

MANTIS™

FLARE INSPECTION SERVICE

Measuring flare efficiency has become a routine activity thanks to the Mantis™ flare monitor. The industry validated Video Imaging Spectral Radiometry (VISR) method has been used around the world to measure more than 1,000 flares. It has been used by regulatory agencies (US EPA, State) to determine compliance. It has been endorsed by industry groups (OGMP 2.0, OGCI) for use in measuring methane emissions inventories. Providence offers flare inspection services at daily and weekly rates, onshore and offshore, domestic and international locations.



FEATURES AND FLARE PERFORMANCE METRICS

- Combustion Efficiency (Accuracy within 0.5 %)
- Smoke Index (measure of visible emission)
- Fractional Heat Release (process flow rate)
- Flame Stability
- Flame Footprint (cross-sectional area)
- Methane emission rate (given methane content)
- Presence of flame (no latency)

ACCURACY

- Validated through industry testing (blind)
- Validated through US EPA sponsored testing
- Statistically equivalent to extractive methods
- Combustion Efficiency accurate to within 0.5% versus reference method (extractive)

LOGISTICS

- Easy setup, no site preparation needed
- Remote measurement (up to 1500 feet)
- Testing can be done day or night
- Data is immediately available, no post processing or data reduction required

APPLICATIONS

There are numerous applications for a flare inspection, here are just a few:

- Demonstrate flare efficiency of 95% or higher in the 14-day testing as required by EPA NSPS OOOOb/c to exempt flare from continuous NHV monitoring
- Demonstrate compliance with applicable regulations
- Establish process control parameters and assist levels to optimize flare performance
- Replace engineering estimate with real world efficiency measurement
- Support permitting objectives with actual emission data.
- Performance testing for new or repaired flares
- Validate the performance envelope for your flare to ensure high combustion efficiency across a wide range of process conditions

DATA ANALYSIS

Continuous 1-second data is provided together with a summary report. Combine the Mantis™ data with your process data or environmental data to tell the story of your flare performance.

- Identify over-assisted flaring conditions
- Isolate cause of visible emissions
- Compare flare performance to expectations

