CNSME PUMP Successfully Completes Major Slurry Pump Retrofit for Antofagasta Mine Site in Chile

SHIJIAZHUANG, HEBEI, CHINA, September 14, 2026 / EINPresswire.com/ -- Shijiazhuang Minerals Equipment Co., Ltd. (CNSME PUMP) has successfully completed a major slurry pump retrofit project at a large mining operation in Antofagasta, Chile. The upgrade resolved long-standing operational challenges, reduced annual operating costs by approximately RMB 60,000 (USD 8,300) per pump, and has already led to a follow-up engineering assignment for a new mining expansion project. The successful implementation highlights CNSME PUMP's capability to deliver customized, energy-efficient slurry transport solutions for demanding mining applications.



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Mine Area Overview and Production Challenges

The Antofagasta mine site spans a vast 492 hectares and encompasses massive resource reserves, including 900,000 tons of titanium ore, 100 million tons of white silica sand, and 4.6 million tons of yellow sand. Managing such large-scale extraction requires highly reliable and efficient equipment. However, the site was previously burdened by underperforming, locally produced pumps that failed to meet the operation's high-capacity production requirements. These original units suffered from insufficient flow rate and head, low operational efficiency, high energy consumption, severe mechanical wear, and an unacceptably short service life of wet-end parts. The mine operator urgently required a robust replacement solution capable of delivering large flow capacities, maximizing efficiency, lowering energy consumption, and utilizing long-lasting, wear-resistant materials.

Site Visit and Selection of Slurry Pumps

Responding to the operational challenges, CNSME PUMP deployed a team of expert engineers to conduct a thorough on-site inspection. After assessing the rigorous operational demands and specific site conditions, the engineering team selected the highly regarded AH Series Slurry Pumps. Renowned as a general-purpose, heavy-duty horizontal centrifugal pump, the AH series features a horizontal double-casing structure designed for seamless on-site installation and maintenance. The inner casing, which serves as the primary wet-end wear component, is constructed from advanced high-chromium alloy material and engineered for strategic, periodic replacement, making it exceptionally suited for transporting medium- to high-concentration mining slurry.

Customized Technical Upgrades for Precisely Overcoming Harsh Working Conditions

To ensure the long-term stable operation of equipment in the harsh mining environment, the CNSME PUMP engineering team implemented several targeted, customized technical improvements:

 The new slurry pumps feature a specialized five-vane impeller design, which, alongside the other wet-end parts, utilizes heavy-duty wear-resistant construction to dramatically extend service life.
 Considering the lack of reliable clean water sources in the mining area, the shaft sealing system adopted an expeller seal, completely eliminating the need for shaft seal flushing water.
 The bearing assembly is equipped with heavy-duty, grease-lubricated bearings that require only routine grease maintenance, completely eliminating the need for complex external oil stations.
 A tailored belt driven system was also implemented between the pump and motor to perfectly match the precise working conditions and site constraints.

The upgrade and renovation project was completed efficiently and precisely within a tight three-month timeframe.

AH Series Pumps Performance Earns Customer Praise and New Order

High-quality products and efficient contract fulfillment have brought CNSME PUMP extremely high customer satisfaction. After system installation and commissioning, all performance indicators immediately and fully met the performance guarantees stipulated in the contract. The newly operational AH series slurry pumps perfectly solved the pain points of the original pumps, such as low efficiency, rapid wear, and high energy consumption. Their outstanding economic and environmental benefits have satisfied the customer.

By significantly lowering energy consumption, the upgrade is expected to decrease the annual operating costs by approximately RMB 60,000 (USD 8,300) per individual pump. In light of these impressive results, the mining operator has chosen to expand its partnership with CNSME PUMP.

The customer has already compiled and submitted preliminary operational data, including slurry properties, conveying distances, and high-altitude conditions, for an upcoming mining site, officially entrusting CNSME PUMP to develop a customized design solution for the new expansion.

Driving Energy-Saving Retrofits of Mining Slurry Pumps Globally

CNSME PUMP officially announced that the successful implementation of the Antofagasta Mine Site project in Chile marks another significant step forward for the company in the field of energy-saving retrofits of international mining slurry pumps.

In the future, CNSME PUMP will comprehensively promote the Antofagasta project. The project demonstrates how targeted slurry pump upgrades can help mining operators improve efficiency, reduce energy consumption, and extend equipment service life.

For more information about CNSME PUMP and its innovative slurry pump solutions, please visit www.cnsmepump.com.

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