



## A common cause

Petrochemical company, Jubail, Saudi Arabia

Case story



The team from the customer and Alfa Laval worked together to find a solution to the problems with semi-welded plate heat exchangers

When the customer began to experience problems with their semi-welded plate heat exchangers, Alfa Laval feared that they'd lose a valued customer. Instead, the two companies decided to work together to find a solution, and now they've never been closer.

It's what every company dreads: a customer calls up one day to say that the product you've supplied isn't working as it should, and it's having an adverse effect on production. Thankfully for Alfa Laval this is a rare occurrence, but it did happen back in 2005, when a petrochemical company

in Jubail, Saudi Arabia began experiencing problems with their semi-welded plate heat exchangers.

Construction of the petrochemical complex in Jubail, Saudi Arabia began in 2001, with Alfa Laval supplying semi-welded plate heat exchangers the following year. However, a few years later, soon after construction was complete, the customer began to experience repeated problems with leakages and gasket failure. The news came as a complete surprise to Alfa Laval, who feared losing a valued customer, not to mention damage to their reputation.

"Initially we were very concerned and I imagine the customer were reconsidering our relationship," recalls Juergen Kohler, Alfa Laval Manager for Parts & Service in Saudi Arabia. "However, once we responded and they saw the lengths we were willing to go to fix it, they decided they wanted to work with us to find a solution."

What impressed the customer most in these initial meetings was Alfa Laval's determination to fix the problem before all else.



“We needed to understand why this was happening because it was completely unexpected,” adds Juergen. “We needed to find the root cause and they agreed. From the very beginning we had a good understanding.”

#### **Resources and expertise from Alfa Laval research and development team**

The first step in fixing the problem was to set up an investigative team, which included representatives from the customer, Alfa Laval, as well as other suppliers, contractors and licensees. The next step was to formulate a list of all the possible causes, and then work through the list eliminating each cause one-by-one. Throughout this process, Alfa Laval was not only able to assist with tests and experiments at the Jubail plant, but also offered the use of their own laboratories. In an effort to diagnose the problem with the gaskets as quickly as possible, Alfa Laval mobilised all their resources and expertise from their research and development team.

“After many meetings and investigations by both companies, we actually discovered that there wasn’t just one root cause, but many causes,” says Juergen. “Some of them were con-

nected to our side, and some were due to the customer’s processes.” As a result, the gaskets were replaced by modified designs, upgraded materials and improved manufacturing methods. The customer also made adjustments to some of their processes. Since then, they’ve seen the lifespan of their gaskets significantly increase and the plant is back to full productivity.

#### **Mutual agreement from the beginning to find the root cause**

The key to finding an effective solution was communication and the willingness of the two companies to work together. From the very beginning there was a mutual agreement that they had to find the root cause of the problem, regardless of which side was at fault. Alfa Laval immediately offered their resources and expertise, such as the use of their labs, and support from the whole organisation, from management in Sweden to local suppliers in Saudi Arabia. However, willingness to work together towards finding a constructive solution was also vital and greatly appreciated by Alfa Laval.

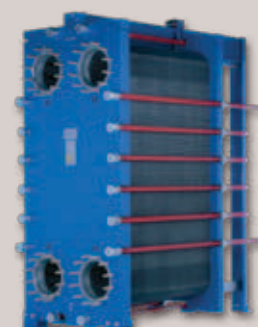
“I had only just moved to Saudi Arabia at the time, and I was really impressed with attitude towards cooperation when it came to dealing with this issue,” says Juergen.

#### **Strong relationship**

With the problem resolved and the exchangers now working more reliably, the relationship between Alfa Laval and the customer has never been stronger, which can be put down to the working relationship that was established during this critical phase. Trust between the two companies is exceptionally high, with full confidence that if another problem were to ever arise, they could once again rely on Alfa Laval for assistance.

Today, Alfa Laval not only continues to supply the plant with heat exchangers, but also other components such as water coolers. Recently, we also signed a three-year service agreement. “They really appreciated our efforts and since then they have extended our working relationship,” says Juergen. “As they say in Saudi Arabia, ‘once you have a real friend, you have them forever.’”

#### **Fast facts:**



#### **The solution**

The customer purchased Alfa Laval’s MA30W model of semi-welded plate heat exchanger. After extensive investigations into possible faults, Alfa Laval upgraded the field gasket material, and made modifications to the design and manufacturing of the ring gaskets.

#### **The customer**

The petrochemical company is based in Jubail, Saudi Arabia and produces ethylene, ethylene glycol and linear alpha olefins.

#### **Comments**

Juergen Kohler, Manager for Parts & Service, Alfa Laval, Saudi Arabia: “From the very start we had a good understanding and good cooperation on all levels. After many meetings and investigations by both companies, we actually discovered that there wasn’t just one root cause, but many causes.”

#### **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)