



Germanischer Lloyd

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INSPECTION REPORT

Report No. :- GLIS/PAN/RR/007/01

Dated 12.1.2007

This is to certify that the components as described hereunder have been inspected.

Client: :- **M/S PANAM ENGINEERS**

Client's P.O. No./Contract No: -

Project:- -

Item: **316SS COMPRESSION TUBE FITTINGS**

Supplier: -

Manufacturer: **M/S PANAM ENGINEERS**

Place of Inspection: **R-628 TTC INDUSTRIAL AREA
MIDC , RABALE
NAVI MUMBAI : 400 705 -- INDIA**

Date/Period of Inspection: **29.01.2007 TO 10.02.2007**

The Following Material was inspected

1 Order

The order was the test stainless steel tube fittings according to BS 4368 Part4 : 1984

"Compression coupling for tubes"

2 Samples

The necessary samples were delivered by M/s Panam Engineers surveyed by M/s Germanischer Lloyds Industries & Services, GmbH, Mr. Rajesh Raikar of Mumbai India

Managing Directors: *Lutz Wittenberg (Spokesman) Hans Berg*
Germanischer Lloyd Industrial Services GmbH, Registered Office Hamburg, HR B86804, Amtsgericht Hamburg
C/o GVC Energy Services Pvt Ltd 1st Floor, Dakshina Building, Sector 11, Plot No.2, CBD Belapur, Navi Mumbai - 400 611
Place of performance and jurisdiction is Hamburg. The latest edition of the General Terms and Conditions of Germanischer Lloyd applies.
German law applies



INDUSTRIAL SERVICES
GLIS-16



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4.2 Minimum Hydraulic Burst Pressure Test

All Tube fittings have satisfactory passed the requirement of four times the permissible working pressure.

CODE	Tube wall thickness	Working Pressure		Min Burst Test Pressure		Actual Test Pressure		Time
		Bar	Psi	Bar	Psi	Bar	Psi	
PAN 001-1/4"	0.049	421	6000	1799	24000	1850	26399	5
PAN 002-3/8"	0.065	421	6000	1799	24000	1920	27398	5
PAN 003-1/2"	0.083	421	6000	1799	24000	1825	26042	5

4.3 Dismantling and Reassembly Test (7.4)

All tube fitting passed the test satisfactory.

4.4 Minimum Static Gas Pressure (vacuum)Test (7.5)

All tube fitting passed the test satisfactory

4.5 Maximum Static Gas Pressure Test (7.6)

All tube fitting passed the test satisfactory

4.6 Hydraulic Impulse and Vibration Test (7.7)

CODE	Tube wall thickness	Working Pressure		Pressure Impulse			Vibration	Time
		Bar	Psi	Hz	Min Bar	Max Bar	Hz	Hrs
PAN 001-1/4"	0.049	421	6000	0.5	45	450	23	278
PAN 002-3/8"	0.065	421	6000	0.5	45	450	23	278
PAN 003-1/2"	0.083	421	6000	0.5	45	450	23	278

Attached documents:-

- 1) All Loop Drawing
- 2) Pressure Gauge Calibration List



12.1.2007

Place

Date


 Manager to Germanischer Lloyd
 Industrial Services GmbH.
 (printed/signature/stamp)



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Sl no	Content
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4.1	Hydraulic Proof Pressure Test
4.2	Minimum Hydraulic Burst Pressure Test
4.3	Dismantling and Reassembly Test
4.4	Minimum Static Gas Pressure (vacuum test) Test
4.5	Minimum Static Gas Pressure Test
4.6	Hydraulic Impulse and Vibration Test

3 Performance of the test

The tests were performed by using the testing equipments and calibrated pressure gauges.

The test are carried out, witnessed by the surveyor of Germanischer Lloyds Industries & Services, GmbH, Mr Rajesh Raikar of Mumbai India

The following tests were performed:

- 7.2 Hydraulic Proof pressure test
- 7.3 Minimum hydraulic burst pressure test
- 7.4 Dismantling and reassembly test
- 7.5 Minimum static gas pressure (vacuum test) test
- 7.6 Minimum static gas pressure test
- 7.7 Hydraulic impulse and vibration test

4 RESULTS

4.1 Hydraulic Proof Pressure Test

All tested samples meet the requirement of 1.5 times the maximum permissible working pressure

CODE	Tube wall thickness	Working Pressure		Test Pressure		Time
		Bar	Psi	Bar	Psi	
PAN 001-1/4"	0.049	421	6000	631	9000	5
PAN 002-3/8"	0.065	421	6000	631	9000	5
PAN 003-1/2"	0.083	421	6000	631	9000	5

