

# CUSTOMER SUCCESS STORY

## GE AURORA TDLAS HYGROMETER

### PREEM REFINERY IMPROVES PLANT PROCESS WITH INSTALLATION OF GE SOLUTION

**The Preem refineries are the biggest supplier of MK-1 diesel in the Swedish market. The refineries supply the market with effective, environmentally-adapted oil products. Preem's two facilities, one in Lysekil and the other in Goteborg, are managed and operated as one system with the goal of being one of Europe's most efficient refinery system.**

#### PROBLEM

The Preemraff Refinery in Lysekil—Preemraff Lysekil - was using a competitor's system to measure the water content in the gas it was producing. During the measurement process the analyzer was becoming flooded with liquid. This damaged the system, causing it to go offline. While offline, Preem needed to rely on technicians to manually take the readings, which was time and resource intensive. The cost to replace the existing system with the current provider and the lead time it would take to do so were not conducive to Preem's needs, causing them to select and implement a new moisture analyzer from GE.

#### SOLUTION

GE's Aurora TDLAS (tunable diode laser absorption spectroscopy) Hygrometer was selected to replace the existing system based on GE's ability and commitment to work with the refinery to resolve its flooding issues in a cost-effective way. When the team from Preemraff Lysekil first approached GE about changing out its technology, GE arranged for them to visit a GE facility in Shannon, Ireland where they could see the Aurora TDLAS Hygrometer system in action to help them better understand how the system operates—and how to best address issues should they arise.

#### PAYBACK

Approximately four weeks after Preemraff Lysekil installed the Aurora TDLAS Hygrometer, the refinery experienced the same flooding issue it had with its original system. The difference this time versus when Preem was working with the previous vendor, was that a local GE representative from Pema Control visited the Preemraff Lysekil site and stayed until the Aurora system was fully operational again. Through the Preem team sharing the details of the problem with the GE representative, GE was able to troubleshoot the problem quickly and accurately.

- GE has years of field experience with TDLAS devices and has experienced service personnel available and is capable of resolving issues in the field. Most importantly, GE was able to resolve the issue without returning the analyzer to the factory.
- The Aurora TDLAS Hygrometer is equipped with fast response capabilities. It is able to detect process upsets in real-time and helps maintenance personnel be more productive and complete system verifications in just a few minutes.
- Once process upsets are corrected, the Aurora TDLAS Hygrometer enables normal production to resume, with no lag time due to the sensor technology.
- The estimated cost savings on analyzer replacement/consumables and technician/laboratory personnel time in this instance was in the region of \$50,000 USD over a three- to four-year period.



Aurora TDLAS  
Hygrometer



Water



## BENEFITS

Following the installation of GE's Aurora TDLAS Hygrometer, Preemraff Lysekil was able to resolve its flooding issues and institute new policies to prevent the issue from recurring. Preem Refineries now has plans to replace existing systems at its Preemraff Lysekil site with GE's measurement solutions and is evaluating additional Aurora installations at other locations.

- GE worked closely with the team at Preemraff Lysekil to identify the source of the flooding issue and resolve it in a timely manner, shortening the window of unplanned downtime due to mechanical issues.
- The decrease in system downtime means labs technicians can spend their time doing other tasks instead of manually collecting and running samples.

