



Improve Efficiency



Extend Product Life



Reduce Environmental Impact

# NATURAL GAS SEPARATORS

## INSPECT SAND LEVELS AND EMISSIONS WITH THERMAL IMAGING

### THE CUSTOMER'S CHALLENGE

In the fracking process, gas is separated from oil and water and sent to a meter while the oil and water is collected and hauled away by trucks. Through this process, sand can build up in the heating element, causing damage to the separator. If this build-up is not noticed and promptly removed, it may result in costly repairs or catastrophic failure of the unit. Since separators are typically inspected by hand or generally cleaned out on a routine basis without evaluation, a problem could arise without detection until it's too late. Safety and regulatory compliance are also concerns, as separators emit natural gases.

### A SOLUTION

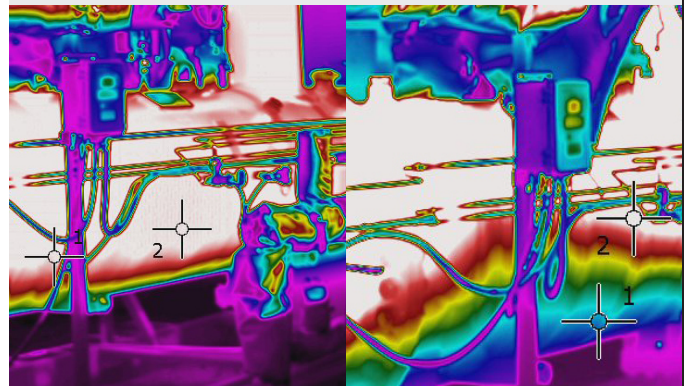
A variety of devices can be used to inspect separators, but using a thermal imager is one of the safest and most efficient solutions. The FLIR GFx320 optical gas imager can be used to visualize natural gas leaks and sand levels; the camera shows changes in temperature from sand vs oil, gas, and water. The GFx320 is certified for use in Class 1: Division 2 or Zone 2 locations, allowing the user to get close to the unit for a thorough inspection. The FLIR E8-XT thermal camera is an alternative, low-cost solution for inspecting sand levels from a distance. This device is ideal for initial inspections, but a more sensitive camera, such as the GFx320, may be needed for clearer, more detailed results.

### THE RESULTS

Thermal imaging helps maintenance professionals determine which separators to clean out and which ones are operating efficiently. Each separator costs nearly \$100,000, so the ability to inspect them is critical. Considering the cost of replacement, a thermal imager's return on investment is high. Using thermal imaging for routine inspections allows oil and gas companies to easily verify tank pressures and liquid levels. They can also detect leaks from the separator, resolve anomalies to restore compliance, avoid adverse environmental impact, and prevent safety risks to equipment or personnel.



*It's important to catch problems with separators early, before they fail, as they are costly to replace.*



*A thermal camera with sufficient thermal sensitivity and resolution can distinguish very small changes in temperature between liquids, solids, and gases of different densities and specific heat characteristics.*



Equipment described herein is subject to US export regulations and may require a license prior to export. Diversion contrary to US law is prohibited. ©2019 FLIR Systems, Inc. All rights reserved. 5/19 - 18-2923-INS

