Siemens equips copper mine in Mongolia with slurry pump system

The Siemens Industrial Solutions and Services Group (I&S) has received an order from the Erdenet Mining Corporation to supply a pump system for a copper mine in Mongolia. The purpose of the pump system is to improve the tailings extraction process in the copper mine and to cope with the increase in the mine’s production. The system will be supplied and installed by Siemens and is to start operating at the beginning of 2007. It is the largest slurry pump ever supplied to a mine. The order is valued at around 3.7 million euros.

The state-owned Erdenet Mining Company operates a copper mine near Erdenet, a city in the north of Mongolia, and extracts 25.3 million tons of copper ore in 2005. At an annual production rate of 126,000 tons copper per annum and a cup off of 0.25 per cent copper, the life of the mine is expected to last about 35 years. The mine is located in Orkhon province approximately 400 km to the north-west of Ulaanbaatar, the capital of Mongolia. Mining is the largest and most important industry for the country, which is presently undergoing a period of economic growth. New technology is therefore being introduced to increase production.

This Slurry pump system pumps the rock mass left over from the ore concentration process and transports it to the settling pond. The pumps can also be used as cyclone and water pumps because a great deal of water is needed for mining and sometimes has to be pumped over a distance of many kilometers to the mine.
For these purposes, Siemens is supplying the Simine Pump GD system with a KSB slurry pump manufactured by GIW in the United States. The pump is connected to a slowly operated squirrel-cage induction motor, and a gearbox between motor and pump. The frequency-controlled drive enables precise adaptation to any requirement, including operation at the lowest speeds. This guarantees that the material which is being transported flows smoothly and quickly. The pump system can be operated with a low voltage supply of 400 V to 1000 V and with a medium voltage supply of 1000 V to 3000 V. The system can be upgraded up to an output of 10 MW.

This will ensure that the necessary energy is used more effectively and that up to 30 per cent savings can be achieved compared to conventional systems. Because the system is optimized for current and future load conditions the wear rate of the pump is optimized and there is less need for maintenance and repair work. This, in turn, leads to greater pump availability. Increased throughput and shorter down times make a substantial contribution to higher overall productivity.

Siemens has already supplied lighting systems for halls and production lines as well as submersible pump systems with a control unit to the Erdenet Mining Company.

Further information under: http://www.siemens.com/mining

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