

NEWSLETTER- 10

(Snubber – Chapter 2)

In the earlier issue under the topic “**How a Hydraulic Snubber working/functioning**” we have seen that the snubber takes care of three functions: “Snubber should absorb the thermal movement in the directing of snubber.”

The 1st function is:

A1. How is Thermal movement (\pm movement) absorbed?

This can be understood through a simple (crude) way of explanation.

Let us consider that oil is poured very slowly (low velocity) from a container (chamber1), through a small funnel having a **TINY** hole (PORT) to another container (chamber2). So long as oil is poured very slowly (low velocity), it flows down gradually through the funnel hole from container 1 to container 2.

If the same oil is poured fast (high velocity) through the **tiny** hole, it gets **choked** & oil does not flow down through the funnel.

In a Hydraulic Snubber somewhat similar condition/situation occurs:

The snubber is (absorbing) moving in (compressed during -ve movement) or moving out (expanded during +ve movement) like a SHOCK absorber, but **acting very slowly**.

This happens due to Hydraulic oil flowing from one chamber to another chamber through a tiny port at a very low velocity during thermal movements. We must note that the thermal movements will be normally very slow as the temperature raise is gradual.

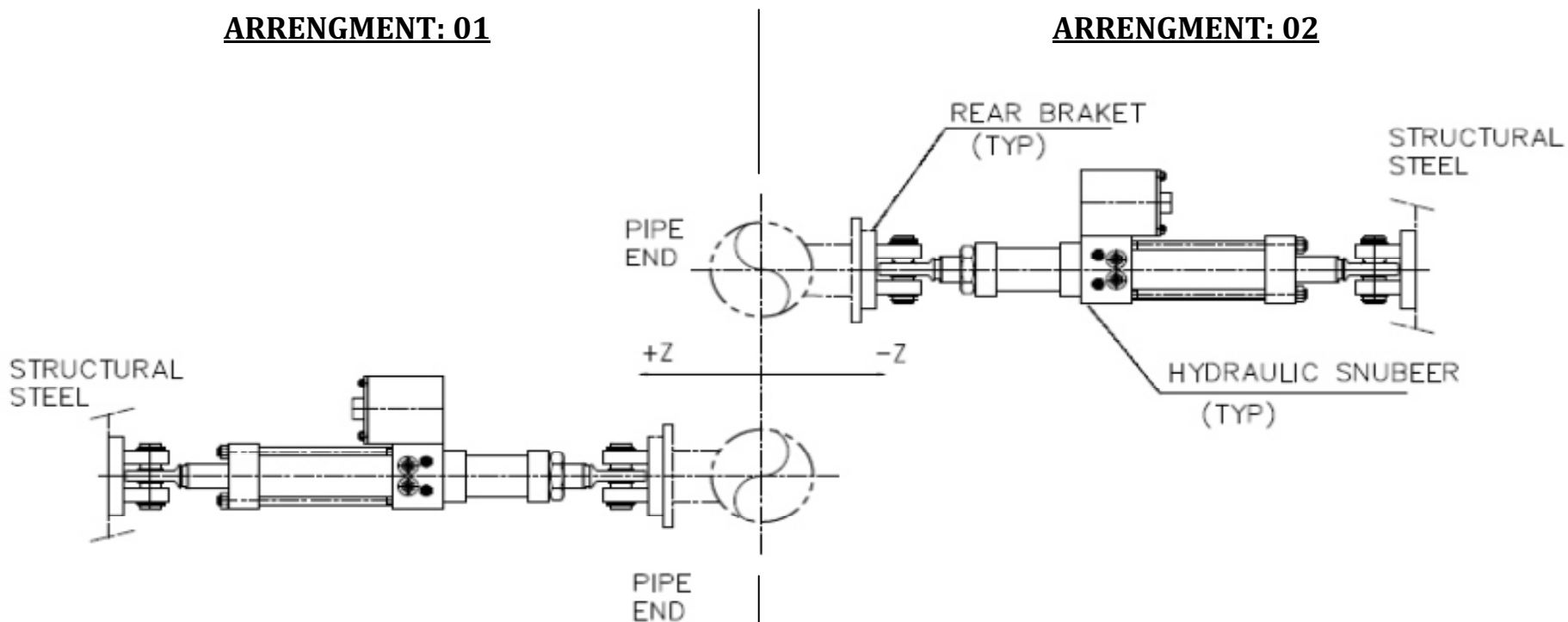
When there is sudden movement during dynamic condition, the oil tries to flow quickly which cannot happen & gets **choked**.

Further, depending on the location of the snubber with respect to pipe movement axis, the compression & expansion of snubber differs. Accordingly, the snubber is compressed or expanded depending on its position with reference to pipe & its movement.

This can be clearly understood through the following illustrations.

ARRENGMENT: 01

ARRENGMENT: 02



IN THIS CASE

-Z is Expansion

+Z is Compression

IN THIS CASE

-Z is Compression

+Z is Expansion

Rest let us see in the next issue. Till then BYE!

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