



Pipe Supports (19.3.13)

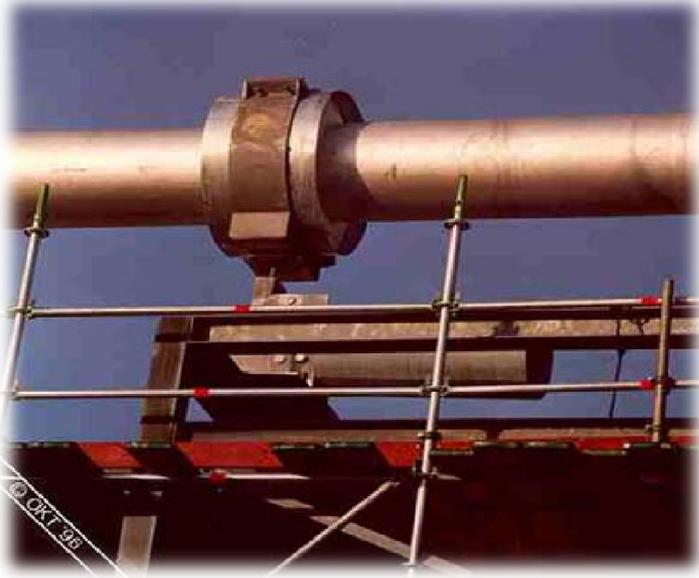


Prepared by:

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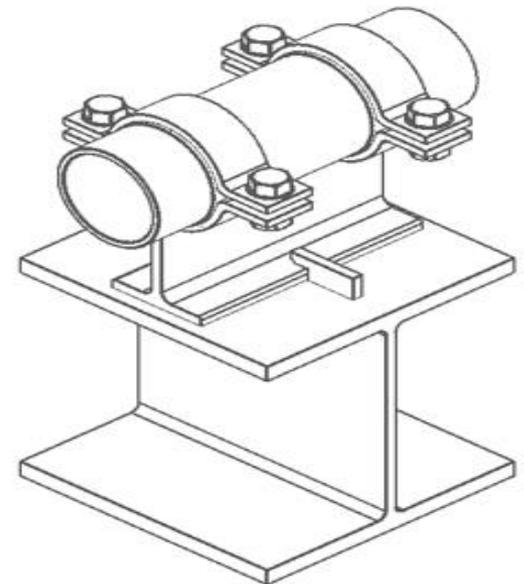
Pipe Supports





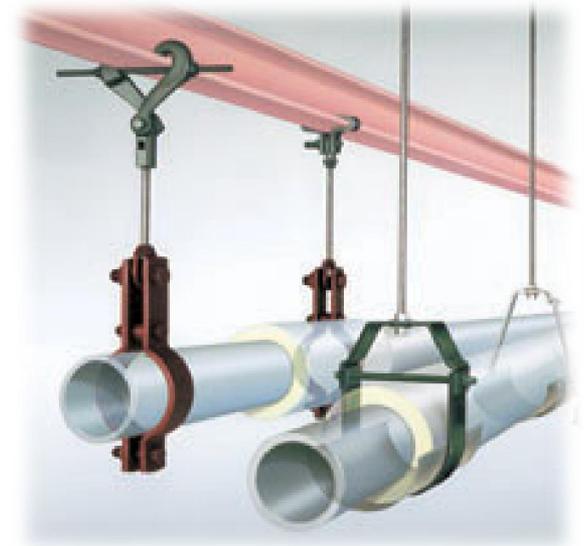
Pipe Supports

- A pipe support is a device designed to carry the weight of the pipe
- There are a number of typical pipe supports that can be installed to support dead weight loads, and restrain the pipe for thermal and dynamic loads.
- The four main functions of a pipe support are:
 - To guide
 - To anchor
 - Absorb shock
 - Support specified load



Hangers

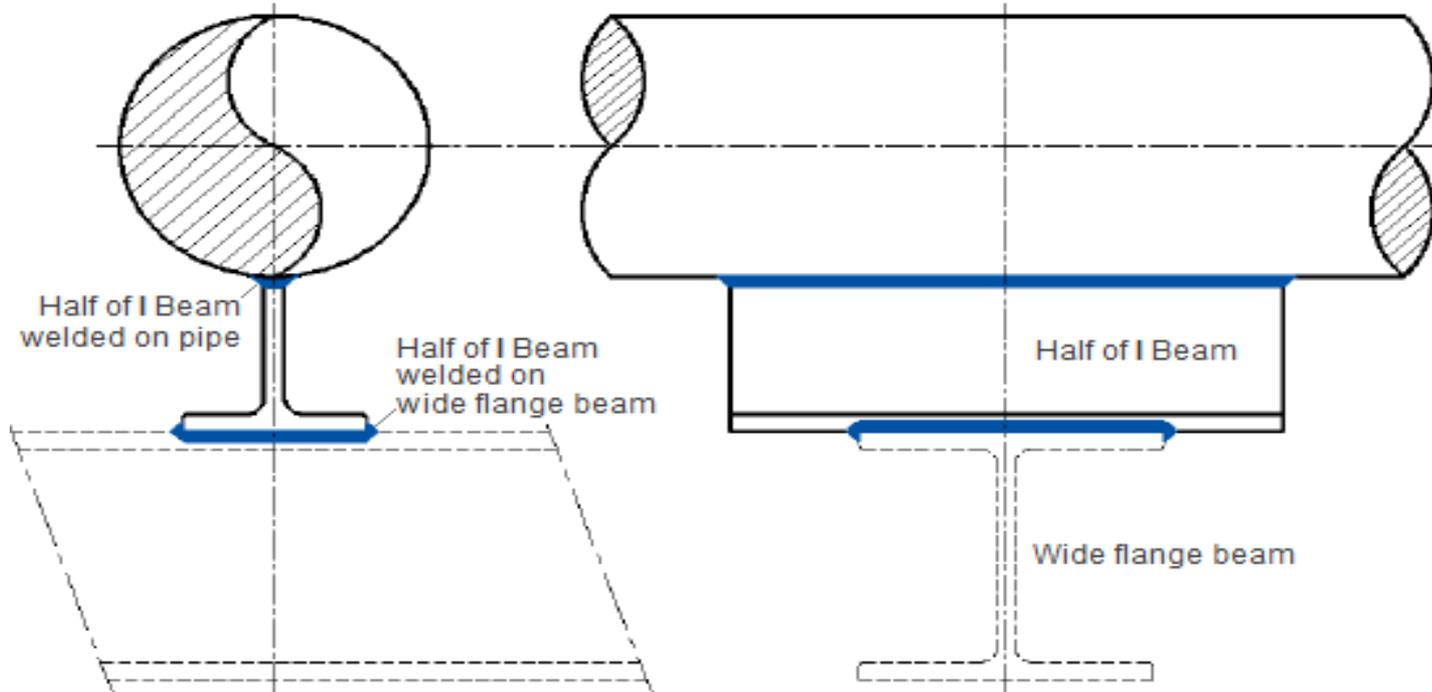
- A vertical pipe support that incorporates a rod. It may be a rigid, variable spring or constant support hanger.
- Rod hangers or pipe hangers attaches to the pipe by a U bolt, a clevis, a pipe clamp etc.





Anchors

- A pipe anchor is a rigid support that restricts movement in all three orthogonal directions and all three rotational directions. This usually is a welded stanchion that is welded or bolted to steel or concrete





Guides





Guides

- When total restriction of pipe movement is not required, pipe guides are used.
- Pipe guides confine movement along the pipe's lineal axis. In piping terms this is called a sliding point. They are used primarily to maintain proper line spacing in a pipe rack and they prevent lateral or sideways movement.
- Unlike the pipe anchor which is welded to the pipe and steel structure, the guide allows pipe to slide lengthwise between two angle shapes. When the pipe is supported on shoes, the angle shapes are positioned on either side of the shoe.



U-Bolts



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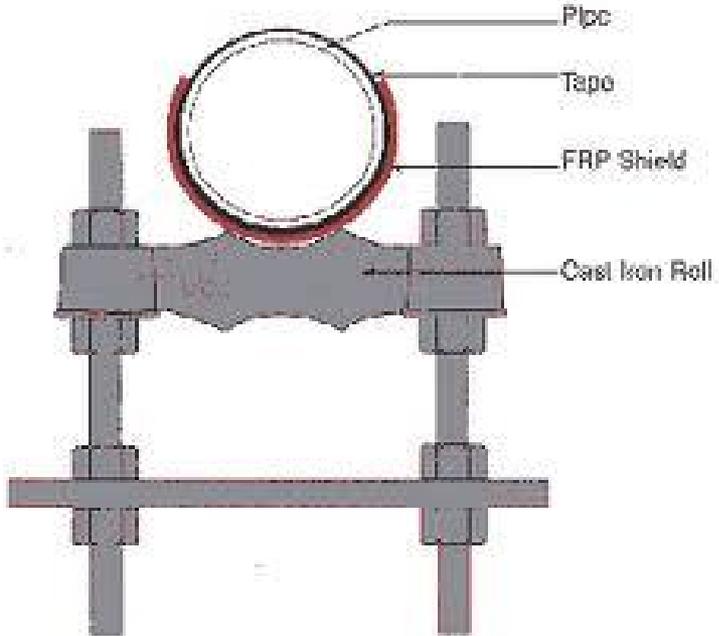


U-Bolts

- U bolt is a u shaped bolt with two threaded arms.
- There are many other uses of U bolts but in pipe supports it is often used with some other supports like hangers, guides etc..
- It mainly restricts pipe against pulling action



Rollers



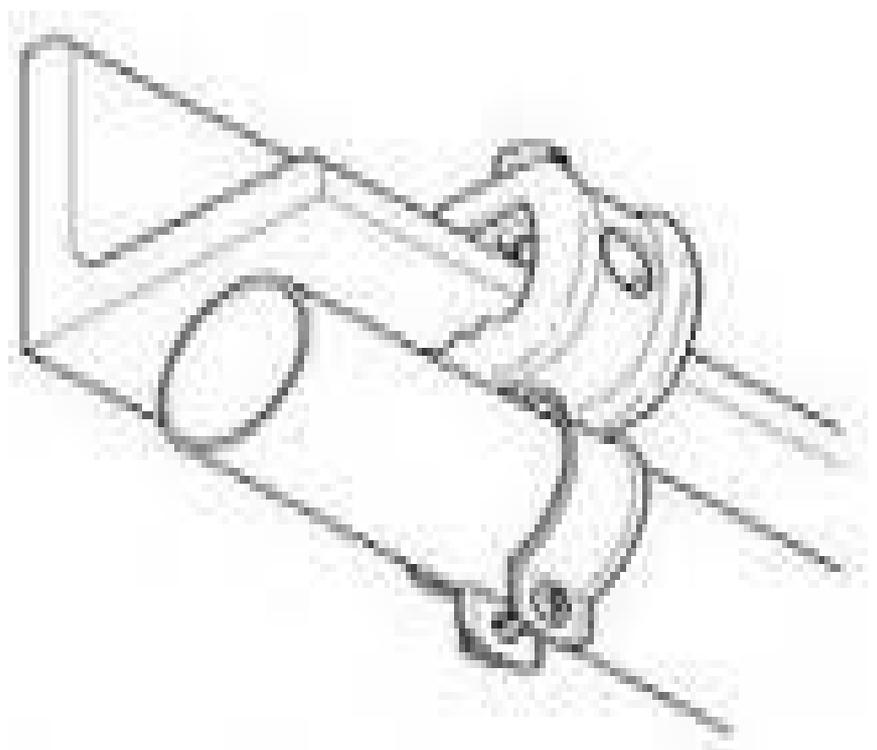
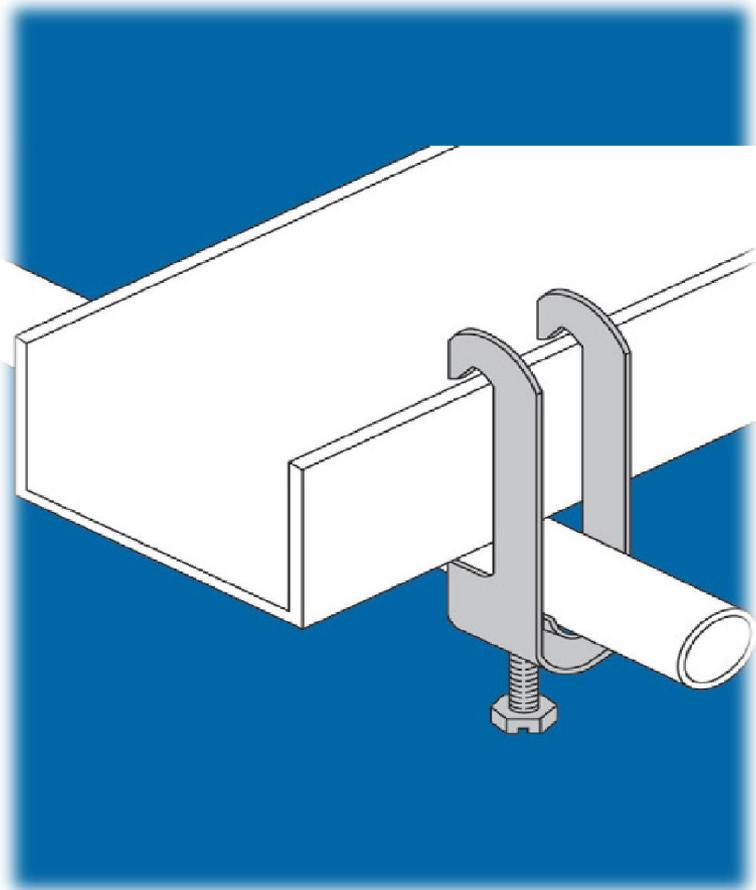


Rollers

- The pipe work system must be sufficiently flexible to accommodate the movements of the components as they expand
- Steam or condensate pipe lines usually expand thermally due to the high temperature
- Roller supports are ideal methods for supporting pipes, at the same time allowing them to move in two directions.



Girder/beam clamps





Girder/beam clamps

- They are used to clamp the pipe with a beam or girder.
- They are not suitable for heavy or bulky piping system