

Original Date: October 15, 2008 Revision Date: October 23, 2013

Prepared for: SSP FITTINGS CORP, 8250 Boyle Parkway; Twinsburg, OH USA 44087-2200.

**Test Protocol:** ASTM F 1387-99 (Reapproved 2005), Standard Specification for Performance of Piping and Tubing, Mechanically Attached Fittings, and GE 362A2915, General Electric Compression Fitting Test Specification, and SSP Tube Fitting Test Procedure P-001-13B-76.

Purpose: To determine compliance of SSP Duolok 316 SS Instrumentation fittings with <u>ASTM F 1387 – 99 (Reapproved 2005)</u> and the more stringent <u>General Electric</u>, <u>GE 362A2915</u> test procedure.

**Test Conditions:** OnSpeX 3<sup>rd</sup>-party witnessed all tests to assure compliance to ASTM and GE test specifications. All tests were performed at the Tech Center Laboratory of SSP FITTINGS in Twinsburg, OH, except for vibration testing, which was performed at OnSpeX test facility in Cleveland, OH.

**Test Methods:** All fittings were assembled in accordance with SSP published instructions. All tests were performed in accordance with ASTM F 1387, Standard and Supplementary Tests, as follows: Sizes under test include Duolok 316 SS ½ ½ ½, ¾ and 1 diameters; Metric sizes are proportional in design to inch in every respect and are included in sizes 6mm thru 25mm.

Refer SSP Eng Doc # P-001-13B-76-( Rev . - ) Subject Tube Fittings Test Procedure conforming to the requirements of ASTM F 1387 – 99 (Reapproved 2005)

**ASTM F 1387 Standard Performance Tests:** A2 Examination of Specimen, A3 Pneumatic Proof Test, A4 Hydrostatic Proof Test, A5 Impulse Test, A6 Flexural Fatigue Test, A7 Tensile Test, A8 Hydrostatic Burst Test, A9 Repeated Assembly Test, A10 Rotary Flex Test, Section 7.2 Intermixing of MAF Subcomponents (SSP Duolok 316 SS vs. Swagelok fitting components).

**ASTM F 1387 Supplemental Performance Tests:** S2 Thermal Cycling Test, S3 Elevated Temperature Soak Test, S4 Stress Corrosion Test, S8 Vibration Test. Intermix and Interchange test to ASTM F 1387, paragraph 7.2 Intermixing of MAF Subcomponents.

Test Results: See OnSpeX Witness Testing Report Number 2530771, R5, June 27, 2012 for detailed test information and related results. Also refer SSP ASTM F 1387 Testing Data Sheets ITR - 778 - 00, Test Data.

**Conclusion:** SSP Duolok 316 SS Instrumentation fittings meet all the above requirements of ASTM F 1387 – 99 (Reapproved 2005), and the GE 362A2915 test procedure (excluding GE's initial makeup torque).

Prepared by:

Mike Schmidt, Project Technician

Approved by:

Justin Olesky, Team Lead

8503 East Pleasant Valley Rd. Cleveland, OH 44131-5516

www.onspex.com

Confidential

Toll Free: 888-CPE-3335 Telephone: 216-520-8981 Fax: 216-520-8983