

3M Introduces First Cold Shrink Branch Splice

A new splice from 3M allows power utilities and industrial contractors to more easily make a wye/branch splice configuration on electrical power cables rated up to 15 kV. The 3M cold shrink branch splice QS-2001B is a silicone rubber splice based on reliable 3M cold shrink technology. It allows fast installation of the wye/branch configuration without the force needed to install push-on modular splices or the time required for tape splices or heat shrink.

The 3M branch splice QS-2001B accepts all conductor sizes from #2 AWG (33.6 mm²) through 500 kcmil (250 mm²). It is rated for 15-kV cable systems and accommodates main feeder cable runs and taps of 350–500 kcmil (175–250 mm²) conductors. The splice also accommodates conductor sizes from #2 AWG (33.6 mm²) through 250 kcmil (125 mm²) with an adapter applied to increase the OD of the cable. The connector supplied with the splice is a set screw connector that guarantees the correct connection. The connector is designed to have bolt heads shear off at the correct torque.

Two cables enter the splice on one end and one on the other. An adapter is installed on the two cables on one end that controls the stress and seals between them. The splice kit also contains all components to continue the grounds of the cables across the splice and jacketing and environmental sealing materials to completely seal and protect the splice and ground connections.



3M invented cold shrink splicing technology more than 30 years ago. Because the tube is applied by unwrapping and pulling a perforated core that supports the tube, installation presents fewer risks to installers than when using torches or force to install a splice.

For more information about the 3M Cold Shrink Branch Splice QS-2001B, contact the 3M Electrical Markets Division, A130-4N-40, 6801 River Place Blvd., Austin, TX 78726-9000, USA, or call 1-800-245-3573. For more information about 3M electrical products, go to www.3M.com/electrical.

ATCO Electric Successfully Tests New Dissolved Oxygen Removal System

In 2002, ATCO Electric successfully tested a new dissolved oxygen removal system from the oil of a free-breathing transmission transformer. InsOil Canada Ltd. coordinated the demo project, as the developer of this economically viable and environmentally friendly maintenance technique. Basically, it consists of a generator capable of supplying a continuous flow of nitrogen that purges the surface of oil in the gas space of the conservator. According to Henry's law, the gases dissolved in the oil diffuse slowly in the flowing nitrogen that carries them to the outside atmosphere. The system was installed on a 144 kV, 40-MVA power transformer, and the amount of gases dissolved in the oil was determined by DGA every 2 weeks. As the diagram illustrates, the content of dis-

solved oxygen dropped significantly over a period of 5 months.

The level of dissolved carbon dioxide and combustible fault gases also decreased. Hence, when the dissolved oxygen is removed, not only the oxidation process is arrested but also the interpretation of fault gases becomes more meaningful. This economically rewarding maintenance procedure is based on InsOil's patent application No. 10/314,491 that was recently approved by the United States patent office. Consequently, by adopting this innovative system entitled "Method and Apparatus for Decreasing Gassing and Decay of Insulating Oil in Transformers" the service reliability of aging power transformers can be enhanced. In addition, the effectiveness of the reliability centered maintenance procedures is maximized, and their cost is reduced.

