



## NEWSLETTER- 12

In the earlier newsletters, we have seen static loading supports- viz

- a. Spring hanger taking Cold load, Hot load.
  - b. Constant support having fixed load & taking care of high vertical deflections.
1. There is one more load acting on pipe (non-continuous) which we have to necessarily understand. That is Hydraulic load or simply "Hydro load". Before we go into details of this load let us understand a bit about the piping system.
  2. Piping can be defined as a circular conduit which carries any medium say steam, water, air, oil, gas hydrocarbons etc from inlet point to outlet point. The medium can be conveyed either by gravity or by **pressurizing** the fluid, so that the flow takes place. Normally any piping will be subject to pressure & temperature by the medium of flow. For the time being let us look at the piping having pressurized medium flowing inside.
  - 3.a. Whenever there is pressure there tends to be leaks due to inefficient welds/flange etc. Depending on the intensity of pressure the piping system can be termed as low pressure, medium pressure & high pressure piping.
  - 3.b. But these terms are only relative. Take an example of a country where the average height of a human being is only 5 feet, then a person with 5½ or 6 feet is considered to be taller. Whereas if the average height of person in the country is 6 ft then anybody who is >6ft is termed as taller. Similarly any factory handling piping with max pressure of say 40 kg/cm<sup>2</sup>, that system is called as High pressure. Maybe systems with 20 kg/cm<sup>2</sup> is called as medium pressure & far less pressure is called as low pressure piping.
  4. Any way piping subjected to pressure is prone for leak. How does this leak occur?  
Length of piping will be dependent on the inlet source & outlet point. Any piping is connected by
    - a. Socket Weld (used only in small bore piping (upto 2")),
    - b. Flanged connections (in low pressure systems)
    - c. Butt welded connections (>2", medium & high pressure systems).
  5. Apart from that piping has branching off- welded tees, forged tees, pressure, temperature tappings(weld), drain, vent connections (all are welded tapings). Also piping may have valve-gate (for on/off), regulating globe valve (for flow regulation), throttle (control valves), non-return valve (allows flow in one way). All these may have bolted bonnet- cause for leak.

Let us discuss this leakage & impact on piping & pipe supports in the next issue. Till then bye!

For past newsletters please look up our website [www.pipehangers.in](http://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 32 years we have supplied to major power plants, refineries, nuclear installations & process industries in India & several International projects.**