METHANE FROM FLARING TOOLKIT



Composition: Fixed Flange Probe

Uncategorized > Composition: Fixed Flange Probe

Fixed flange probes are permanently installed on a flare system line usually on the top of a horizontal pipe or the flare knock out drum. They are flanged connected, isolated with a DB&B valve, and can only be removed for maintenance during a flare system shutdown.

How it Works

A fixed flange probe protrudes through a double block & bleed valve isolation arrangement to extract a sample of the flowing gas nominally from the centre third of the pipeline.

Fixed flange probes inserted into a process line, such as a flare line, must undergo wake frequency calculations to ensure they will not fail during maximum flaring conditions.

With a flare line, the fixed flange probe must protrude into the flare line by a minimum of 25.4mm (1") to extract the sample and the maximum intrusion depth is dependent on the wake frequency calculation acceptable criteria.

Fixed flange probes can only be inspected or have maintenance conducted during a flare system shutdown.

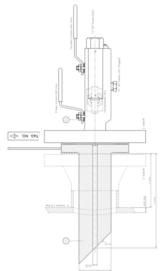


Figure 1: Principles of a fixed flange probe



Figure 2: Installed sample probe for a sampling system

Fixed flange probes are installed on multiple systems globally to either take samples for laboratory analysis or analysis by on-line analyser systems.

Advantages

✓

Low equipment costs

Low maintenance costs
Limitations
Can only be installed during a flare system shutdown
Can only be inspected and/or maintained during a flare system shutdown
Must be designed to handle the very high velocities in flare system pipework

Go Deeper

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Case study

No case study available at this time.

Do I know the gas composition?



Composition: Spectrometry (GC – MS)



Composition: On-Line



Composition: Laboratory Analysis



Composition: Specific Gravity Analyser (Relative Density)



Composition: Wobbe Index Analyser (Calorimeter)

