

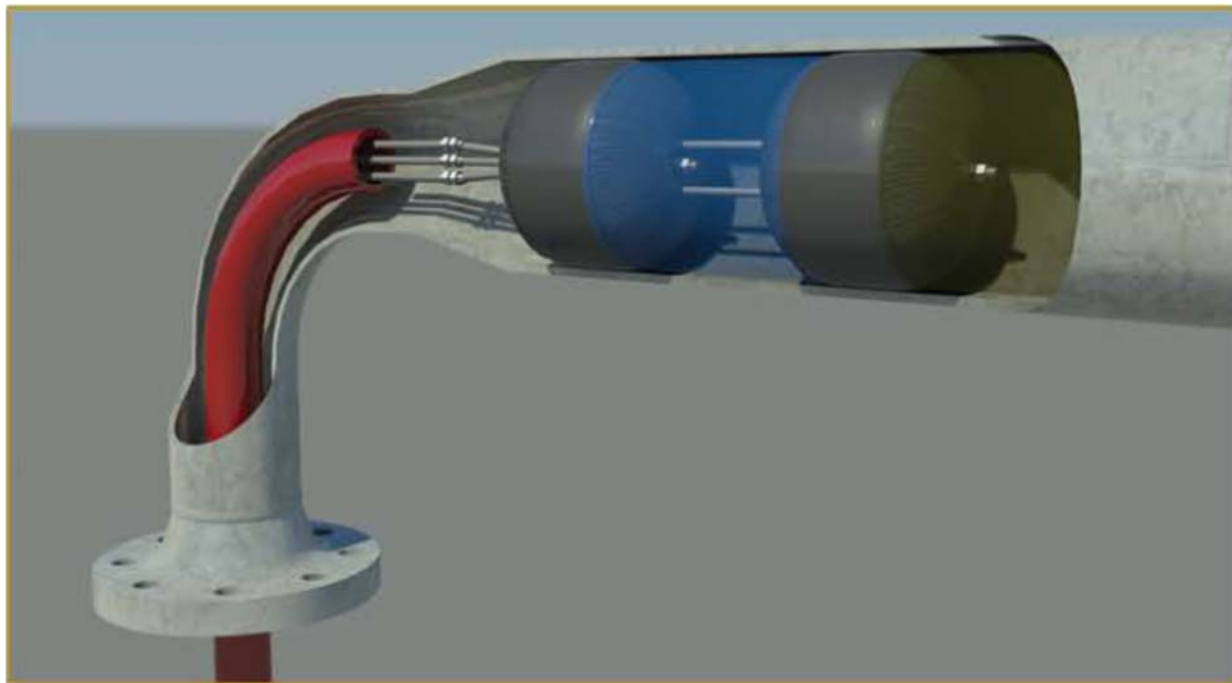
2016 – Present project updated that PAPS are representing

STATS GROUP – PTTEP GASBAG 18"



In order to mitigate the risk of the ignition (flash off) of flammable vapours or gasses, a vapour barrier is a recommend best practice during hot work operations particularly those that are carried out on existing hydrocarbon service pipe work systems.

The flow of hydrocarbon medium under pressure through a pipe work or pipeline system will, over time, impregnate the scale and the superficial inner surface of the pipe and also the fabric of any hardware and fittings pertaining to the system. During maintenance periods, when the system has been depressurized cleaned and purged, the ambient pressure within the pipe work allows flammable gases and vapours to be released from any residual hydrocarbon debris, and these vapours may build up to a level of concentration that will be, potentially explosive.



*Figure 1 – Gas Bag arranged as a dual vapour barrier to allow hot work*

The installations of a verified vapour barrier mitigate the risk of this explosive mixture migrating to the hot work area and encountering the source of ignition that will cause explosion (flash-off).

The dual gas bag assembly provides a verified vapour migration barrier to significantly reduce the risk of ignition (flash off) of flammable vapours or gasses during hot work operations. The barrier is created by inflating the front and rear bags and introducing an inert gas such as nitrogen or argon at a positive pressure between the bags.

Dual gas bag assemblies are an ideal solution to the requirement for a vapour barrier in situations where the access to the pipe work is restricted or the location of the vapour barrier is required through a branch or beyond an elbow.

With the animation can be found at [www.paps-thailand.com/statsgroup.htm](http://www.paps-thailand.com/statsgroup.htm)

The Gas Bag vapour migration barrier is created by deploying the dual bag assembly into the existing pipe work, inflating the front and rear bags and introducing a positive pressure inert gas into the void between the front and rear bags. **For Hot Work** the rear gas bag must be located beyond the reach of the thermal conduction from the heat source along the pipe work. (The rear bag must be a minimum of 1500mm from the heat source).

The Gas Bag vapour barrier must not be installed in a pipe or system where there is the potential for pressurisation of the atmosphere contained by the barrier. The containment atmosphere must be maintained at ambient pressure. isolate and install a suitable bypass line.



*Figure 2 – During FAT at PTTEP workshop Sonakhla*



*Figure 3 – Deployed Dual Gas Bag into pipe spool*



*Figure 4 – Pressurise Dual Gas Bag during FAT*

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