

Newsletter-38

Understanding MSS SP-58 – Pipe Hangers and Supports

1. What is MSS SP? MSS SP stands for *Manufacturers Standardisation Society Standard Practice*. It is a set of guidelines and standards developed by the Manufacturers Standardization Society of the Valve and Fittings Industry, aimed at ensuring consistency and safety across various mechanical and construction processes.

2. MSS SP-58 Overview MSS SP-58 specifically deals with *Pipe Hangers and Supports*. It covers everything from materials, design, and manufacture to selection, application, and installation of pipe hangers and supports. This standard is crucial for ensuring that piping systems are safely and efficiently supported in various industrial applications.

3. Evolution of the Standard Historically, the guidelines for pipe hangers and supports were spread across three different standards: MSS SP-58, MSS SP-69, and MSS SP-89. However, MSS SP-58 now encompasses all the requirements previously outlined in these three standards, rendering MSS SP-69 and MSS SP-89 obsolete.

4. Industry Recognition MSS SP-58 is a recognized standard with official backing. It is specifically referred to in ASME B31.1 (the American Society of Mechanical Engineers Code for Pressure Piping), making it a critical design reference for pipe hangers and supports.

5. Key Data and Guidelines in MSS SP-58 The following are the key elements provided in MSS SP-58 that guide the design and selection of pipe hangers and supports:

- **Allowable Stresses (Table A2 & A2M):** Lists the allowable stresses of various materials at different temperatures, along with guidelines for materials not listed.
- **Stress Considerations:** Specifies factors for allowable stresses in shear, bending, compression, welds, and threaded portions (Clause 4).
- **Minimum Design Load Ratings (Table 1):** Provides the minimum load ratings for pipe hanger and support assemblies.
- **Load Ratings of Threaded Rods (Table 2 & Table 2M):** Lists load ratings for various sizes of carbon steel threaded rods.
- **Spacing Recommendations (Table 4):** Provides the recommended hanger and support spacing for horizontal pipes.
- **Variable Spring Hangers (Clause 7.7.1.2):** Specifies the recommended maximum variability factor for selecting variable spring hangers.
- **Constant Load Hangers (Clause 7.7.1.3):** Defines the allowable variation in the supported load of constant load hangers.
- **Spring Design Guidelines (Clause 8):** Provides detailed guidance on spring design.
- **Fabricating Tolerances (Clause 9.2):** Outlines the required tolerances for fabrication processes.
- **Protective Coatings (Clause 10):** Specifies requirements for protective coatings.
- **Testing of Components (Clause 11):** Details testing procedures for hanger components.
- **Manufacturing & Fabrication Processes (Clause 12):** Includes cold forming, hot forming, and welding requirements.
- **Preheat and Post-Weld Heat Treatment (Table 7 & Table 7M):** Specifies preheat and post-weld heat treatment requirements for materials.

- **Packaging, Shipping & Storage (Clause 13):** Defines guidelines for packaging, marking, shipping, receiving, and storing hangers and supports.
- **Hanger Installation Practices (Clause 14):** Details best practices for the proper installation of hangers.
- **Hanger Record Sheet (Figure 3):** A suggested form to document details about hangers.

Conclusion MSS SP-58 is an essential standard for the safe and efficient design, selection, and installation of pipe hangers and supports. It combines detailed guidelines and tables, offering engineers and manufacturers valuable resources to ensure structural integrity, safety, and operational efficiency. This comprehensive standard not only supports the design process but also plays a vital role in maintaining industry safety and performance across a wide range of piping systems.

For further details on MSS SP-58 or to access the full standard, visit the Manufacturers Standardization Society website or refer to the ASME B31.1 for specific application contexts.

For past newsletters please look up our website www.pipehangers.in

About Pipe Hangers:

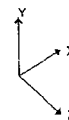
A Global Solution to Spring Hangers and Supports

We are the leading manufacturer of spring hangers, supports & accessories. Over the past 40 years we have supplied to major power plants, refineries, nuclear installations & process industries in India & several International projects.



Pipe Hangers & Supports Private Limited

Information Req'd by Pipe Support Manufacturer



- 1) Hot Load (Operating Load) in Kgs : _____
- 2) Thermal Movement / Travel (Direction + or -) in mm : UP (+) _____ mm
- 3) Type of Hanger Variable / Constant / Rigid : Variable Effort Support
- 4) For Constant Add Over Travel : ☐ Yes ☐ No
- 5) For Variable Springs Max Allowable % Load Variation : _____ %
- 6) Horizontal / Lateral Movement (If any) : 'X' Dir _____ mm / 'Z' Dir _____ mm
- 7) Hydro Load (If any) : _____ Kgs
- 8) Model & Type of Support : _____
- 9) Assembly Length (From BOS/TOS to Pipe CL) : _____ mm
- 10) Operating Temperature : _____ Deg C
- 11) Pipe Insulation Thk : _____ mm
- 12) Pipe Material : _____
- 13) Require Pipe Shoe for Foot Mounted Support : ☐ Yes ☐ No
- 14) For Foot Mounted Support Match Height : ☐ Yes ☐ No
- 15) Attachments like Lugs, Cleats Welded to Pipe in Scope : ☐ Yes ☐ No
- 16) Operating Load includes Wt of Accessories like Clamp, Tie Rods, Cleats, Lugs etc. : ☐ Yes ☐ No
- 17) Preferred Surface Protection / Painting : _____
- 18) For 'G' Type / Double / Trapeze type Hanger the Load Given above is for 1 assembly consisting of 2 Hangers / Individual Hanger : ☐ Yes ☐ No
- 19) Hot load or Cold load Setting

