

**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 : DFS4390L15/03 28.07.2014**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 : 10.09.2014 at 13:00 hrs. (IST)

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Performance Guarantee : Not Applicable

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

Item No./ Mat. Code	Material Description	Quantity	UOM
<b>10</b> 29760012	<p>Spares &amp; Accessories for Instruments MALE CONNECTOR (¼" X ¼")</p> <p>1.0 SCOPE This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p> <p>2.0 ITEM DESCRIPTION MALE CONNECTOR Size : ¼ inch NPT (M) X ¼ inch OD(T) Material : SS316</p> <p>3.0 MATERIALS 3.1 Fittings shall be manufactured from the following materials i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479. ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182. 3.2 The fitting end connections shall be compatible to tube of hardness &lt;= Rb80. 3.3 All parts shall be made of SS 316. 3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE 4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269. 4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm2 of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES The Manufacturer shall provide Valid (valid for at least 1 year from Bid</p>	500	NO

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	<p>Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle.</p> <p>5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage.</p> <p>5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes.</p> <p>5.3 Thermal Cycle Test: should undergo testing conducted at tubing working pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles.</p> <p>5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as calculated by the following equations:  Tube Calculated burst pressure = working pressure x 4  Minimum allowable force = tube calculated burst pressure x tube cross-sectional area.</p> <p>5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10, 000,000 cycles without failure.</p> <p>5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing.</p> <p>5.7 High Impact Shock Test: should undergo testing conducted to evaluate the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p><b>6.0 MARKINGS, PACKING AND SHIPMENT</b></p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p><b>7.0 GUARANTEE</b></p> <p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material</p>		

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	<p>and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		
<p><b>20</b> 29760013</p>	<p>MALE CONNECTOR (½" X ½")</p> <p>1.0 SCOPE This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p> <p>2.0 ITEM DESCRIPTION MALE CONNECTOR Size : ½ inch NPT (M) X ½ inch OD(T) Material : SS316</p> <p>3.0 MATERIALS 3.1 Fittings shall be manufactured from the following materials i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479. ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182. 3.2 The fitting end connections shall be compatible to tube of hardness &lt;= Rb80. 3.3 All parts shall be made of SS 316. 3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE 4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269. 4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm2 of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES The Manufacturer shall provide Valid (valid for at least 1 year from Bid Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle. 5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage. 5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes. 5.3 Thermal Cycle Test: should undergo testing conducted at tubing working pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles. 5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as</p>	400	NO

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	<p>calculated by the following equations:            Tube Calculated burst pressure = working pressure x 4            Minimum allowable force = tube calculated burst pressure x tube cross-sectional area.</p> <p>5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10,000,000 cycles without failure.</p> <p>5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing.</p> <p>5.7 High Impact Shock Test: should undergo testing conducted to evaluate the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p>6.0 MARKINGS, PACKING AND SHIPMENT</p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p>7.0 GUARANTEE</p> <p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		
<p><b>30</b> 29760014</p>	<p>MALE CONNECTOR (½" X ¼")</p> <p>1.0 SCOPE            This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p> <p>2.0 ITEM DESCRIPTION            MALE CONNECTOR            Size : ½ inch NPT (M) X ¼ inch OD(T)            Material : SS316</p>	200	NO

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	<p>3.0 MATERIALS</p> <p>3.1 Fittings shall be manufactured from the following materials</p> <p>i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479.</p> <p>ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182.</p> <p>3.2 The fitting end connections shall be compatible to tube of hardness <math>\leq</math> Rb80.</p> <p>3.3 All parts shall be made of SS 316.</p> <p>3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE</p> <p>4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269.</p> <p>4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm<sup>2</sup> of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES</p> <p>The Manufacturer shall provide Valid (valid for at least 1 year from Bid Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle.</p> <p>5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage.</p> <p>5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes.</p> <p>5.3 Thermal Cycle Test: should undergo testing conducted at tubing working pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles.</p> <p>5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as calculated by the following equations:</p> <p>Tube Calculated burst pressure = working pressure x 4</p> <p>Minimum allowable force = tube calculated burst pressure x tube cross-sectional area.</p> <p>5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10, 000,000 cycles without failure.</p> <p>5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing.</p> <p>5.7 High Impact Shock Test: should undergo testing conducted to evaluate the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the</p>		

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	<p>Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p>6.0 MARKINGS, PACKING AND SHIPMENT</p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p>7.0 GUARANTEE</p> <p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		
<p><b>40</b> 29760015</p>	<p>MALE CONNECTOR (¼" X ½")</p> <p>1.0 SCOPE This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p> <p>2.0 ITEM DESCRIPTION MALE CONNECTOR Size : ¼ inch NPT (M) X ½ inch OD(T) Material : SS316</p> <p>3.0 MATERIALS 3.1 Fittings shall be manufactured from the following materials i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479. ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182. 3.2 The fitting end connections shall be compatible to tube of hardness &lt;= Rb80. 3.3 All parts shall be made of SS 316. 3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE 4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269.</p>	200	NO

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	<p>4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm<sup>2</sup> of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES The Manufacturer shall provide Valid (valid for at least 1 year from Bid Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle.</p> <p>5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage.</p> <p>5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes.</p> <p>5.3 Thermal Cycle Test: should undergo testing conducted at tubing working pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles.</p> <p>5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as calculated by the following equations: Tube Calculated burst pressure = working pressure x 4 Minimum allowable force = tube calculated burst pressure x tube cross-sectional area.</p> <p>5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10, 000,000 cycles without failure.</p> <p>5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing.</p> <p>5.7 High Impact Shock Test: should undergo testing conducted to evaluate the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p>6.0 MARKINGS, PACKING AND SHIPMENT</p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p>7.0 GUARANTEE</p>		

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	<p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		
<p><b>50</b> 29760016</p>	<p>MALE CONNECTOR ( ¼" X 3/8" )</p> <p>1.0 SCOPE This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p> <p>2.0 ITEM DESCRIPTION MALE CONNECTOR Size : ¼ inch NPT (M) X 3/8 inch OD(T) Material : SS316</p> <p>3.0 MATERIALS 3.1 Fittings shall be manufactured from the following materials i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479. ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182. 3.2 The fitting end connections shall be compatible to tube of hardness &lt;= Rb80. 3.3 All parts shall be made of SS 316. 3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE 4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269. 4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm2 of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES The Manufacturer shall provide Valid (valid for at least 1 year from Bid Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle. 5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage. 5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes. 5.3 Thermal Cycle Test: should undergo testing conducted at tubing working</p>	150	NO

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Item No./ Mat. Code	Material Description	Quantity	UOM
	<p>pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles.</p> <p>5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as calculated by the following equations:            Tube Calculated burst pressure = working pressure x 4            Minimum allowable force = tube calculated burst pressure x tube cross-sectional area.</p> <p>5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10, 000,000 cycles without failure.</p> <p>5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing.</p> <p>5.7 High Impact Shock Test: should undergo testing conducted to evaluate the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p>6.0 MARKINGS, PACKING AND SHIPMENT</p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p>7.0 GUARANTEE</p> <p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		
<p><b>60</b> 29760025</p>	<p>FEMALE CONNECTOR (½" X ½")</p> <p>1.0 SCOPE</p> <p>This specification covers the purchaser's requirements (as a minimum) for design, material of construction, marking, testing and supply of high pressure stainless steel ferrule fittings.</p>	50	NO

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Item No./ Mat. Code	Material Description	Quantity	UOM
	<p>2.0 ITEM DESCRIPTION FEMALE CONNECTOR Size : ½ inch NPT (F) X ½ inch OD(T) Material : SS316</p> <p>3.0 MATERIALS 3.1 Fittings shall be manufactured from the following materials i. Bar stock (Straight fittings and tube adapters) shall be as ASTM A276 / ASME SA 479. ii. Forgings shall be (Elbows, crosses, and tees.) ASTM A182 / ASME SA182. 3.2 The fitting end connections shall be compatible to tube of hardness ≤ Rb80. 3.3 All parts shall be made of SS 316. 3.4 The ferrule material shall be able to withstand an atmosphere of natural gas, oil and Moisture without rusting.</p> <p>4.0 DESIGN AND MANUFACTURE 4.1 The SS fittings shall be of flare less design and four piece construction, consisting of, front and rear ferrules, nut and body suitable for use on SS tubes conforming to ASTM A 269. 4.2 Fittings shall be rated for at least the operating pressure of 200 Kg/cm<sup>2</sup> of Oil and Gas application.</p> <p>5.0 PRODUCT TYPE TEST REPORTS &amp; CERTIFICATES The Manufacturer shall provide Valid (valid for at least 1 year from Bid Closing Date) Product Type Test Reports for all the following tests mentioned below along with their offer. These Product Test Reports should be approved by leading approval agencies like TUV, DNV, ABS, LR, US Navy &amp; Wyle. 5.1 Hydrostatic Pressure Test: should undergo testing up to 3.5 times working pressure without hydraulic leakage. 5.2 Helium Proof/ Nitrogen Re-make Test: should undergo testing conducted to evaluate the performance of tube fittings with 1.5 times the working pressure with Helium and at rated working pressure with Nitrogen after every re-make for 25 such re-makes. 5.3 Thermal Cycle Test: should undergo testing conducted at tubing working pressure with Nitrogen at 1,000 ° F and allowed to air cool every time for such 10 cycles. 5.4 Tensile Pull Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing under tensile load, should pass the tensile test conducted using the tensile test stand where the shear load exceeded the force exerted on the tube by the system fluid at 4 times working pressure as calculated by the following equations: Tube Calculated burst pressure = working pressure x 4 Minimum allowable force = tube calculated burst pressure x tube cross-sectional area. 5.5 Vibration Test: should undergo testing conducted to evaluate the amount of cantilever deflection that can be applied to a tube and fitting assembly and still pass through 10, 000,000 cycles without failure. 5.6 Tube Burst Test: should undergo testing conducted to evaluate the grip of tube fittings on tubing at the burst pressure of the tubing. 5.7 High Impact Shock Test: should undergo testing conducted to evaluate</p>		

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	<p>the performance when subjected to shock test conducted as per ASTM F1387-99 standards.</p> <p>5.8 Manufacturer should provide valid ISO 9001:2008 certificate.</p> <p>5.9 The fittings shall have valid product approval certificates from Lloyds Registrar of shipping.</p> <p>5.10 Certificates conforming to all ASTM/ASME standards mentioned in the Specification from one of the auditing agency like TUV/ BSI/ DNV/ BV or PED.</p> <p>6.0 MARKINGS, PACKING AND SHIPMENT</p> <p>6.1 Heat code traceability number shall be stamped or etched on both body nut and ferrules (front and back) of each fitting.</p> <p>6.2 Replacement nuts and ferrules shall be packaged in a manner so as to allow safe and simple replacement.</p> <p>6.3 All items shall be suitably wrapped and packaged to withstand rough handling during shipment and inland journey.</p> <p>6.4 Items shall be properly tagged and packaged separately to facilitate easy identification.</p> <p>6.5 Items shall be wrapped and packaged in such a way that they can be preserved in original as new condition.</p> <p>7.0 GUARANTEE</p> <p>7.1 The manufacturer shall guarantee that the design, materials, manufacturing and testing of fittings comply with the requirements of this specification and applicable codes and standards. Manufacturer shall replace all fittings, which are defective or fail during field pressure testing or fail to perform satisfactorily due to inadequate engineering, sub standard material and workmanship.</p> <p>7.2 The manufacturer shall guarantee the fittings against any defect, failure or malfunctioning occurring during 12 months from the date of commissioning or 24 months from the date of supply, whichever is earlier.</p>		

**Special Notes** : 1.0 The items covered by this tender will attract Custom Duty on merit. Indian bidders are required to quote NON DEEMED EXPORT price.

**2.0 Bidders are required to quote with minimum validity of 120 days from the Bid Closing Date as per NIT requirement. BIDS with lesser validity shall be rejected.**

3.0 Bidders have to indicate the minimum FOB/FCA charges in case of partial order for reduced quantity/items. In case this is not indicated specifically, the charges quoted would be prorated calculated and the same will be binding on the bidder.

4.0 Bidders are required to mention the weight of each item individually. QUOTATION must be submitted in **TRIPLICATE** with original company catalogues as well as necessary certificates.

5.0 Please mention clearly in your quotation the Net. Weight, Gross Weight & Volume, Indian Agent's Name and its Commission, Payment Terms, Ocean Freight/Air Freight Charges, Port of Loading, Delivery period, Country of origin with manufacturer's name, etc.

6.0 Bidders who have successfully executed OIL's Purchase Order for the items in the tender

are eligible to bid against this tender. However, the bidder must fulfill the criteria under clause 1.0 of "General Terms & Conditions" (Document No. MM/GLOBAL/01/2005).

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**Tender Date** : 28.07.2014  
**Bid Closing On** : 10.09.2014 at 13:00 hrs.(IST)  
**Bid Opening On** : 10.09.2014 at 13:00 hrs.(IST)

**Tender issued to following parties only:**

Slno	V_Code	Vendor Name	City/Country
1	100138	SONAL ENTERPRISES	NEW YORK 10956-5538
2	100684	AKV ENTERPRISES(CANADA)	ONTARIO
3	100732	PETRO MECH COMPANY INC	KATY
4	101134	PARKER HANNIFIN	OHIO
5	101191	SWAGELOK COMPANY	OHIO - 44139
6	101720	HY-LOK CORPORATION	BUSAN
7	201433	SIDDHARTHA ENGINEERING AND SALES	KOLKATA
8	203568	BOMBAY FLUID SYSTEM COMPONENTS PVT	MUMBAI
9	204935	LMG HYDRO PNEUMATICS	KOLKATA
10	208407	PANAM ENGINEERS	MUMBAI