May 2011 / Issue 3

Point-to-Point

A Dow Wire & Cable Update

DOW INSIDE

POWER • TELECOMMUNICATIONS • WIND • BUILDING AND CONSTRUCTION • PERSONAL ELECTRONICS • APPLIANCES • TRANSPORTATION

Expansion plans and programs bring new opportunities

Tim Laughlin, General Manager, Dow Wire & Cable

Over USD $500 million has been invested in Dow Wire & Cable infrastructure over the past several years and that allows us to continue and expand our efforts to bring you excellent technology and materials. Dow's commitment to our business unit reinforces our ability to provide world-class quality and consistency in products and technology that result in reliable, long-life cables.

For example, we are currently modernizing our manufacturing facility in Seadrift, Texas, USA. This will allow the implementation of new technology and expanded capacity for the production of DOW ENDURANCE™ HFDC 4202 EC, our next generation medium voltage (MV) offering, as well as our existing line of jacket and insulation compounds for high (HV) and extra high voltage (EHV) applications.

Dow has also signed a joint development agreement and letter of intent with Solazyme, Inc., a leading renewable oils and bioproducts company. This will give us access to the intellectual and physical assets needed to produce micro-algae-derived oils. We'll utilize these environmentally sustainable products in the manufacture of fluids for a wide range of electrical applications. This agreement also represents Dow's commitment to developing sustainable high-performance solutions.

> *"Dow's commitment to our business unit reinforces our ability to provide world-class quality and consistency..."*

It's an exciting step forward as we expand our commitment to the power and telecommunications industries beyond our traditional portfolio of wire and cable compounds. We look forward to bringing you news of further developments in the months to come.

Regards,
Timothy J. Laughlin
General Manager

Experienced team members contribute to industry excellence

By Brad Miller, Global Marketing Director

As the new Global Marketing Director, my role is to drive strategic growth initiatives by understanding the unmet needs of the industry and utilizing Dow Wire & Cable's technology, capabilities and talent to deliver solutions to meet those needs. I'm very pleased to take on this new role and bring my decades of Dow experience to this growing business. Please join me in offering thanks to my predecessor, Jon Penrice, as he moves to his next assignment within Dow.

It's long been said that material selection is critically important in the success of overall system performance and I couldn't agree more. We also believe that having the right people on your team makes all the difference. And our experienced team members bring value to the entire industry as well as to our customers and end-users.

Simon Sutton, European End-use Marketing Manager, has just been appointed to the CIGRE Strategic Advisory Group for solid insulating materials. This group provides guidance to the Study Committee chairman and proposes topics for Working Groups within CIGRE's Materials Study Committee.

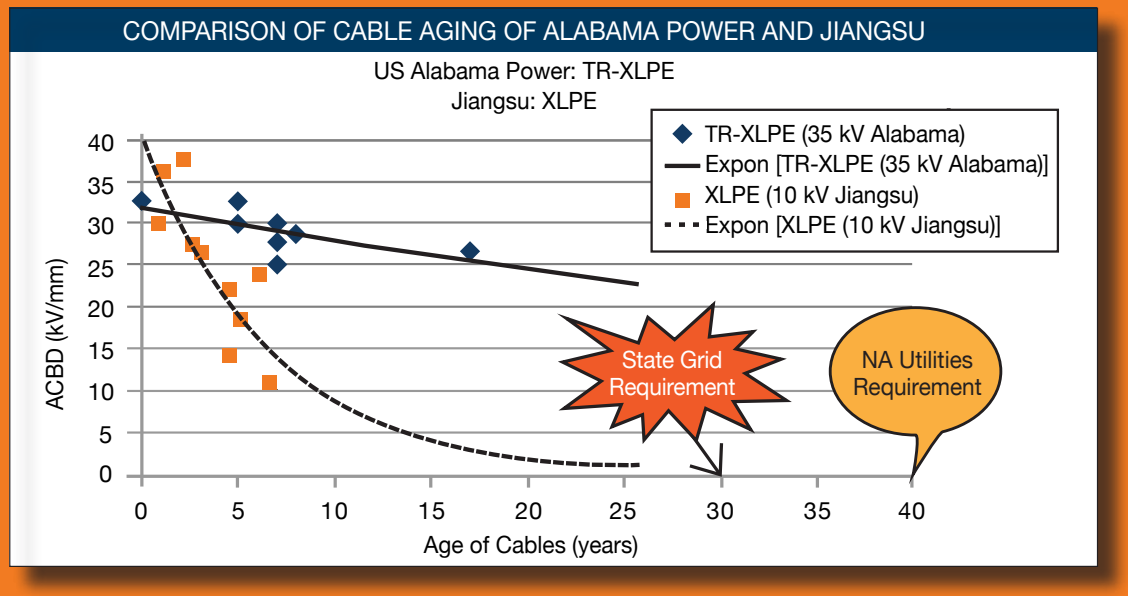
And Damien Polansky, Global Telecommunications Market Segment Leader, has been appointed to the board of the Telecommunications Industry Association (TIA). TIA is the leading trade association representing the global information and communications technology industries. Board members are selected from among member companies and are responsible for formulating policy.

TR-XLPE to help State Grid of China utility companies achieve required material life

Input parameters to compare lifecycle cost of XLPE and TR-XLPE 10 kV cables

In a paper presented at the 2010 Power Cable Condition Monitoring and Maintenance Technology Exchange Meeting in China, Dow Wire & Cable experts discussed the importance of material specifications on the reliability of distribution cables. The use of a lifecycle cost (LCC) model to help customers quantify system costs and reliability of materials used to produce distribution cables was also demonstrated.

This project demonstrates the lifecycle value and performance of tree-retardant crosslinked polyethylene (TR-XLPE) cables as compared to XLPE cables. Cables made with TR-XLPE materials may be slightly more expensive at the time of purchase than cables made with classic XLPE materials. However, lower initial costs for cables may not necessarily mean a lower total lifecycle cost. LCC is a useful tool to assess the overall cost of TR-XLPE through the entire lifecycle of the cable.

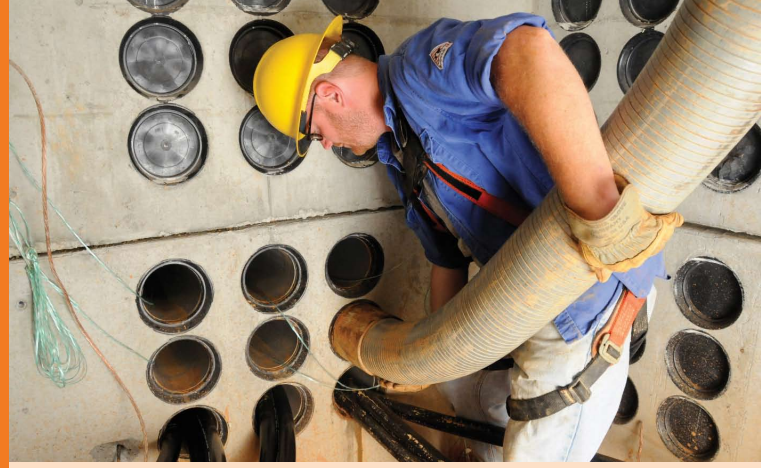


Reference: Alabama Power data – JiCable 2003, Jiangsu XLPE: CIGRE 2010, paper B1-112

The above chart shows the performance of TR-XLPE materials from Alabama Power in North America as compared to the performance of XLPE materials used in Jiangsu, China. Combined with the LCC considerations, a thorough assessment can be made. Some of the critical input parameters include:

- Comparative cable cost of XLPE vs. TR-XLPE
- Anticipated cable life
- Installation cost
- Fault repair costs
- Number of faults prior to replacement

While regional purchasing and installation procedures and cost data will vary, LCC is a useful tool to justify the additional cost for TR-XLPE materials. For additional information about how TR-XLPE or LCC could benefit your program, please contact your Dow Wire & Cable sales representative or visit www.dowwireandcable.com. This paper is expected to be published in China's *High Voltage Engineering* magazine.



Product showcase

Semiconductive jacketing material provides durability and ease of installation

DOW ENDURANCE™ DHDA-7708 BK is a thermoplastic semiconductive compound specifically designed for jacketing MV, HV and EHV power cables in land or underwater applications. It combines the conductive properties of a semicon with the mechanical properties and durability of a normal insulating jacket.

First used for MV cables, DOW ENDURANCE DHDA-7708 BK provides a continuous ground along the entire cable, offering additional protection from surges and transients while minimizing the cost needed for grounding alternatives. This also provides benefits in areas where there is a high propensity for lightening strikes.

For HV and EHV applications, the material is used as a thin, extruded layer over the regular jacket material. This application is used in areas where graphite has typically been used, including air insulated applications like duct systems or tunnels, or where ground conditions make testing graphite-coated cables difficult. This enables testing to ensure installation effectiveness prior to energization.

Compared to conventional thermoplastic semicon materials, DOW ENDURANCE DHDA-7708 BK offers:

- Improved grounding
- Higher environmental stress-crack resistance
- Excellent low-temperature properties
- Superior thermomechanical properties
- Reduced moisture vapor transmission
- Reduced adhesion to strippable insulation shields
- Improved cut-through and abrasion resistance
- Potential to reduce the overall system cost

The compound can be applied as a thin layer over an existing jacketing grade during manufacture or it can be extruded to form the entire jacket. This extends benefits to both manufacturers and end users of cables for an MV or HV system.

For additional information, please visit www.dowwireandcable.com or contact your Dow Wire & Cable sales representative.

Calendar of events

Dow Wire & Cable experts participate in many industry events. Please visit us at the following:

Spring ICC (St. Petersburg, FL, USA)
May 22-25, 2011

Windpower 2011 (Anaheim, CA, USA)
May 23-25, 2011

Wire Russia (Moscow, Russia)
May 23-25, 2011

CIRED (Frankfurt, Germany)
June 6-9, 2011

JICABLE (Versailles, France)
June 20-23, 2011

Underground Congress (Sao Paulo, Brazil)
June 20-22, 2011

At Dow Wire & Cable, we'll help you keep the lights on and get people connected. We're working with cable manufacturers, utilities, testing institutes and other global industry experts to provide the products, technology, solutions and expertise you need to achieve your objectives. Our goal is to create materials that deliver reliability, longevity, efficiency, ease of installation and protection. Whether you manage power, voice or data connections, we can support your current and future transmission and distribution needs. With more than 60 years of industry experience, Dow Wire & Cable is a business unit of The Dow Chemical Company and can be found online at www.dowwireandcable.com.