



Service Agreement helps reduce diesel fuel consumption for major copper producer

Major copper producer, Chile



When building a large solar thermal power plant for a major copper producer, a Chilean energy company turned to Alfa Laval to maximize heat transfer efficiency and secure energy savings in critical steps of the solvent extraction electro-winning process. The result? Large Alfa Laval gasketed plate heat exchangers backed by an Alfa Laval Service Agreement covering tailored service solutions that enhance plant performance, ensure uptime and reduce fossil fuel use.

Greener solutions for the copper mining industry

In Chile, wind and solar energy producers can now supply electricity at less than the price of fossil fuels. That is why the energy company set out to build and operate a large-scale solar thermal power plant for the mining company. The mining company now uses the solar power plant to heat 80% of the water used in its electro-winning processes, among the most energy-intensive processes in copper production.

To optimize these processes, the copper producer decided to buy large Alfa Laval gasketed heat

exchangers to optimize heat transfer efficiency and reuse excess heat in the electro-winning process stream. This contributes to reducing the plant's carbon footprint further.

Engineering expertise optimizes processes

Providing solar thermal energy on a massive scale calls for smart, reliable heat transfer. With demonstrated engineering know-how, Alfa Laval designed the installation with the optimal gasketed plate heat exchangers to produce high-quality copper cathodes that meet customer requirements. Besides optimizing processes,

improving energy efficiency and cutting operating costs, these reliable heat exchangers are easy to install, configure, open for inspection, and clean.

Maximizing uptime

The copper producer owns the Alfa Laval equipment and the energy company is responsible for operating it. To enhance performance throughout the life-cycle of equipment and maximize uptime, the mining company signed a two-year Alfa Laval Service Agreement, including these services for critical gasketed plate heat exchangers:

- Alfa Laval Performance Audit tailored to establish and maintain a heat exchanger performance baseline, and to develop a preventive maintenance schedule.
- Alfa Laval Cleaning Services based on the results of the Performance Audit to restore heat exchanger surfaces to optimal condition.
- Alfa Laval Spare Parts to ensure the availability of critical genuine spare parts on site, thereby minimizing downtime.
- Alfa Laval Reconditioning to secure safe, efficient and continuous heat exchanger operation.
- Alfa Laval Redesign to keep pace with process or capacity changes, such as the need for new heat recovery loops.

“ We appreciate working with a like-minded partner who can help us deliver measurable savings to our customer.”

– Project manager at the Chilean energy company.



Alfa Laval gasketed heat exchangers, backed by a two-year Service Agreement, help ensure uninterrupted power supply to electro-winning processes of a major Chilean copper producer.

Trustworthy service partner

Reliability is key for continuous operations. Alfa Laval has proven to be a reliable partner who can provide engineering expertise, dependable equipment and extensive professional services to ensure the solar thermal power plant is always online. Providing maximum uptime with renewable energy enables the energy company to contribute to the copper producer’s profitability.

With an Alfa Laval Service Agreement, the energy company can focus on its core business and leave optimizing heat exchanger performance to us,” says Juan Merlo, Senior External Sales Manager, Alfa Laval.

The Alfa Laval Service Agreement provides the customer with a reliable partner who continuously helps improve heat transfer efficiency – all with less impact on the environment. Spending less time performing administrative tasks for maintenance translates directly into higher productivity and profitability.

Fast facts

The customer

A Chilean energy company was selected as a partner to one of the country's major copper producers. The Chilean energy company supplies large-scale systems for industrial process heat that often use solar energy as the primary energy source and diesel, gas, biomass or other fuel as backup energy sources.

The challenge

To reduce the customer’s fuel costs and to ensure maximum uptime and performance of mission-critical Alfa Laval heat exchangers at the company’s solar thermal energy plant that supplies power to the copper mine.

The solution

An Alfa Laval Service Agreement for critical gasketed plate heat exchangers to ensure maximum uptime and heat transfer efficiency through optimized cleaning, maintenance and reconditioning intervals.

The benefits

- The customer can focus on their core business while relying on Alfa Laval to secure heat exchanger uptime
- Optimized copper extraction process thanks to the Alfa Laval 360° Service Portfolio
- Increased profitability through higher heat transfer efficiency
- Significant reduction in fuel consumption in the electro-winning process

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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