maximum and minimum ID at pipe end) shall be 3.0 mm and tolerance on internal diameter at pipe ends shall be same as diameter tolerance for the pipe ends indicated in API 5L Table 8.

Note 2 (page 14 to 17) -STANDARD SPECIFICATION FOR PIG SIGNALLERS

CONTENTS

1.0 SCOPE

This specification covers the minimum requirements for the design, manufacture, testing and supply of Pig Signalers, used for the detection of passage of scraper and instrumented gauging pigs, to be installed in pipeline systems handling hydrocarbons in liquid or gaseous phase including Liquefied Petroleum Gas (LPG).

This specification does not cover pig signalers for sour hydrocarbons (liquid / gas) service as defined in NACE Standard MR 0175-98.

2.0 MATERIALS

2.1 The material used in manufacture of the main components of the Pig Signaler shall be as under :

a. All metallic parts except scarfed welding base : SS316
b. Scarfed welding base : CS, ASTM A 105
c. Soft Seats : PTFE / VITON

Other components shall be as per Manufacturer#s Standard, suitable for the service conditions indicated in Data Sheet, which will be subject to approval by Purchaser.

2.2 Scarfed welding base shall have Carbon Equivalent (CE) not greater than 0.45 on check analysis, calculated as per the following formula :

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

2.3 Carbon steel used in the manufacture of pig signaler shall be fully killed.

3.0 DESIGN AND CONSTRUCTION REQUIREMENTS
3.1 Pig Signalers shall be designed to meet the requirements of pipeline material, diameter, wall thickness and service conditions indicated in the Data Sheet.

3.2 Pig Signaler shall be bi-directional type, having pivot-less tumbler mechanism and laminated trigger blades.

3.3 Design of Pig Signalers shall be such that any possibility of Signaler being operated by line pressure is eliminated. Also design of Pig Signalers shall be such that repair and installation of internal / accessories are possible under pressure, without removing the unit from the line.

3.4 Pig Signaler shall be provided with a visual indicator to indicate the passage of pigs, by means of spring loaded metal shaft. The arm shall lock in down position when manually reset.

3.5 All welds shall be made by welders and welding procedures qualified in accordance with the provision of ASME Section IX.

4.0 INSPECTION AND TESTS
4.1 Manufacturer shall perform all inspection and tests required to supply the Pig Signaler as per requirements of this specification.

4.2 Hydrostatic tests shall be conducted at a pressure as indicated in the data sheets.

4.3 All welds shall be non destructively examined.

4.4 The welding end shall be inspected ultrasonically over the entire circumference for lamination type defects. Any lamination larger than 6.35 mm shall not be acceptable.

4.5 Manufacturers shall perform functional tests to establish satisfactory performance of both manual.

4.6 All Pig Signallers shall be visually inspected.

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

4.8 All forgings shall be wet magnetic particle examined on 100% of the forged surfaces. Method and acceptance shall comply with MSS-SP-53.

5.0 TEST CERTIFICATES
Manufacturer shall submit the following test certificates :
5.1 Test certificates for material compliance as per the relevant material standards.
5.2 Certificate for hydrostatic test and functional tests.
5.3 Test reports of ultrasonic / magnetic particle inspection.

6.0 PAINTING, MARKING AND SHIPMENT

6.1 Exterior surface of the Pig Signaler shall be thoroughly cleaned, freed from rust and grease and applied with sufficient coats of corrosion resistant paint. In case of Pig Signalers with extension, the buried portion shall be coated with three coats of coal tar epoxy resin. The minimum dry film thickness shall be 300 microns.

6.2 A corrosion resistant metal tag shall be permanently attached with each unit, with the following marking :

i) Manufacturer#s name.
ii) Suitable for installation in _____mm dia. pipeline
iii) ANSI Rating
iv) Tag No.

6.3 Each unit shall be suitably protection to avoid any damage during transit Care shall be exercised during packing to prevent any damage to the welding ends. All machined surfaces subject to corrosion shall be well protected by a coat of grease or other suitable materials.

7.0 SPARES AND ACCESSORIES

7.1 Manufacturer shall furnish list of recommended spares and accessories for Pig Signalers required during start up and commissioning. Cost of such spares shall be loaded by the Manufacturer in the item rates indicated in quotation.

7.2 Manufacturer shall furnish separately a list of recommended spares and accessories required for two years of normal operation and maintenance of Pig Signalers.

8.0 DOCUMENTATION

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

a. General arrangement drawings with overall dimensions and cross sectional drawings.
b. Reference list of similar supplies of Pig Signaler shall be furnished including project, Year of supply, Client, Size, Rating and service for the last five years.
c. Clause wise list of deviations from this specification, if any.

8.2 Within three weeks of placement of order, the Manufacturer shall submit four copies, but not limited to, the following drawings, documents and specifications for approval.

a. Fabrication drawing / sectional arrangement drawings showing all parts with reference numbers and material specification.
b. Assembly drawing with overall dimension.
c. Welding and testing procedure.
d. Quality Assurance Plan.

Once, the approval has been given by Purchaser, any change in design, material, etc. shall be notified to Purchaser whose approval in writing of all such changes shall be obtained before Pig Signalers are manufactured.

8.3 Within four weeks from approval date, Manufacturer shall submit one reproducible and six copies of the drawings, documents and specifications as listed in clause 8.2 of this specification.

8.4 Prior to shipment, Manufacturer shall submit one reproducible and six copies of the following :

a. Test Certificate as per clause 5.0 of this specification.
b. Manual for installation, erection instructions, maintenance and operation instructions.

8.5 All documents shall be in English language.

DATA SHEET # 3
PIPELINE DETAILS

Nominal Diameter, mm
(inch) 200 (8#)
Wall Thickness, mm 6.4

Material API 5L Gr. X 60, PSL 2, ERW/LSAW /HSAW
Design
Temperature (oC) MAX. 65 Service Natural Gas
MIN. -28 Design code ASME B 31.8 ANSI rating 300 class
Pig Signaler Specification
Part Specified Material
Body ASTM A 105
Internals SS-316
Type Mechanical / Visual, Manual reset flag
General Signalers are to be mounted vertically to indicate passage of pigs through pipeline and are required to be welded on the pipes specified above. When the pig passage through then the flag is flipped from a position perpendicular to the axis of the signaler. The flag is received manually.

Notes :

1. Pig Signaler shall be without an isolation valve and shall be directly mounted on the scraper Receiver/launcher.

Tender No. : **DFD4727L15/06**
Tender Date : **30.08.2014**
Bid Closing On : **10.12.2014 at 13:00 hrs.(IST)**
Bid Opening On : **10.12.2014 at 13:00 hrs.(IST)**

Tender issued to following parties only:

Slno	V_Code	Vendor Name	City/Country
1	100065	PIPELINE ENGINEERING & SUPPLY CO. L	NORTH YORKSHIRE
2	100430	FORAIN S R L	MILANO
3	102240	ALEXANDER CARDEW LIMITED	
4	102241	SCOMARK ENGINEERING LTD	
5	102242	TAYLOR FORGE ENGINEERED SYSTEMS INC	
6	102243	SIIRTEC NIGI SPA	
7	102244	TECTUBI SRL	
8	200369	VEE KAY VIKRAM & CO	AHMEDABAD
9	200500	HYDROCARBON DEVELOPMENT CO. PVT. LT	MUMBAI
10	200966	MULTITEX FILTRATION	N. DELHI
11	202746	INDCON PROJECTS & EQUIPMENT LTD.	NEW DELHI
12	204900	TDW INDIA LIMITED	VADODARA
13	207744	BGR ENERGY SYSTEMS LIMITED	NOIDA

NOTICE

Other than the vendors to whom the enquiry has been issued, interested vendors who wish to participate in the tender may apply with proper credentials and other relevant details so as to reach Head-Materials, Oil India Limited, P.O. Duliajan, Dist. Dibrugarh, Assam – 786602 (E-mail : material@oilindia.in , Fax : 0374-2800533) within 10 days of publication of the tender in OIL's website.

The vendors must fulfill the following conditions :

i) The party should have three year's experience for the same item.
ii) The party should have received one order for at least 50% quantity in last three years for the item from any reputed firm.
iii) Annual turnover of the firm in any of the last three financial years or current financial year should be more than Rs 23 Lakhs.

NOTE : i) Relevant documents in support of experience, last order and annual turnover must be submitted along with the application.

ii) Application without complete supporting document will not be considered.

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