



Recommended Procedure for Annual Re-certification of Flow Line Safety Restraints

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Rev. 1
ECN: 4440
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1.0 SCOPE: This procedure covers the annual re-certification of SPM Flow Line Safety Restraint (FSR) components.

2.0 STANDARDS: The following standards will be used, where applicable, in conjunction with annual re-certification procedures:

- SPM SP 8-2-2002
- MIL-STD-105: Sampling
- SPM PWI-1057RD

3.0 RESPONSIBILITY:

The ultimate accountability for securing the FSR annual re-certification resides with the field personnel responsible for the installation of the flow line. The recommendations stated in this procedure are broad in spectrum.

The actual FSR re-certification will be done by an SPM representative or their assign.

4.0 FUNCTION: The function of the annual re-certification procedure is to ensure that all components are in acceptable working condition and are functioning properly. The FSR re-certification includes the same visual examination of each FSR component that should be done prior to each installation throughout the course of the year.

Flow line Safety Restraints cannot be repaired and any FSR components that are damaged or are otherwise unacceptable should be discarded immediately.

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5.0 PROCEDURE:

5.1 Safety Restraints (Spines & Ribs) –

5.1.1 Stage ONE – Visual Examination

The FSRs are designed so that failures are generally visible. If there are any signs of damage, the affected components should be replaced. Remove Safety Restraints from service if inspection indicates the following damage:

- 1) Any damage to the FSR cover where internal red-stripped white core yarns are exposed (This includes cuts, holes, tears, snags, abrasions or other damage to cover).
- 2) The safety restraint ID tag is missing or has become illegible.
- 3) Knots or other modifications to any part of the FSR.
- 4) Melting, charring, or other indications of excessive heat to any part of the FSR.
- 5) Acid, caustic burns, or other signs of chemical deterioration to the FSR.
- 6) Any FSR that has been stretched beyond its original design length or deformed or otherwise misshapen.
- 7) Any other visible damage which causes doubt as to the strength of the FSR.

Note that SPM's Flow Line Safety Restraints have been designed and manufactured so that a visual examination should be sufficient to determine if each component is in allowable working condition. The FSR's outer cover, or sleeving, is designed to rip or otherwise fail before the inner, load-bearing or "core yarns" have been stretched beyond their elastic strength.

5.1.2 Stage TWO – Proof Load Testing

For annual re-certifications, SPM does offer additional load testing for all safety restraints.

- Sampling for proof testing per SP 8-2-2002 should be done in accordance with MIL-STD-105-E, Table 1 Gen. Insp. Level 1, AQL 4.0, Table II-A.
- Proof test restraints to failure. While not mandatory, this service is available in the U.S, and is recommended.

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5.2 Anchor Crossover Assembly –

Remove Anchor Crossovers from service if inspection indicates the following damage:


- 1) Excessive rust or corrosion prevents the crossover from operating properly.
- 2) Excessive wear on the OD or ID of crossover.
- 3) Any damage to integral female threads that would prevent proper installation.

Inspection of pressure bearing elements of anchor crossover should be done in accordance with SPM PWI-1057RD.

5.3 “Anchor”-type & “D”-type Shackles –

Remove shackles from service if inspection indicates the following damage:

- 1) Visible signs of damage or galling on screw threads that would prevent proper operation.
- 2) The metal shackles show excessive wear.
- 3) The shackle’s screw pin is damaged and cannot be fully installed into the mating threads.
- 4) Excessive rust or corrosion prevents the shackle from operating properly.

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