

New waterproofing solution proposed for Canadian mines

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1 / 2 A 30-metre length of drift at the NORCAT Underground Centre was recently “waterproofed” using a system provided by W. Giertsen Tunnel AS of Norway. The product is being introduced in Canada by Schauenburg Industries Ltd. of North Bay. (Photo for Schauenburg by James Hodgins)



BY LEN GILLIS

They’ve been doing it in Europe for years and it is such a unique concept that Don Croteau’s first reaction was, why isn’t this being used in Canada?

Croteau is the managing director of [Schauenburg Industries Ltd. in North Bay](#), which specializes in mine ventilation solutions. But now Schauenburg has become the exclusive Canadian distributor for the [W. Giertsen Tunnel AS](#) which is produced in Norway.

The Giertsen system provides a [watertight membrane](#) which can seal underground tunnels from all moisture and humidity.

“It’s a product that wherever you have an issue underground where it is wet and lots of moisture that is creating rust or humidity problems, this is a product that will solve the problem for you.

“It’s not about stopping the water, it’s about controlling the water,” said Croteau. He said excess water can be channeled away or pumped to a sump area.

“You can seal off the ends of the drift or the open area if you want, and then you can put a dehumidifier in and control the humidity,” he added.

“First of all, it is not new. They’ve been using in Norway for about 35 years. I asked these guys why they never introduced it to Canada and they said, we never got around to it. So it’s not a new product, it’s just new to Canada.”

One of the reasons for the development of the product was the need to store military equipment in underground caves in Norway. This was done to satisfy long-term storage needs for the armed forces in Norway as well as military vehicles belonging to the United States Marine Corp as part of a NATO commitment.

Croteau said he sees a significant marketplace in Canada for the waterproofing, especially in mining where the problem of dripping water is an everyday occurrence.

Recently, Schauenburg installed the system at the [NORCAT Underground Centre, a test mine in Onaping](#) which is part of the City of Greater Sudbury. Croteau said the system does not require testing. It was set up for marketing purposes.

“Onaping is the perfect place to showcase this kind of stuff. People from all over the world come to NORCAT to see new technology.”

He said NORCAT provided a length of drift roughly 30 metres long where the waterproof membrane could be installed.

“We actually installed it with supervision from Norway,” said Croteau. He said the system uses lengths of coated rebar that are inserted into the walls and roof of the tunnel followed by lengths of steel cable that run the length of the drift. The membrane is stretched tight and attached to the cables.

“So it was an opportunity for us to learn how to install it because then when we’re talking to people we can have a better understanding of it.

“When we were done we got some LED lighting put inside. When you put the lighting up against the white material it is unbelievable how bright it is,” said Croteau.

Croteau, an engineer who has considerable experience in the mining environment, said there are a wealth of applications where waterproofing would be used underground.

Croteau said one of the key applications would be for powder storage, to keep water from damaging mine explosives and fuses. He said waterproofing would also be important for electrical substations in underground mines where there is an obvious need to keep electrical equipment dry and free of corrosion.

He added that the product is flame retardant. He said the membrane will burn but it will be localized only to areas where a flame is in place. When the flame is removed, the burning stops. He said any rips or tears in the fabric can be repaired using a heat-weld process similar to repairs on ventilation tubing.

After visiting Norway, Croteau said he was more than impressed with the applications for civil engineering such as waste water plants, hydroelectric plants, road tunnels and subway tunnels. Perhaps the best part he said is the technology is tried and true with hundreds of

successful set-ups in Europe. The bugs have been worked out and it is only a matter of time before the Giertsen product is established on this side of the Atlantic, he said.

Comments ⁽⁰⁾
