

# Gas Leakage Find and Fix Utilizing Optical Gas Imaging & Leak Repair



## Overview

Invisible gas leaks were safely and effectively eliminated using advanced optical gas imaging (OGI) cameras to discover and quantify the leaks and best-in-class on-stream leak repair technology to seal them.

## Project

Combining optical gas imaging with on-line leak repair to discover, quantify then repair invisible gas leaks

## TEAM Service

Optical gas imaging & leak repair

## The Need and Challenge

A large manufacturing facility noticed methane losses in its gas supply piping system. In addition to being very costly, the emissions posed the risk of creating an explosive atmosphere in a busy processing unit. The system contained several hundred joints in a confined area. Identifying the problem joints would be extremely time consuming using manual methods.

## Solution and Outcome

TEAM deployed a work party consisting of optical gas imaging and leak repair technicians to deliver a safe and efficient solution to the user's gas leakage risk.

The project included:

- System walk-down
- Optical gas imaging (OGI) survey identifying leakage of invisible gasses
- Quantifying leakage severity using methane detector

- Production of survey results video and written report
- Leak repair to defective areas
- Follow-up methane detector survey to confirm zero leakage

The project was executed safely and successfully with all leaks being arrested. A follow-up survey physically verified the project's cost savings and safety improvements.

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### What is Optical Gas Imaging?

Optical gas imaging (OGI) cameras can detect methane, sulfur hexafluoride, and hundreds of other industrial gases quickly, accurately, and safely—without shutting down systems. With OGI cameras, TEAM can scan broad sections of equipment rapidly and survey areas that are hard to reach with traditional contact measurement tools. OGI cameras can also detect leaks from a safe distance, displaying these invisible gases as clouds of smoke.

### How are leaks quantified?

When leaks are identified using the OGI camera, a TEAM technician (where possible) takes a direct measurement of the leak concentration (in PPM) at the point of leakage. This provides a figure against which to prioritize and measure the effectiveness of repair efforts.

### What is On-Stream Leak Repair?

On-Stream leak repair technology allows leaks to be sealed while equipment is in-service. This eliminates asset downtime and restores pressure integrity. Leaks can be sealed on a wide range of pressurized system components such as flanges, valve stems, piping, vessels and tanks.

TEAM has long been recognized as a world leader in emission control services (ECS) and leak repair. Combining these technologies allows owners/operators to benefit from significant efficiency gains through:

- One contractor, two man crew—find & fix
- Arresting flammable & toxic releases—improving plant safety, reducing operating risk
- Detecting and arresting greenhouse gas releases
- Zero asset down-time—detection and repair carried on with equipment in-service
- Tangible cost savings—reducing the cost of gas emissions

