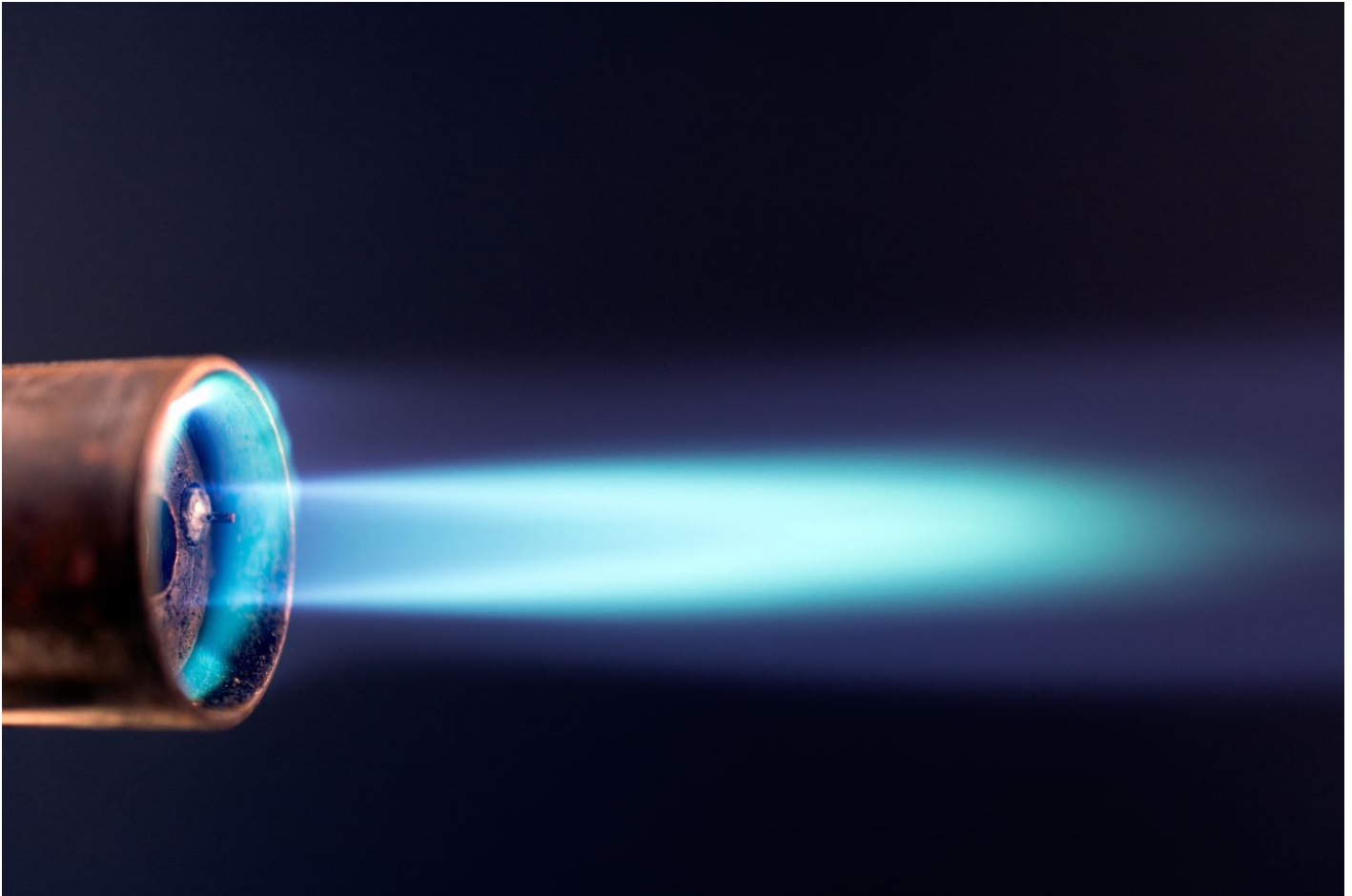


METHANE FROM FLARING TOOLKIT



Composition: Wobbe Index Analyser (Calorimeter)

Uncategorized > Composition: Wobbe Index Analyser (Calorimeter)

Summary

Wobbe Index analysers are purpose-built gas monitors which determine the Wobbe Index (WI) or Wobbe number of a gas. This number is an indicator of the interchangeability of fuel gases such as natural gas and is frequently defined in the specifications of gas supply and transport utilities.

The Wobbe index number can also assist in defining the heating value of the flare gas.

How it Works

A small sample flow of the flare gas is mixed continuously with a known flow of dry air and then the mixture is combusted in a catalytic oven.

The amount of oxygen remaining in the combustion products is measured using a zirconia cell and the Combustion Air Requirement Index (CARI) determined. The Wobbe Index of the combusted gas can then be calculated from the CARI using standard ASTM 4891-89.

If a specific gravity measuring cell is also incorporated into the analyser, it is possible to determine the gas's heating value.

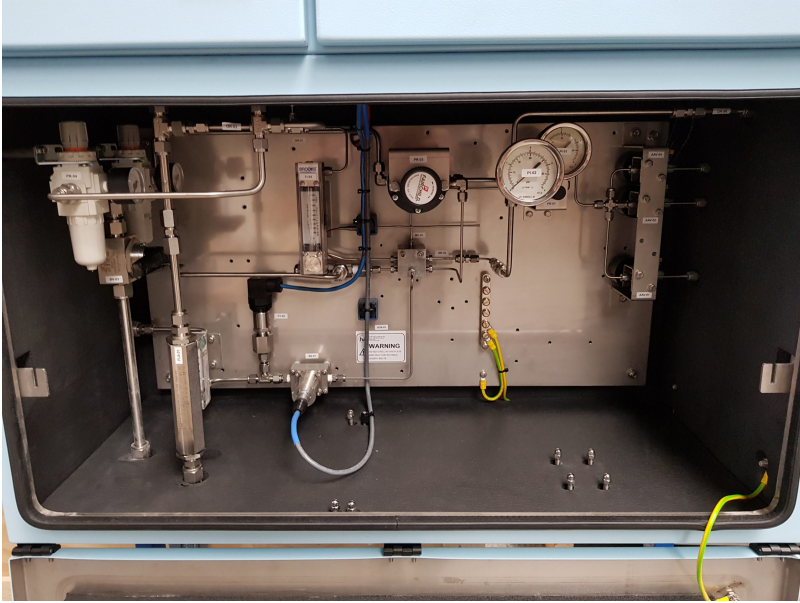


Figure 1. Internals of a Wobbe Index Analyzer

Flare Gas Analysers incorporating Wobbe Index and Specific Gravity analysers are used widely in the Oil and Gas Industry.

Advantages

- ✓ On-line analysis at regular intervals
- ✓ High accuracy
- ✓ Low uncertainty

Limitations

- ✗ Maintenance requirements
- ✗ Equipment costs
- ✗ Maintenance costs

Go Deeper

• [Hobre](#)

- [Applied Analytics](#)
- [Sensevolution](#)

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: Gas Chromatograph