

Rea Magnet Wire Company, Inc. Announces Plans to Purchase Phelps Dodge North America Magnet Wire Operations



Rea Magnet Wire Company, Inc., headquartered in Fort Wayne, IN, announces that it has signed a definitive agreement with Phelps Dodge Corporation to purchase the assets of the Phelps Dodge Magnet Wire Company North America operations, which includes manufacturing facilities, property, and equipment at Fort Wayne, IN and Monterrey, Mexico. The sale also includes the purchase of Phelps Dodge inventory held for distribution at various warehouses throughout North America. The sale is subject to customary closing conditions, including regulatory approvals. The transaction does not include Phelps Dodge's European minority interest, its Suzhou, China plant, or its One Technology Center buildings in Fort Wayne.

Rea Magnet Wire, which has been in business since 1933, currently has six manufacturing locations in North America: Fort Wayne, IN; Lafayette, IN; Las Cruces, NM; Guilford, CT; Ashland, VA; and Osceola, AK. The company also has two joint venture manufacturing facilities in China.

Rea currently employs approximately 675 people in North America. Purchase of the Phelps Dodge Magnet Wire operations will add about 600 employees.

Punctured Rubber Bladders Detected by New ASTM Oil Test

As in many high voltage American power transformers, rubber bladders also seal the 500-kV generator step-up units of Salto Grande. Under service conditions, some of them are punctured because of the aging of the rubber or mechanical problems. Gasket wear and other causes can let oxygen in the transformers. A warning of malfunctioning was the increased amount of dissolved oxygen determined in the oil by DGA. Salto Grande, conscious of the detrimental effect of dissolved oxygen, had sealed every unit and implemented a periodic oil analysis procedure. Nevertheless, the amount of oxygen was not considered harmful to the solid insulation because of the ability of oxidation inhibitors to hinder the decay process of the oil. Indeed, measuring the interfacial tension (IFT) and the organic acidity (TAN) of oil, as suggested by the IEEE and IEC, confirmed the lack of oxidation products.

Meanwhile, we learned that ASTM International has developed a new laboratory technique entitled "Test Method for Determination of the Relative Content of Dissolved Decay Products in Mineral Insulating Oils by Spectrophotometry," which was approved 3 yr ago as ASTM D6802. Sending oil samples from the same unit to Benchmark Analytical (a Canadian commercial lab that performs the newly developed test method), we received different results. The analysis of oil in the units with punctured rubber bladders has shown a higher content of dissolved oxidation decay products (Fig. 1). Hence, because of this modern test method, the aging process of oil in power transformers can be monitored step by step.

Additionally, at all other seven transformer banks, D6802 test results were in line with gassing. The cooperation between the ASTM's Technical Committee D27 with the private sector should be credited for the technical progress in the analytical chemistry of mineral insulating oils.

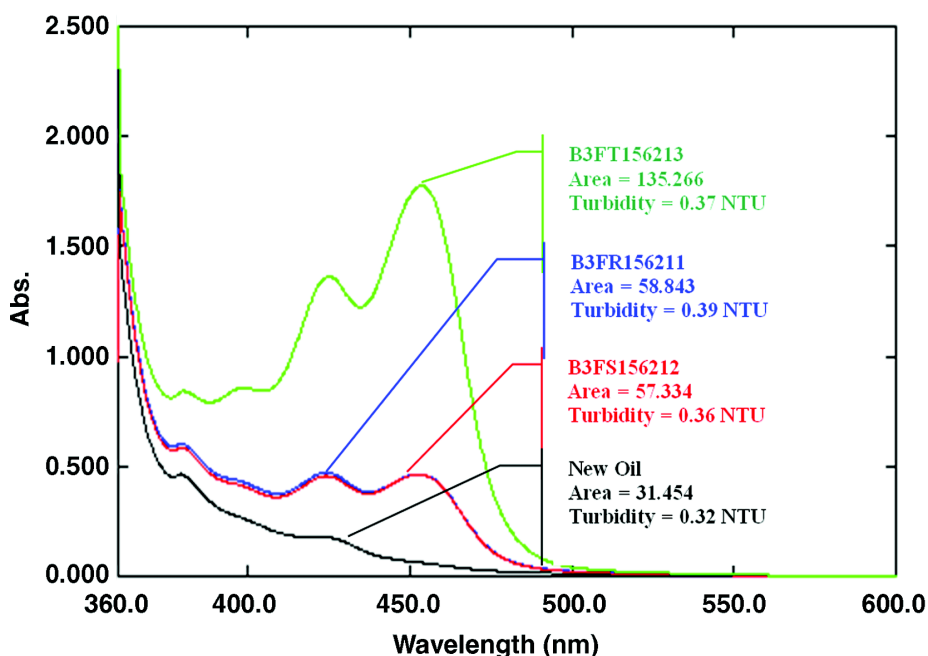


Figure 1. Dissolved decay product analysis ASTM D6802 Salto Grande – TRB3 R, S, T