EyeCGas®

OGI ACADEMY - SENSITIVITY

OGI sensitivity is the proven metric for the efficiency of the OGI camera for compound detection. The more sensitive the camera, the smaller the leaks it can detect. OGI sensitivity is generally represented as a mass flow rate of the leaks in grams per hour.

Factors influencing OGI sensitivity

Aside from the camera sensitivity itself, the detection of a compound is also influenced by the following factors:

01. ΔT (delta T) Difference of temperature between the background and gas plume

02. Distance (Range) between the camera and the area of interest

03. Wind speed

ΔT (delta T) Impact of temperature difference between background and gas plume

- A larger temperature difference of a background and gas plum increased the difference between the thermal radiance
- A contrast visible in the camera image for a specific leak rate becomes highly visible
- Larger temperature differences between the background and the gas plum improves the sensitivity of the camera.

Distance (Range):

- Distance between the OGI camera and the gas leak accounts for foreground air transmission
- Longer ranges include aerosols such as dust, fog, has and humidity
- These factors reduce sensitivity, especially for longer ranges

Impact of wind speed:

- Faster winds can dilute the gas plum emissions while reducing the thermal radiance absorption
- OGI camera sensitivity decreased drastically with higher values of wind speed

SUMMARY

Optical Gas Imaging technology has proven to be a very effective tool for locating small to large size gas leaks in the oil & gas industry. The more sensitive an OGI camera is, the better it will identify a leak. In a 2011 3rd party study conducted by the EPA, it was established that Opgal's EyeCGas camera can detect leaks as small as 0.35g/hr (methane) and saw leaks better than other OGI cameras. Making it the most sensitive OGI camera in the world. With additions of accessories, spectral filers and lens changing capabilities, it provides an easy, safe and efficient LDAR inspections tool from close and far away.