

# PERFORMANCE TEST WITNESS REPORT

**Report. No: O-EM-VERI/19/TC550732/12254 Rev 0**

## **BHOLA ENGINEERS PVT. LTD.**

<b>Office:</b> Bhola Engineers Pvt. Ltd., Plot No: 57, Apple Industrial Hub, National Highway No: 08, Near Nallasopara Phata, Pelhar, Vasai (E) – 401208, Palghar, Maharashtra, INDIA	<b>Works:</b> Bhola Engineers Pvt. Ltd., Plot No: 57, Apple Industrial Hub, National Highway No: 08, Near Nallasopara Phata, Pelhar, Vasai (E) – 401208, Palghar, Maharashtra, INDIA
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The under mentioned surveyor did visit the facilities, upon request, of the above manufacturer, of Mechanically Attached Fittings [MAF], between 4<sup>th</sup> May 2019 to 27<sup>th</sup> September 2019, for witnessing the performance appraisal of tests mentioned below, and conducted on the below mentioned sizes of Fittings as per norms of ASTM F1387-99 [Reapproved 2012]

Grades of Material of Fittings: Stainless Steel ASTM A276 or Equivalent & ASTM A182 SS316  
 Grades of Material for Tubes: ASTM A269 TP SS316 Seamless

[1] Test Parameters Used:

- Temperature during testing: Ambient [25°C±10°C]
- Test Pressure retained within ± 5% Psig
- Test Medium: Demineralised Water/SAE Grade 10W Oil for Hydraulic Tests
- Metallurgical Tests carried out at NABL Approved Laboratories

### MANDATORY TESTS

[2] Sizes of Mechanically Attached Fittings [MAF], used for Performance Appraisal of Tests [Size of Fittings Tube OD x Wall Thickness [WT]	[3] Following Tests were Witnessed as per ASTM F1387-99 [Reapproved 2012], along with review of applicable documents
3/16" OD x 0.028" WT	Selection of Test samples
1/8" OD x 0.028" WT	Verification of Material Properties
1/4" OD x 0.028" WT	Performance Test [A1]
5/16" OD x 0.035" WT	Examination of Specimen [A2]
3/8" OD x 0.035" WT	Pneumatic Proof Test [A3]
1/2" OD x 0.049" WT	Hydrostatic Proof Test [A4]
5/8" OD x 0.065" WT	Impulse Test [A5]
3/4" OD x 0.065" WT	Flexure Fatigue Test [A6]
7/8" OD x 0.083" WT	Tensile Test [A7]
1" OD x 0.083" WT	Hydrostatic Burst Test [A8]
1 1/4" OD x 0.109" WT	Repeated Assembly Test [A9]
1 1/2" OD x 0.134" WT	Rotary Flexure Test [A10]
2" OD x 0.188" WT	

*Notice: The certificate is subject to terms and conditions overleaf. Any significant changes in design or construction may render this certificate invalid. The digitally signed and electronically distributed document is the original and valid certificate.*

All the above tests have been witnessed and Found Satisfactory. The details of the applicable test pressures with reference to various tests mentioned above have been Witnessed and Attested by DNV GL in the reports produced by the manufacturer.

The above mentioned Mechanically Attached Fittings meet the requirements of ASTM F1387-99 [Reapproved 2012] with reference to Mandatory Tests mentioned in the specifications and conducted therein.

<p>DNV GL Project No: TC550732          Place of Issue: Pune          Location of Test: Vasai [East]          Works          Date of Issue: 2019-10-31</p>		<p>Witnessed by</p>  <p>G. I. Sindgi          Gaus Ibrahim Sindgi          Senior Surveyor &amp;          Service Lead [PED]          DNV GL [Oil &amp; Gas]</p>
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