News Letter-34

Site Issues And Feedback

Pipe Hangers and Supports has always provided assistance at site to customers, for the thirty nine years that it has been in existence. However, in the past few years we have brought in added focus to this aspect, based on the requirements we have been receiving from our customers. We now have a dedicated set up for offering site services which consists of people who are very experienced in the manufacture of our product and its operation. Due to this, we are able to offer this service not only for hangers supplied by us, but also for those supplied by other manufacturers.

Our service at site for new projects normally involves inspecting the hangers to see whether they have been erected properly and whether the hangers have been "floated" after hydrotest of the piping system. In case any correction is to be carried out, we offer advice regarding the same and also guide the customer to carry it out. In the case of running projects, we inspect the hangers to check whether they are functioning properly and whether any replacement is required.

Based on our experience we thought it fit to record our observations and recommendations, which we feel will be useful for engineers at site.

Busting the myths

Myth 1- The cold or hot position of the spring hanger not matching with the design values indicates a problem with spring hanger which the spring hanger manufacturer should resolve.

Fact: It is the piping that decides the behavior of the spring hanger and not vice versa. Hence the difference between the actual and design positions can only be explained by the agency that carried out stress analysis of the piping. Spring hanger manufacturer can only demonstrate that the spring hanger is working properly.

Myth 2 – The cold and hot position of the spring hangers should exactly match the design values

Fact: The weight at each support location is got as output from stress analysis which is carried out using nominal values of pipe diameter, pipe thickness, pipe weight, insulation thickness and insulation density. Since there is a tolerance on all of these parameters, there is bound to be difference between the actual values at site and the design values. Similarly, the thermal movement is based on theoretical calculations related to thermal expansion of the piping and the actual values can vary slightly in practice.

Myth 3- Spring hangers can be repaired by the manufacturer at site

Fact: Normally spring hangers only require adjustment which can be carried out at site. But in case any major repair is required, it can only be done in the factory where certain facilities for dealing with the compressed spring are available.

Myth 4- The load of the constant load hanger can be adjusted by rotating the turnbuckle, similar to variable spring hangers.

Fact: Rotating the turnbuckle of constant load hangers only impacts the movement and the elevation and has no impact on the load.

In extreme cases it is possible adjust the load of a constant load hanger. This is done by rotating the load adjuster nut, but it should be done only in consultation with our site services team. The load adjustment done using the load adjuster nut would be approximate and not very accurate.

Dos and Don'ts

1. Please preserve the documents such as data sheets and drawings related to hangers and supports. They will be required for monitoring the performance of hangers and also for reordering, if required.

2. Please record the details of the hangers and supports in a hanger record sheet after the initial installation and also after every shut down. The suggested format of the record sheet is given in Figure 3 of MSS SP58.

3. Periodic maintenance of spring hangers and ancillaries which involves cleaning them of dust and ash. Threaded portions should be subjected to cold zinc spray to avoid rusting, while components such as spring boxes are to be painted over.

4. The spring hangers are sent to site in locked condition. Hangers should be unlocked by loosening the combinuts and the hangers should be floated after the hydrotest of piping is complete.

5. Ensure that both the combinuts are loosened simultaneously to avoid tilting of the pressure plate.

6. Before releasing the locknuts please ensure that the RTO and assembly length are as per the drawings.

7. It should be ensured that the locknuts adjacent to hanger components like turnbuckle are tightened properly.

8. Ensure that the pipe weight is transferred to the hanger. In the case of bottom supported springs, ensure proper alignment of spring with the pipe base or trunnion.

9. For piping systems containing liquids, use external weights at each support location to equal the weight of the liquid, while floating the hangers.

10. Modify the load of a variable spring by rotating the turnbuckle in the case of hanging type and the nut below the load flange in case of bottom supports.

11. While unlocking the spring hangers in a twin arrangement, both hangers should be unlocked simultaneously to prevent the load from getting shared unevenly between the two springs.

12. While installing the stainless plate in a slider arrangement, ensure that that the side of the stainless steel plate with mirror finish is in contact with the PTFE or graphite. Also ensure that the protective sticker covering the stainless steel plate is removed.

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 39 years we have supplied to major power plants, refineries, nuclear installations & process industries in India & several International projects.

HANGER RECORD

				PREPARED BY		
COMPANY		SYSTEM		SHEET	OF	
LOCATION		PLANT NAME		DATE		

HANGER TAG NO.	N.S.E. W (A)	HANGER DATA				CONSTANT SUPPORT HANGER NAME PLATE DATA				VARIABLE SUPPORT NAME PLATE DATA		ELEVATION INITIAL COLD (E)	HANGER SCALE READING (D)								
		TYPE (C)	SIZE	FIG NO.	MFR	CALIB LOAD	TOTAL TRAVE	FACTORY POSITION (D)		LOAD			DATE								
								H	C	H	C		BY								
													COND (H,C)								

Notes :

(A) To identify the specific unit within a multiple support assembly. Where N= North, S = South, E = East, W= West

(B) Hanger size to be taken from the name plate

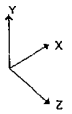
(C)For rigid,spring (variable or constant),anchor,guide,sliding, or other attachment, indicate by letter R,VS or CS, A, G , OR S, respectively

(D)0 indicates highest scale position with 5 being mid-point and 10 being lowest scale position

(E) Elevation of centreline of pipe, or other reference point, after cold springing anf final settings with line cold

Pipe Hangers & Supports Private Limited

Information Reqd 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 : VariableEffort 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