METHANE FROM FLARING
TOOLKIT

Composition: Retractable Probe

Do I know the gas composition? > Composition: Retractable Probe

Retractable probes are permanently installed on a flare system line usually on the top of a horizontal pipe, they are flanged connected, isolated with a DB&B valve, and can be removed for maintenance and inspection during normal operation.

How it Works

Retractable probes protrude through a double block & bleed valve isolation arrangement with a flange to allow for retraction to extract a sample of the flowing gas.

Retractable 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 retractable probe must have a probe diameter further than 25,4mm (1”) and must not protrude into the flare line greater than 25.4mm (1”) to extract the sample to meet the wake frequency calculation acceptable criteria.

Retractable probes can be removed for inspection or maintenance under normal operating conditions.

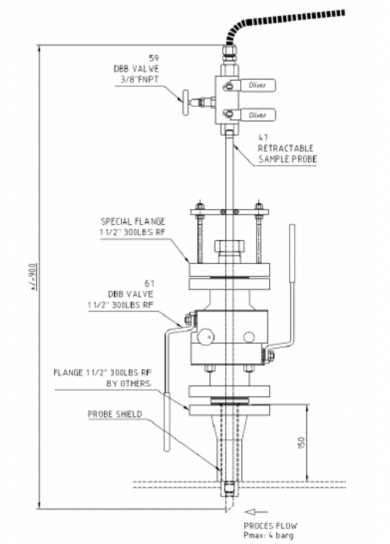


Figure 1: Principles of a fixed flange probe

Advantages

- Can be inspected or maintained during normal operations

Limitations

- Must be designed to handle the very high velocities in flare pipework

Go Deeper

- Vendor Website
- Vendor Website
- Vendor Website
- Vendor Website

Case study


Figure 2: Installed retractable sample probe for a sampling system

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

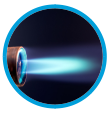
Do I know the gas composition?


Composition: Spectrometry (GC – MS)


Composition: On-Line


Composition: Laboratory Analysis


Composition: Specific Gravity Analyser (Relative Density)


Composition: Wobbe Index Analyser (Calorimeter)