

METHANE FROM FLARING TOOLKIT



Composition: Install New Nozzles

Do I know the gas composition? > Composition: Install New Nozzles

Installing a sample probe within an existing (Brownfield) operation is often a complicated exercise. Options are to install a sample probe using a hot tap or repurposing existing nozzles for sample probes. The preferred solution is installing new nozzles during a shutdown or an outage.

How it Works

To allow a sample of flare gas to be extracted for either laboratory or online analysis can require a new nozzle to be installed on the flare system to allow the sample probe to be inserted into the line.

Typical installation requirements for gas sampling state that the sample is to be extracted from the top of a horizontal pipe with a minimum of 10D upstream and 5D downstream free of disturbances and the nozzle for the sample probe should be a minimum of 50mm (2") diameter.

In a new facility (Greenfield), installation requirements are nominally easy to achieve as the system can be designed accordingly.

In an existing facility (Brownfield), installation requirements are nominally difficult to achieve, so pragmatism should be employed.

Any deficiencies to the installation requirements should be captured accordingly in any uncertainty analysis.

The above operations are required to be completed under a shutdown or an outage as it requires access to the normally pressurised flare system.

Advantages

- ✓ Nozzles can be installed to meet installation requirements
- ✓ Location of nozzle can be selected to allow optimal sampling

Limitations

- ✗ Brownfield facilities may limit installation opportunities

Go Deeper

- [Oil and Gas Climate](#)

Case study

No case study available at this time.

Do I know the gas composition?



Composition: Spectrometry (GC – MS)



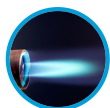
Composition: On-Line



Composition: Laboratory Analysis



Composition: Specific Gravity Analyser (Relative Density)



Composition: Wobbe Index Analyser (Calorimeter)