



Nordex tanker truck used for transporting bulk emulsion explosives. The product is either transferred into specialized pumping units for underground use, or pumped into the drill holes in surface operations.

Nordex emulsion product creates greater efficiencies

BY ADELLE LARMOUR

Nordex Explosives Ltd., a company in the Kirkland Lake area, has commissioned a new emulsion plant.

The company has been manufacturing and distributing explosive products such as NorANFO, initiating systems and dynamite for almost 40 years and decided to add emulsion explosives to its product lineup in an effort to remain competitive.

Nordex claims it is the first emulsion plant to be built in Canada in the past 10 years, and the only plant that produces packaged emulsion explosives.

Available in bulk or packaged form, the emulsion has the consistency of mayonnaise. The bulk product is delivered in tanker trucks for use in surface and underground mines, as well as quarries. The product is either transferred into specialized pumping units for underground use, or pumped right into drill holes in surface operations. The packaged product, contained in a plastic-type sleeve, looks like sausages that range from one to six inches in diameter.

Nordex president John Kozak sees a trend in the industry toward greater use of emulsion products.

"Over the last couple of quarters, sales have picked up by at least 40 per cent," he said.

The company continues to supply the

mining sector, but is aggressively pursuing construction and aggregate markets throughout Ontario and Quebec.

The process

What initially began as a desire to expand its manufacturing division turned into a five- to six-year process that ultimately led Nordex to obtain a license for new emulsion technology from Precision Blasting Services Inc., an Ohio-based explosives consulting firm.

"We're the first company to introduce the new technology into Canada, and we have the exclusive rights for Canada," Kozak said.

Nordex chief operating officer Jim Taylor described the process as long and arduous. There were several phases of research and development and a series of hazardous operations studies required by the Natural Resources Canada in order to identify the strengths and weaknesses of the concept.

"It is the formulation of the product and the manner in which it is manufactured that will generate a superior product in the end," Taylor said.

Nordex maximized the use of the plant's existing infrastructure, which complies with current licensing and storage regulations. The company also developed and invested in a new fleet of trucks for bulk shipment, as well as pumping units for underground use.

The plant was commissioned in October 2008, following which trial runs were initiated in local mines.

"The market response was incredible," Kozak said. "They've really taken to the product. It has increased efficiencies with respect to cycle time and downstream processing, which has provided a lot of benefits to the clients."

The benefits

Kozak touts several attractive features of this product. There are increased efficiencies in loading a blast because a truck or pumping unit is faster than manual loading. The product is water resistant, has a longer shelf life than dry products, can withstand extreme temperatures, and is more powerful, thus, enhancing its overall stability and performance.

"It breaks up the rock more thoroughly," Kozak explained. "The better you break up the rock, the more efficiencies you'll have in your downstream processing. It is easier to get rock out from underground, or in the case of quarries, it is easier to process rock if it's broken up more thoroughly, and it is easier on the crushers."

Taylor said the manner in which Nordex manufactures the product creates a more consistent, reliable product.

"Other manufacturers will adjust their product in the field," he said. "We've chosen a different way to guarantee the consistency

of the product and how it performs in the field by designing a facility that allows us to make any of those adjustments under a more controlled environment."

In early April, the company received full certification for the Normite V booster-sensitive emulsion from the Explosives Regulatory Division (ERD) of Natural Resources Canada to sell it across the country. The Normite EV, Nordex's detonator-sensitive emulsion explosives product line, is expected to receive ERD certification later this year.

This spring, Apollo Gold signed a two-year contract for the supply of explosive products at its Black Fox project, 75 kilometres east of Timmins. Initially, it was going to use ANFO, but is using emulsion exclusively now, said Kozak.

The company's 20 employees have developed in-house expertise in the development and manufacture of explosives and had extensive input into the development and design of the new facility.

"We have the reputation for providing the best technical and customer support in the industry, which is a result of the expertise we've developed," said Kozak. ■

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