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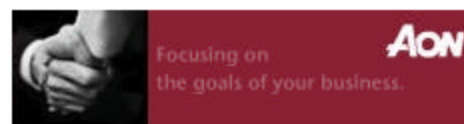
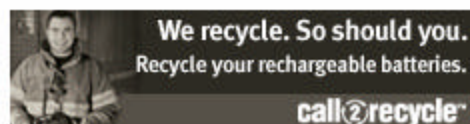
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December 2006



■ Quebec Cartier pioneers safer, more efficient railroad brakes

A recent Federal Railway Administration (FRA) report on railroad brakes shows that electronically-controlled pneumatic (ECP) brakes dramatically shorten stopping distance, while reducing fuel use and maintenance costs

(<http://www.fra.dot.gov/us/content/1713>).

Using an electronic signal rather than a pulse of air to trigger railroad brakes, ensures that the brake signal reaches all cars at once, rather than serially from front to back over as long a time as 120 seconds for a 150-car train. The result is smoother, better controlled braking that reduces the wear on draft gear (from aft cars running into forward cars) and wheels (from fewer lock-ups). Other benefits are better, incremental control over brake application, and the installation of a "data pipe" that can not only send signals back, but carry car and brake condition signals forward to the locomotive.

The FRA has called ECP brakes the most important new safety initiative in three decades. In the report, the FRA recommended both regulatory relief and financial incentives to railroads to accelerate the adoption of this new brake system. To achieve that fastest return, to lessen the financial shock of this enormous transition (estimated to cost \$8.6 billion over 15 years) and to avoid inter-operability problems with existing brakes, the FRA advises that railroads focus their initial efforts on "unit trains" that keep the same locomotive/cars combination. These are most commonly found in the mining industry.

One of the ECP brake users covered in the FRA report was Quebec Cartier Mining (<http://www.qcmines.com>), which runs unit trains from its Mont-Wright open pit iron mine in Québec 420 km to its port operations in Port-Cartier on the north shore of the Gulf of St. Lawrence, in temperatures that often drop to -40°C. The QCM

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project began in March 1998. One-hundred and ninety cars were fitted with New York Air Brake's EP-60 ECP brakes as singles and married pairs, and 17 locomotives were equipped with an integrated NYAB CCB II/EP-60 computerized brake control and ECP brake system. The trains involved carry 15.4 million tonnes of iron ore annually.

Since installing EP-60 brakes, QCM trains have experienced a 5.7% decrease in fuel use and a 15% increase in throughput capacity. ECP brakes have virtually eliminated undesired emergencies, allowed an increase in average speed, and shortened stopping distances. Safety has been improved and component life lengthened (e.g., a 27% increase in brake shoe life). QCM has been able to increase train length from 156 cars to 182 cars without adding extra locomotives, and has been able to stop its practice of shortening trains to 100 cars and adding in-train compressor cars in the extreme cold.

For more information visit www.nyab.com or phone 1-315-786-5520.

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