

Natural Gas Sampling

To obtain a representative sample the following considerations should be addressed. *Ref GPA 2166-8*

1. The sample should be taken from the centre $1/3$ ^{r/d} of the pipeline
2. If the sample is to be transported, a sample cylinder that will maintain the sample in the same condition as in the pipeline, should be used.
3. If liquid or vapour is present in the gas stream, liquid elimination measures should take place before the sample is introduced to on-line analysers, to prevent damage to the instrument.
4. The sample collection and storage equipment should be constructed of stainless steel to minimise absorption of some elements in the gas. Further treatment or coating of the materials of construction may be necessary.
5. If a sample pump is being used it is important that:
The system is purged between strokes so that a fresh sample is collected with every grab and low points are not present in the exit tubing.
6. For systems that use an insertion probe to take the sample, it is preferable that if the sample has to be collected or analysed at a lower pressure than in the line, the pressure reduction occurs in the pipeline rather than externally. In doing this the Joule-Thompson effect that will produce liquifaction of the heavy ends can be eliminated or significantly minimised.
7. If possible to ensure a dry sample is collected or produced, temperature prediction techniques are used to ensure equipment is selected on the basis of suitability rather than guesswork.