CASE STORY

Emergency stock keeps downtime to a minimum

Alfa Laval Compabloc in a bitumen refinery, Italy

Alfa Laval works closely with a European leader in high-quality bitumen products. The company's main refinery operates continuously for eleven months out of the year, with one month set aside for planned maintenance. Equipment reliability is therefore a top concern, and the refinery depends on their service providers to minimize any eventuality of an unplanned stop. When the customer encountered a challenge with one of their heat exchangers, Alfa Laval quickly got them up and running again thanks to the expertise of our local field service technicians in combination with our unique Emergency Stock programme.

“Alfa Laval Compabloc has given the company the ability to boost production while also increasing their energy efficiency, something that is particularly important given their focus on improving the environmental sustainability of their processes.”

Keeping up with changing times

For over 60 years, the Italian refinery has specialized in the production of paving-grade, industrial and special bitumens. Today they processes upwards of 550 thousand tons of raw materials annually. It is a challenging operation, as the heavy, highly viscous fluids involved put tough demands on the equipment. This can be particularly true for the heat transfer equipment used throughout their processes.

As a facility originally built in the late 1950s, the refinery historically used traditional shell-and-tube technologies for thermal applications. However, these heat exchangers had a bulky design that took up a great deal of space and increased installation costs whenever a unit needed replacing. Shell-and-tubes are also very inefficient in the types of positions involved in refining bitumen from crude oil.

For these reasons, the refinery began to replace many of their older heat exchangers with Alfa Laval Compabloc models starting around the year 2000. With a special corrugated plate design, Compablocs deliver high heat transfer efficiency even when handling extremely viscous media. This has given the company the ability to boost production while also increasing their energy efficiency, something that is particularly important given their focus on improving the environmental sustainability of their processes.

The compact design of the Compabloc also ensures smoother and more cost-effective installation. As an added bonus, the units are even easier and faster to service than shell-and-tube models used in bitumen production.

Rapid response to a critical challenge

The refinery now has Compabloc heat exchangers installed in a variety of positions in their processing. This includes a unit used as a dedicated condenser for the output flow at the head of the vacuum distillation column. After more than ten years of reliable and efficient performance, stress and corrosion led to cracking issues with this particular heat exchanger, ultimately resulting in external leakage.

Upon noticing the leak, the customer contacted Alfa Laval about scheduling a service visit the following week. Alfa Laval confirmed the availability of an experienced field service engineer with deep knowledge of Compabloc equipment, who could be on location at the refinery as soon as the coming Monday.

Within one day of their arrival, the service engineer disassembled and inspected the unit to evaluate the nature of the issue. They quickly determined that, unfortunately, the significant extent of the damage by this point meant that the problem could not be repaired. This created a challenge for the refinery, as replacing the entire unit would be a costly solution that would greatly extend downtime. The service engineer recommended that they could avoid these challenges by taking advantage of Alfa Laval’s Emergency Stock programme.

A smart solution to minimize downtime and costs

The Emergency Stock service was developed specifically to help these types of customers minimize downtime should they run into any issues with their Compabloc. Alfa Laval maintains a consistent supply of complete blocks for a variety of different Compabloc models. These are ready to be shipped and installed at a moment's notice, allowing customers to resume production as fast as possible instead of standing still as they wait for necessary repairs or a completely new unit. If it is possible to repair the original block, this can then be reinstalled or stored as a spare for the future.

Because repairs would not be possible in this particular case, the entire Compabloc was sent to Alfa Laval's nearest service centre. Within a day of taking action, an emergency block for that specific model was shipped from the storage facility. In just one week, Alfa Laval's service experts had completely disassembled, checked, reassembled and fully tested the unit with the new emergency block.

Alfa Laval quickly packed and shipped the heat exchanger back to the customer, where the local field service engineer reinstalled and commissioned the unit. The refinery's Compabloc was fully up and running again within two weeks of first contacting Alfa Laval for help.

Close cooperation with all parties was essential to making the entire process as smooth as possible. The strong communication between Alfa Laval and the Italian customer, as well as the different parts of Alfa Laval's global service organization working proactively as one cohesive team, ensured the refinery would be able to keep downtime to a minimum. Today they can once again see the excellent, reliable thermal performance that they had come to expect from their Compabloc.

Results

- Rapid response to keep unplanned downtime to a minimum
- A proactive and cost-effective solution to an unforeseen challenge
- Restored thermal performance that ensures long-term process sustainability

Service that keeps you growing

Alfa Laval offers the market's widest portfolio of welded heat exchangers. We also offer an unmatched range of services, with support for everything from installation to routine maintenance and even tough process challenges. Our local technicians can be onsite with the experience you need – no matter where in the world you are.

Learn more about service for Compabloc at **www.alfalaval.com/compabloc/service.**

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

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