



## Performance Audit and CIP turn sceptics into believers – as the savings add up

Petrochemical plant, Saudi Arabia

Case story

In 2009 Alfa Laval suggested to one of the world's largest ethylene producers that Alfa Laval Performance Audit service could accurately determine whether their 11 plate heat exchangers from another manufacturer needed cleaning. Without opening the units. At the time, the company was sceptical to say the least. Four years and hundreds of thousands of Euros in savings later, they're more than convinced.

**Too good to be true? Let us show you why not!**

When Alfa Laval first approached the petrochemical giant on the Arabian Gulf, the company was in the habit of, on a yearly basis, routinely opening their seawater coolers (plate heat exchangers that use seawater to cool process water) for manual cleaning – whether it was needed or not. The practice was expensive, time consuming and caused unnecessary wear and tear on gaskets and plates.

**“ In the beginning the customer had trouble believing in Alfa Laval Performance Audit – By 2012 they'd signed a three-year performance agreement.”**

Samer Tyba, Alfa Laval Service

It also made it impossible to ensure the optimal efficiency needed to guarantee critical production uptime in the searing heat of the Saudi Arabian summer. But the company knew of no alternative.



“I suggested we use our Alfa Laval Performance Audit solution to collect and analyze data on the actual operating conditions and determine how clean or dirty the plates were without opening the units. Then we could decide whether they needed cleaning and how they should be cleaned – with Cleaning in Place (CIP) or manually,” says Samer Tyba, Sales Group Manager, Alfa Laval Service, Saudi Arabia and Bahrain, “Initially, the company thought it sounded too good to be true – particularly since the units were supplied by another manufacturer. We knew it wasn't too good to be true, and we set out to prove it.”

### **A convincing demonstration**

To convince the company, in 2009, Alfa Laval offered to use Performance

Audit to monitor a number of units chosen by the company, return reports and then subsequently bear the expense of opening the units to determine the accuracy of the reports. The results were impressive enough to win Alfa Laval the first of three 1-year agreements for annual audits.

### **Online, efficient plate heat exchangers all the time**

The initial agreement consisted of a one-year Performance Agreement that included assessing fouling with Performance Audit, executing CIP and, on the rarer occasions when severe fouling made it impossible to use CIP, performing manual cleaning. Afterward, cleanliness is confirmed with another Performance Audit.

The company quickly realized that they were seeing more uptime and more efficient cooling because they were able to ensure that all the units were in good condition before the critical summer period. Which made them even more confident about the agreement with Alfa Laval.

### Maintenance costs drop drastically

In addition, the company's maintenance budget dropped drastically because they were now cleaning only when needed and because CIP had taken the place of manual cleaning most of the time. CIP requires only 24 man-hours as compared to the more than 150 man-hours required for manual cleaning.

Pleased with the results, the company renewed its agreement with Alfa Laval in both 2010 and 2011.

### Extended Performance Agreement is proof of a 100% convinced customer



Samer Tyba

to gain. We've saved this company a great deal of money: They've been able

"Alfa Laval Performance Audit is a great product," says Samer Tyba, "I'm proud to sell it. The results are really reliable, and companies have so much

Colour	Performance level	Action
● Green	High	No action required
● Yellow	Medium	Time to plan cleaning
● Red	Low	Schedule cleaning as soon as possible

Based on monitoring of actual operating conditions, followed by analysis of the data gathered, Performance Audit determines what action – if any – is required.

to optimize their maintenance schedule, better their overall efficiency and improve uptime. In the beginning they had trouble believing in Alfa Laval Performance Audit – By 2012 they'd signed a three-year Performance Agreement. They're clearly convinced now!"

#### Fast facts

##### The customer

Leading Saudi Arabian petrochemical manufacturer – the producer of one million tons of ethylene yearly and the second largest producer of titanium dioxide in the world.

##### The challenge

- Convince potential customer that Performance Audit can do the job.
- Avoid production losses by keeping 11 plate heat exchangers supplied by another manufacturer running reliably and performing optimally during critical summer months.
- Reduce maintenance costs.
- Eliminate unnecessary downtime caused by performing maintenance on a fixed schedule.

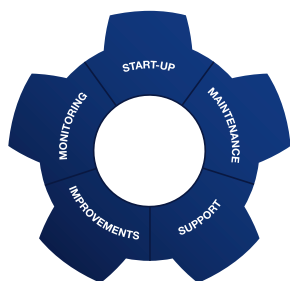
##### The benefits

- Overall savings of hundreds of thousands of Euros since 2009.
- Production losses avoided because optimal performance in summer period is ensured.
- Reduced annual maintenance budget by minimizing cleanings, and reducing cleaning time from more than 150 man hours to 24 by switching from manual cleaning to CIP.
- Lowered offline time by reducing cleaning period for each plate heat exchanger from seven days to one day by switching from manual cleaning to CIP.
- Reduced wear and tear due to less frequent opening extends equipment lifetime and lowers expenditure on spare parts.

#### Alfa Laval Performance Audit Plate Heat Exchanger

By monitoring the current operational conditions of a heat exchanger, Alfa Laval can determine actual performance in terms of heat load without opening the unit and then make recommendations about what type of service is required and when to perform it.

### 360° Service Portfolio and Performance Agreements



#### 360° Service Portfolio

The Alfa Laval 360° Service Portfolio covers the entire lifecycle of your equipment, and brings you maximum uptime, high performance, low maintenance and operating costs.

#### Alfa Laval Performance Agreements

Alfa Laval Performance Agreements are individually tailored service solutions that can include any of the services in our extensive 360° Service Portfolio. Based on your specific needs, they maximize your return on investments, ensure continual top equipment performance and make budget work easy.

#### How to contact Alfa Laval

Up-to-date Alfa Laval contact details for all countries are always available on our website at [www.alfalaval.com](http://www.alfalaval.com)