

America's online magazine for wire and cable

wiredIn USA

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EDITOR

Subway delays are nothing new to New Yorkers – in fact, 32,000 of them hit commuters every year. But Governor Andrew Cuomo took a trip to the Columbus Circle station to highlight faulty wiring being blamed for the delays.

"One circuit goes out, the light goes to red, the trains stop, the engineer is called, you have to troubleshoot the entire system to get to that one circuit," Governor Cuomo explained.

That has led New York State Public Service to order NYC utility Con Edison to take immediate steps to ensure that new conductors, meters and other equipment is installed within the year. The full story can be found on page 10.

Pending customary regulatory approvals, Davis-Standard has agreed to acquire Maillefer International Oy of Finland and Switzerland. The transaction was scheduled to close in late August or September.

"Today is an important day for Davis-Standard and Maillefer as we combine two strong brands into a market-leading global extrusion systems and services provider," announced Jim Murphy, Davis-Standard president and CEO.

"We are excited to expand our organization with Maillefer's talented workforce and outstanding management team. We are also pleased to have the continued support of ONCAP, the current majority owner of Davis-Standard. This transaction is a major milestone in expanding our global leadership in plastic extrusion technology."

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David Bell Editor

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DIARY

Shows & Events 2017/2018

SEPTEMBER

19-21 September 2017

wire Southeast Asia

Bangkok, Thailand

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OCTOBER

8-11 October 2017

IWCS 2017 - The International

Cable & Connectivity Symposium

Florida, USA

www.iwcs.org

DECEMBER

6-9 December 2017

Iran Wire 2017

Tehran, Islamic Republic of Iran

www.iranwire.ir

OCTOBER

3-5 October 2017

wire South America

São Paulo, Brazil

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NOVEMBER

7 November 2017

CabWire World Conference

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MARCH

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MAKING THE

Chilean project takes shape

Telefónica Empresas Chile, Communications and Rural Telephony (CTR), Vupoint System and Austral have all responded to the Chilean government's request for proposals for the construction of a cable to the very southern tip of the country.

The total length of the system, the Southern optical fiber (FOA) project, is estimated at 3,000km. The system includes a terrestrial element for which a number of companies — Claro, GTD, Telefónica, VTR and Wom — have made enquiries of the government.

The whole project, costed at \$100 million, includes terrestrial infrastructure in the Patagonia region with a subsea cable from Puerto Montt, in the center of the country, to Puerto Williams, in the far south. It will offer "high capacity, open and non-discriminatory"

connectivity, so undersecretary of telecommunications Rodrigo Ramiez told El Diario de Cooperativa.

All providers and telecommunications services will have access to the new connection.

The transport and telecommunications secretary, Gabriel Muñoz, said the project: "Puts us in an extraordinary position to generate important initiatives for social, economic and cultural development."

The winner of the subsea contract will be announced in early October. Proposals for the terrestrial section of the project were due in August, with the winner to be confirmed shortly afterwards. Construction of the project is expected to take 26 months.



Subway inspection

New York's governor, Andrew Cuomo, ventured into Columbus Circle station to demonstrate how faulty wiring is causing subway delays.

"One circuit goes out, the light goes to red, the trains stop, the engineer is called, you have to troubleshoot the entire system to get to that one circuit," Governor Cuomo explained.

The governor said there are millions of old wires in the archaic system, contributing to around 32,000 delays every year.

The New York State public service commission has ordered Con Edison, the NYC utility, to take immediate steps to ensure that new conductors, meters, and other equipment are installed within the year.

The power system rebuild will cost "tens of millions of dollars," said Governor Cuomo, adding that this should be at Con Edison's own cost.

Clad wire

Anomet Products has introduced a new line of platinum-clad molybdenum wire and rod for use in aerospace, electronics, semiconductor, and high-vacuum applications, or as an economical design alternative to pure platinum wire for making connectors and switch components.

Anomet's new platinum-clad wire is metallurgically bonded and provides high oxidation and corrosion resistance at temperatures up to 1,200°C, depending

upon the application. Featuring a smooth, consistent surface finish, the wire is said to offer superior integrity, formability, and weld-ability compared to electroplated wire.

Anomet platinum-clad molybdenum wire is available in outside diameters of 0.01" to 0.06", with cladding from 14 percent to 38 percent by weight, depending upon diameter. Platinum-clad nickel products are also available.

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HF-15B Spark Tester





Davis-Standard has agreed to acquire Maillefer International Oy of Finland and Switzerland. Pending customary regulatory approvals, the transaction was scheduled to close in late August or September.

"Today is an important day for Davis-Standard and Maillefer as we combine two strong brands into a market-leading global extrusion systems and services provider," announced Jim Murphy, Davis-Standard president and CEO. "We are excited to expand our organization with Maillefer's talented workforce and outstanding management team."

Lars Fagerholm, CEO of Maillefer, remarked that the businesses share common values

that will create a platform for cooperative growth: "Davis-Standard and Maillefer are an excellent fit," he said. "Our organizations are proud to serve our valued customers with the most advanced technological solutions and the highest level of service. Maillefer will continue to operate and serve its customers as before, and we are excited about this unique chance for business growth and opportunity for all stakeholders."

Jim Murphy added: "We are also pleased to have the continued support of ONCAP, the current majority owner of Davis-Standard. This transaction is a major milestone in expanding our global leadership in plastic extrusion technology."





SAMP 8 Wire Drawing Line



60mm Nokia/Niehoff
Tandem Wire Insulating Line

WIRE DRAWING

Rod Breakdown

WRD971 - Niehoff M-85 Rod Machine, 11 Die

WRD980 - **Eurodraw** SA450.14.2, 2 Wire Rod Machine, 14 Die

WRD824 - Heinrich MC-6063, 2 Wire Rod Machine, 13 Die

WRD989 - **Syncro** 18T10, Tandem Rod Line, 11 Die WRD897 - **Bekaert** KDA, Tandem Rod Line, 9 Die

WRD1027 - Wire & Cable Tech. CWF-13, Wire Rod Machine,

13 Die

Intermediate

WRD1021 - **Niehoff** MT 200.4.2.2617/RDA 200.1.R.1400, Intermediate Tandem Drawing/Annealing Machine

WRD1071 - **SAMP** TR/2-TP, Tandem Intermediate Wire Drawer/

Annealer/Preheater

WRD838 - Niehoff M30/ VG30, Intermediate Wire Drawing/

Annealing Machine

MultiWire

WRD678 - SAMP MLS/ST.14, MT8 (7+7), Multi-wire 14 Wire

Drawing Line, 31 Dies, w/R12 Annealer

WRD1031 - **Nextrom** AMW297, 7-Wire Fine Wire Drawing, Annealing and Spooling Line

WRD932 - **Eurodraw** MMS100, 16-Wire Multi-wire Drawing Line w/Annealing Furnace

WRD831 - **SAMP** MT8.2.4.21, 8-Wire Multi Wire Drawing, Annealing and Spooling Line

WRD942 - SAMP MT10.10.22/ R14.10.10 1250, 10- Wire Multi Wire Drawing Line w/Annealer

WRD973 - **Heinrich** 8 Wire Multi Wire line w/Annealer, 800mm Static Coiler

Spooler/Drop Coiler

WRD967 - **Niehoff** SPH801.1.G.E.A, 800mm Spooler WRD887 - **SAMP** AS/3-820, 820mm Drop Coiler,

WRD995 - **Endex** ECC-30, 30" (762mm) Drop coiler,

EXTRUSION

Extruders/Lines

EXP1313 - **Jennings** 8108, 2.5" (63.5mm) PTFE Ram Extrusion Line

EXITUSION LINE

EXPL362 – 60mm **Nokia/Niehoff** Tandem Wire Insulating Line
EXPL411 – **Rosendahl** Tandem Extrusion Line w/**Niehoff** MT200

EXPL421 - **Davis Standard** 2" (50mm) 30:1 High Temp Extrusion Line

EXP1237 - **Nextrom** NMB60-24D, 60 mm Extruder, 24:1 L/D

EXP1167 - **Rosendahl** RE1-120-30, 120 mm Extruder, 30:1 L/D,

EXP1189 - **Nextrom** NMB80-24D, 80mm, 24:1 Extruder

Payoffs

PAY1221 - **Skaltek** A12P4K, 1.2m Portal Traversing Payoff,

Drag Brake

PAY2114 - **Skaltek** A164K, 1.6m Portal Traversing Payoff, Driven

PAY2090 - **Skaltek** A22-4K, 2.2m Portal Floor Traversing Payoff, Driven

PAY2043 - **Skaltek** A26-4K, 2.6m Portal Floor Traversing Payoff w/ Upgraded Electronics

PAY2049 - Nokia Maillefer AVR-3, 1.25m Portal Driven Payoff

Dual Takeups

TKU1402 — **Maillefer** EKP50, 500mm Parallel Axis Dual Reel

TKU1440 - **Nokia Maillefer** EKP-63, 560mm Dual Parallel Axis Shaftless Takeup

TKU1520 - **Nokia Maillefer** EKP-100-A2/160, 1m Dual Parallel Axis Shaftless Takeup

TKU1175 — **Nextrom** EKP-130, 1.3m Dual Parallel Axis Shaftless Takeup

Caterpullers

CAT597 - Mali VBA2/15/200AC, 2.6m Belt Caterpuller

CAT612 — **Queins** 45-7239, 1.4m Belt Caterpuller

CAT486 - Gauder 2.2m Belt Caterpuller

CAT237 — **Nokia Maillefer** Chenile UA-8, 1.2m Belt Caterpuller

CAT526 - **Johnson Metals** CAT9/208/4, 2.0m Belt Caterpuller

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CBR1184 Stolberger type 630mm 6+12+18 Bay Planetary Cabling Line

CBR1141 Queins (refurbished Gauder) 500mm 12+18 Planetary

Cabling Line

CBR1265 - Watson 600mm 12 Bay Planetary Cabling Line

CBR935 Trafalgar/Northampton 420mm 12+18 Bay Planetary

Cabling Line

- Ceeco 1.6m 1+6 Single Bay Planetary Cabling Line CBR1064

CBR612 - Northampton 560mm 24 Bay Planetary Cabling Line

CBR1143 Dimavag 630mm 6 Bay Planetary Cabling Line

CBR1285 Custom Built 630mm 6 Bay Planetary Cabling Line

Drum Twist

CBR1169 Brondel/MMC/Alind 2.6m Drum Twist Line

CBR1201 Ceeco 2.4m Drum Twist Line

CBR1000 Caballe/Pourtier/Kalmar 2.2m Drum Twister Line

CBR923 Pourtier 1.25m Drum Twister Line

Double Twist

CBR1216 - Nothampton DTS-1800, 1.8m Double Twist Buncher

CBR1226 Setic 1.25m Double Twist Buncher

 Northampton 1.25m Double Twist Buncher CBR1181

CBR953 - Setic 1m Double Twist Strander

CBR1078 - Frigeco 800mm Double Twist Buncher

- Setic 630mm Double Twist Twinner CBR1286

 Niehoff 560mm Double Twist Buncher CBR1088

CBR1260 SAMP 630mm Double Twist Buncher

Single Twist

CBR853 Ceeco 1m Single Twist Cabler

- Entwistle SC-36, 36" Single Twist Cabler CBR1144

- Dynamex TPC-224, 30" Single Twist Cabler CBR1263

CBR110 TEC 630mm Single Twist Cabler

Tubular

TBR196 - Ceeco 800 mm 6+1 Tubular Strander Bartell 406mm 12W Tubular Strander TBR199 - Bartell 254mm 12W Tubular Strander TBR201 TBR190 Krupp 560mm 12W Tubular Strander

Extrusion

EXPL416 Viteck Fiber Jacketing Line, 3.5"

EXPL409 Nokia Maillefer Loose Tube Extrusion Line, 45mm

PAY2019.2 -Nokia Maillefer 350mm 4 position Fiber Payoff

PAY1468 - Nextrom CMP 300mm 4 position Fiber Payoffs

EXPL406 Nokia Maillefer 120mm Loose Tube Jacketing Line

Cabling

CBR1252 Tensor SZ Cabling Line

CBR1001 Nokia Maillefer 12W Fiber Planetary Cabler

CBR1171 - Rosendahl KVT12-500, 500mm 12 position Ribbon

Payoff Strander

 Pourtier 450mm Ribbon Pavoff Strander **CBR929**

CBR923 Pourtier 1250mm Drum Twist Line for Slotted Core

Other

TKU739 Hall 300mm Buffered Dual Automatic Fiber Takeup

PRN230 Nokia Maillefer OFC 52-620, Fiber Coloring Line

PRN232 Technical Development Corp. Fiber Coloring Line

TST119 Sterling Davis Fiber Optic Proof Tester

BIN085 - Tensor KS-200-18, 18 position Aramid Fiber Server

CBR1275 Setic 630mm 2 position DT Back Twist Payoff

EXPL336 - Kabelmetal TIG Weld and Corrugator Line

MSC2398 Tensor TCOR-6, 6" Corrugator

MSC1580 Weber and Scher Rotating Corrugator Line

Interlock

MSC2487 - Calmec 50mm Interlock Armoring Line

Nextrom/Ceeco 50mm BX Interlock Armoring Line

MSC2482 Ceeco 4" Interlock Armoring Machine with Belt

Caterpuller

MSC2372 - Calmec 20mm Interlock Armoring Line

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Deep Blue Cable, a Caribbean subsea telecommunications infrastructure company, is considering a landing site on Cuba for its high speed fiber optic cable. The company has already begun preparatory work for the fiber network, which aims to be operational by the end of 2019.

An initial 12 fiber landings over the next 30 months are proposed for markets including the Cayman Islands, Curaçao, the Dominican Republic, Haiti, Jamaica, Puerto Rico, and Trinidad and Tobago.

Eventually, Deep Blue hopes to make up to 40 landings, bringing in major Latin American markets such as Panama and Colombia. Deep Blue plans to sell cable access on a wholesale basis to broadband providers, and will sell high speed internet services directly to customers.

Deep Blue also plans to market its services directly to major internet companies such as Facebook or Skype, whose services consume large amounts of data.

Deep Blue's proposed first phase fiber would run west from Naples, go around Cuba, then turn south and east towards the Caymans with two possible spurs off the main cable onto Cuba.

Deep Blue founder Denis O'Brien also owns Digicel, a mobile phone network provider operating throughout the Caribbean and repeatedly linked with Cuba. Mr O'Brien has described the island as an "interesting" investment prospect.

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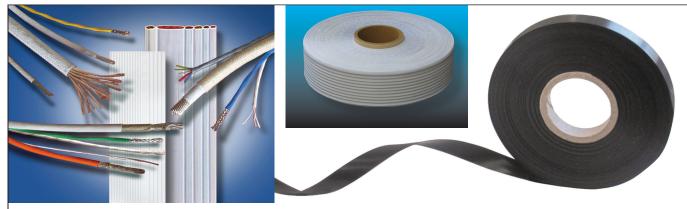


EVs cut the wire

Tesla's CEO, Elon Musk, has announced that the Tesla model 3 will use only 5,000 feet (1,524m) of wiring per vehicle, compared to approximately 10,000 feet (3,048m) of wiring used in each model S sedan. Tesla's upcoming model Y compact SUV will use even less – just 328 feet (100m) of wiring. The model Y is scheduled for the market in 2019 or 2020.

The significant reduction in wiring is made possible by the use of new electrical systems which use different voltage and power transmission hardware, moving away from conventional 12 volt systems.

Simplifying components, such as wiring harnesses, is key to a vehicle's production time, as well as to maintaining quality. The latter is an area of concern as Tesla increases the number of products emerging from its single factory. Plant automation and vehicles designed with a simpler construction (such as the model 3 and model Y) are hoped to accelerate production cycle times.



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Epson's LW-PX400 label and wire-marking printer, available from K-Sun Corporation, creates durable and legible self-laminated wire wrap or heat shrink tube wire markers.

The unit features pre-loaded TIA-606-B patch-panel templates, and is embedded with Label Editor professional software for bar code printing, including QR.

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Fine-tuning crosshead

Guill Tool and Engineering has introduced a new single-point concentricity extrusion crosshead that uses microfine adjustment screws for precise concentricity adjustment. The precision of concentricity reaches 0.008", or finer, per revolution.

This single point adjustment is a Guill development for the extrusion of thinwalled jacketing and precision tubing. One adjustment bolt controls 360° of adjustment.

Features of the single-point crosshead include a patented cam-lock deflector for quick changeovers, with a residence time of one minute at 0.5lb/hr material flow, optimized usage with extruders measuring ½" and ¾", and a maximum die inner diameter of 0.25".

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Brazilian partnership

Canadian Solar Inc and EDF Energies Nouvelles have announced their partnership in the 92.5MWp Pirapora III photovoltaic project in Brazil, through the sale by Canadian Solar of 80 percent interest in the project to EDF EN do Brasil, EDF Energies Nouvelles' local subsidiary. The Pirapora III project has started construction and is expected to reach commercial operation in the fourth quarter of 2017.

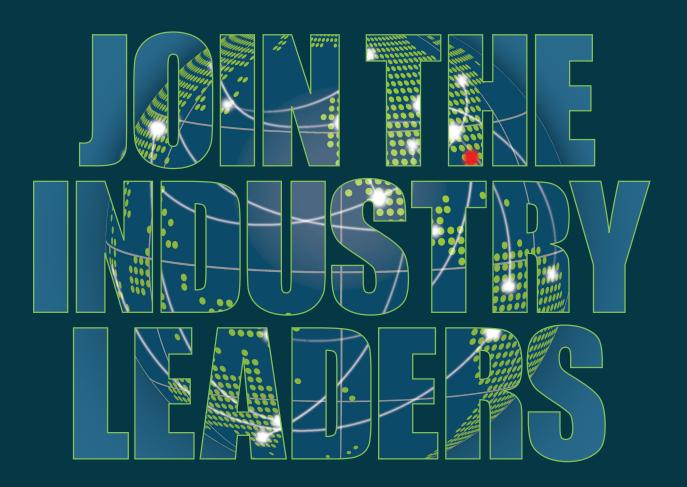
Canadian Solar is supplying modules for the project from its 380MWp modules factory, established in Brazil. EDF EN do Brasil will manage both the construction and operations phases of the project.

EDF EN do Brasil previously acquired an 80 percent interest in the 191.5MWp Pirapora I and 115MWp Pirapora II projects from Canadian Solar. Once commissioned, in 2018, the three co-located projects will form the largest solar photovoltaic facility in operation in Latin America, with a total installed capacity of approximately 400MWp.

Pirapora III will generate 188GWh per year, contributing towards Brazil's goal of obtaining 23 percent of its energy from non-hydro renewable sources by 2030.



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Testing range

Pasternack's new range of 19 test cables for handheld RF analyzers is designed for optimal amplitude and phase stability with flexure. The cables offer voltage standing wave ratio (VSWR) of 1.2:1 and maximum operating frequency of 27GHz, depending on the configuration.

The new cables feature crush resistance of 1,200psi and an operating temperature range of -55°C to +105°C. They are made with silver-plated copper cable conductors, stainless steel body

connectors, a UV-resistant jacket and a rugged, multi-layer armor for crush and torque resistance.

The entire range is available with 7/16, N, SMA, TNC or 3.5mm connector options, and each serialized assembly includes test data. They can be used as replacement cables for FieldFox®, Site Master, CellAdvisor® and Sitehawk® handheld analyzers.

Cable to the Caye

Belize Telemedia Ltd (BTL) and Huawei Marine have completed BTL's strategic evolution underwater link (SEUL) project, bringing fiber optic submarine cable connectivity to San Pedro, Ambergris Caye. Stretching over 23km from the Belize mainland to the Caye, this fiber optic connectivity will be integral in the delivery of fast broadband speeds.

The project is the combined work of BTL and Huawei Marine, and represents an important milestone in BTL's \$100 million capital investment program to radically transform and modernize the country's telecommunications infrastructure. With the installation of the submarine cable, BTL will offer its DigiNet broadband product to the entire island of Ambergris Caye, with broadband speeds of up to 100Mbps.

Zhang Hongxiang, project director for Huawei Marine, said: "In order to protect the environment, our delivery team chose to enclose the entire installation area with a turbidity silt curtain to reduce the impact on the environment. The effective delivery of the project not only reflects our customer-centric focus, but is also the embodiment of Huawei Marine's commitment to environmental and social responsibility."



A new series of vacuum-rated TVAC connectors from MilesTek

Vacuum-rated connectors

MilesTek has released a new series of vacuum-rated TVAC connectors, designed and manufactured with materials that meet NASA's total mass loss (TML) or out-gassing requirements.

The new series consists of five models that can be terminated to 0.129" diameter cable. Available connector styles include TCS, TRB, TRS and TTM.

The 78 ohm connectors are designed for applications with an operating

temperature ranging from +55°C to +200°C.

"These new vacuum-rated connectors were designed for use in thermal vacuum chamber research and development applications involving high performance satellites and space vehicles, where there is zero margin for error. [They] can be used to build new assemblies or as replacement connectors to repair existing assemblies," said Mark Hearn, MilesTek product manager.

Easy stripping performance

AFL has introduced four new thermal strippers for single- and multi-fiber stripping, the RS01, RS02, RS03 and RS03-80. Ergonomic design, with a low level of necessary force, are said to make the series comfortable and easy to use for high fiber count applications.

All the strippers feature a three-second heating time and are capable of stripping 200µm coated fibers and ribbons.

The RS02 and RS03 models include a Bluetooth® - enabled wireless connection for smartphones and can be programmed for user preferences via an Android or iOS smartphone app.

The RS01 model is suitable for locations where Bluetooth technology is prohibited. "With the increased activity levels for high fiber count cable, and especially ribbon fiber construction utilizing 200µm coated fibers, these new stripping tools are ideally suited to address the evolving needs of the market," said Greg Pickeral, product manager for AFL's fusion splicing division.

"The addition of Bluetooth capability not only provides a very convenient way to manage and program the stripper but, as other products evolve, we'll have even better opportunities to create a more robust tool management environment."

The RS03 model includes a powerful lithium-ion battery capable of 600 stripping cycles, and the RS03-80 model is designed for stripping 80µm cladding fiber applications.

A temperature selection switch permits easy field optimization for different fibers or operating conditions.

The strippers accept all Fujikura field and factory style fiber holders.



New thermal stripper from AFL

EUROPE NEWS

Norway-Germany link

Installation is underway on the 1.4GW NordLink HVDC subsea interconnector between Norway and Germany, with the first meters of cable laid on the seabed in Vollesfjord in Vest-Agder.

The completed interconnector will be 623km long, with 516km installed subsea.

NordLink is a joint project between Norway's TSO Statnett and Germany's DC Nordseekabel GmbH. DC Nordseekabel is a 50:50 joint venture between TenneT TSO and the German bank KfW.

"The first part of the cable will be installed this summer, 124km from Vollesfjord and to the Danish sector of the North Sea," said Statnett's executive vice president, Håkon Borgen. "We have been working on this project for several years, and it is very exciting to get started on the actual cable installation.

"The cable is now pulled in to shore through a microtunnel from the head of the fjord, and the cable laying vessel is starting its journey towards open sea."

The cable weighs approximately 50kg per meter, and is being installed by the Nexans *Skagerrak* cable installation ship. Following the laying operation, the offshore vessel

Polar King will bury the cable approximately one meter below the seabed, depending on the seabed conditions. The cable itself was produced by Nexans in Halden, Norway.



NordLink will consist of two cables; the second will be installed next summer in parallel to the first cable. According to Borgen, cable installation in Germany will start next year from Wilster in Schleswig Holstein, north-west of Hamburg.

Digging in



Image: www.tritonknoll.co.uk

Triton Knoll has instituted an archaeological trial trenching project to cover the full route of its planned onshore export cable corridor in Lincolnshire, UK. Work is being carried out by Lincoln-based Allen Archaeology.

The proposed onshore export cable route for the 900MW offshore wind farm is almost 60km long, and runs from the landfall location at Anderby Creek, through to Bicker Fen where power generated by the offshore wind farm will connect into the national grid network.

The archaeological work also includes the landfall location, the onshore substation and the intermediate electrical compound sites. It will involve digging 300 trenches of approximately 2m wide and up to 50m long. Triton Knoll stressed that the preconstruction investigations do not indicate the start of onshore construction activity, but are for archaeological purposes only. The work is required to ensure that any sensitive archaeological sites are identified and discussed with agreed statutory heritage bodies and the Lincolnshire county archaeologist.

Baltic upgrade



ABB has won an order from Baltic Cable AB, a subsidiary of Statkraft, to upgrade the Baltic Cable HVDC transmission link. This link runs beneath the Baltic Sea and interconnects the electricity grids of Germany and Sweden. As part of the modernization project, ABB will upgrade the control and protection system of the link using its ABB Ability MACH technology.

The 250km subsea link has a capacity of 600MW and a 450kV voltage, the highest operating voltage in Germany. Built in 1994 to enhance the efficiency of power utilization, the link takes advantage of the differing patterns of power generation and consumption in Sweden and Germany, pooling energy resources and facilitating the exchange of electricity.

The upgraded MACH control system incorporates advanced fault registration and remote control functions. ABB will also replace other aging equipment to boost efficiency and reliability.

"The modernization of the Baltic Cable HVDC interconnection will not only enhance performance and reliability, but also extend the lifespan of this important link," said Patrick Fragman, head of ABB's grid integration business.

100 percent holding



Norway's Inocean AS has acquired the outstanding shares in its joint venture with Swiss group ABB. The ABB Inocean AB engineering venture, formed in 2012, has been renamed Inocean AB.

Inocean was the minority partner in the venture to supply project management and operational services for HVDC platforms used to transmit wind power to the onshore grid. The venture has worked on the Dolwin Alpha, DolWin 2 and Borwin Alpha projects.

Inocean AB will continue to develop its capabilities within the offshore wind power business, and in other sectors of the offshore and marine industry.

Mill upgrade



German manufacturer Hennigsdorfer Elektrostahlwerke GmbH has contracted Danieli to modernize its bar rolling mill to produce smooth rounds from 14mm to 80mm diameter, and round bars between 9.5mm and 40mm for reinforced concrete.

The two-stage project will begin with the installation of a new intermediate mill featuring H and H/V convertible stands to match a new roll-pass design for the production of rebar and steel bars.

The second stage will replace the finishing train and insert a compact sizing unit (CSU) to improve tolerance and ovality on the final product down to the ½ DIN, where all products will be finished to minimize groove size changing at the intermediate mill. Plant startup of the two stages is scheduled for the first and third quarter of 2018.

The CSU fast-automatic mill stand change system will allow product changes in less than five minutes, so easing the production of small lots. The new equipment will accommodate a future expansion of products, including flats.

Upgrade offers wider range



Rusal has announced the commissioning of a complex of furnaces for the hardening of wire rods at the Kandalaksha aluminum smelter (KAZ), following an investment of \$5.6 million.

The project, launched in March 2016, will produce 6,800 tonnes of wire rods per year from the 6101-T4 alloy. Users of the KAZ hardened wire rods include domestic and foreign manufacturers of cable products.

The new complex includes four convection furnaces for hardening, a loading and unloading table, and two drying chambers. The special feature of the complex is that the rods will be hardened with water, allowing for a natural aging process. For three days after hardening in the water, and drying, the crystal lattice acquires the properties needed for further processing.

In March 2017 the Properzi rolling mill was put into pilot operation at KAZ, which allowed for the launch of seven new sizes of wire rod with a range of diameters between 9.5mm and 25mm. Previously, the smelter had produced only 9mm products. The new rolling mill will ensure an output of up to 50,000 tonnes of value-added products per year.

High speed, high voltage repairs



Image: www.vbms.com

VBMS recently repaired inter-array cables and an export cable in UK waters. With its cable laying vessels deployed for cabling projects at Galloper, Rampion and Walney Extension offshore wind farms, VBMS used the cable laying barge Stemat 82 to carry out the work.

Stemat 82's eight-point mooring system made it particularly suitable for repairing inter-array cables in the shallow waters of the outer Thames Estuary. The export cable repair was carried out 20km offshore, in the Irish Sea.

To connect the replacement to the existing cable sections, VBMS acquired a subsea universal joint, installed by high voltage engineering specialist EDS. The universal joint is designed to connect cables of varied sizes as well as from different manufacturers, providing a rapid, independent installation solution that can be completed in less than 48 hours, thus taking advantage of small weather windows.

At the end of May, VBMS and EDS launched Cable Integrity Solutions, including the 'prepare to repair' framework.

Copper output results



Data from the international copper study group (ICSG) shows that global copper mine output was three percent lower, year-on-year, during the first five months of 2017. Concentrate production declined by around 2.5 percent and solvent extraction-electrowinning (SX-EW) declined by around 4.5 percent.

ICSG attributed the drop in production to a 10 percent, or 220,000 ton, decline in copper production in Chile. The world's biggest copper producing country was affected by the strike at Escondida mine and lower output from the Codelco mines.

Reductions elsewhere include a decline in Canada's and Mongolia's concentrate output, 20 percent and 21 percent respectively, chiefly due to lower grades in planned mining sequencing, and a 14 percent decline in Indonesian concentrate production due to a ban on concentrate exports between January and April. An 11 percent drop in US output was due to lower ore grades, reduced mining rates and unfavorable weather conditions at the beginning of the year.

North Sea installation



Image: www.deme-group.com

Dredging International, part of the DEME Group, has secured the contract from Belgian transmission system operator Elia for the submarine power cable installation for the modular offshore grid (MOG) in the North Sea. DEME will deploy its new fleet of vessels to carry out the works, including the hoppers Minerva and Scheldt River, and the cable installation vessel Living Stone.

Living Stone features DP3 capability and has been equipped with dual fuel engines. Two turntables below deck, each having a 5,000-ton cable capacity, can carry, transport and install over 200km of cable in a single trip.

Elia's modular offshore grid includes an offshore switchyard platform located about 40km off the Zeebrugge coast, to which four wind farms will be connected. Submarine cables will link the platform with a substation in Belgium, from where energy will be injected into the Belgian onshore grid.

The installation scope includes the supply, installation and maintenance of the submarine power cables. One 220kV power cable will be installed along a 4.5km route between the offshore switchyard platform and the first wind farm's platform.

ASIA & AFRICA NEWS



wiredInUSA - September 2017

Packaged marine communication cables from Grand Ocean Marine.

Photograph courtesy of Grand Ocean Marine

Grand Ocean Marine has announced a new partnership with Thailand's largest shipyard, supplying a number of IEC 60092 standard marine cables including low and high voltage marine power cable, designed for lighting and control systems; telecommunication and control cable, with a rated voltage of 150/250V and an operating temperature of 90°C; and variable frequency drive cables, used mainly in AC motors and drive systems. These last cables have an operating temperature of 90°C with a voltage rating of either 0.6/1kV or 1.8/3kV.

All of Grand Ocean Marine's marine communication cables can withstand

harsh conditions such as heat, cold, vibration, corrosion or humidity.

"Grand Ocean employs strict quality control, which complies with the BV classification society standards," explained Mr Zack Gao, Grand Ocean Marine product manager. "We are glad to note that Thailand's largest shipyard is ... satisfied with the quality of our marine electrical cables."

All marine cables and wires are IEC 60092 standard and BV type approved. The ship cables are also flame retardant, halogen free and low smoke to ensure the safety of crew.

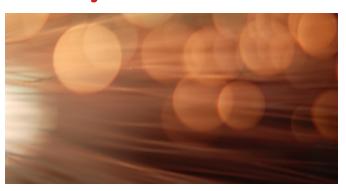
Price rise



A 'Steel mills of the world' report reveals that Saudi Iron and Steel Company (Hadeed) has announced an increase in its rebar and wire rod prices. The price of rebar for the domestic market increased by \$40 per tonne to \$533 per tonne.

The new wire rod price has also been adjusted to \$533 per tonne, up by \$40 per tonne compared with the company's last announced prices.

Italian job



South Korean manufacturer LS Cable & System has agreed an optical cables supply deal in Italy. The contract, signed with Italy's Open Fiber telecoms network, is estimated to be worth \$17.6 million and to be the largest amount of optical cables exported by a Korean company.

LS will provide optical cables for Open Fiber's network construction project until 2018. Open Fiber, owned by the state-controlled utility company Enel and Italian state lender Cassa Depositi e Prestiti, is currently constructing a high speed network to connect 40 Italian cities.

In April 2017 LS established a sales unit in France to cover the European region. LS Cable & System's president, Myung Roehyun, said that the office played a significant part in securing the latest contract, and: "...Expects to win more supply deals in the region during the second half of this year."

Broadband initiative



Integrated Telecom Company (ITC) of Saudi Arabia has begun work on a high speed fiber network across the country. The scheme will connect 640,000 homes, at a cost of \$930 million, following the company's agreement with the Ministry of Communications and Information Technology (MCIT).

Ghassan Itani, CEO of ITC, said: "This agreement will improve the level of services provided to customers in all sectors." The work will "enhance the digital infrastructure as well as help in providing high speed fiber optic broadband services to the urban areas of the kingdom, government offices and residential units," he added.

ITC signed an initial agreement on broadband initiatives with the MCIT and the country's Communications and Information Technology Commission (CITC) in May. The company operates two cable landing stations – at Jeddah on the Red Sea coast in the west and Al-Khobar on the Gulf coast in the east – connected to its existing 17,000km Saudi national fiber network, and owns a number of data centers.

Inter-island link



Spark New Zealand has completed an upgrade to the Nelson-Levin inter-island submarine cable link. The upgrade will improve connectivity to New Zealand, particularly between the North and South islands.

Installed by Spark in 2001, the Nelson-Levin cable link is 237km long and includes a 212km submarine network section between Nelson's Cable Bay and Levin's Hokio Beach. The Cable Bay landing site was built in 1876 to accommodate New Zealand's first international telegraph cable to Sydney, Australia.

The Nelson-Levin link is one of three submarine cables (two of which form part of the Spark network) carrying data traffic between the North and South islands.

"The completion of this upgrade improves the resiliency of our network, particularly between the North and South Islands, as the Nelson-to-Levin cable is shallow buried rather than laid on the surface of the sea floor, and is away from known fault lines," commented Campbell Fraser, Spark's GM technology infrastructure. "In emergency situations it gives us more options for routing traffic and keeping people connected."

Lowered latency in prospect



António Nunes, CEO of Angola Cables

Work has begun on the South Atlantic Cable System (SACS) between Africa and South America. Angola Cables has chosen NEC to construct the 6,500km cable that will run from Fortaleza, Brazil, to the municipality of Quissama on the Angolan coast, carrying 40Tbps of capacity.

"For Angolans, the time to access content available in America – the largest center for the production and aggregation of digital content and services – will improve fivefold," explained António Nunes, CEO of Angola Cables. It currently takes approximately 300ms to connect between Angola and Brazil. With SACS, the latency is expected to be reduced to approximately 60ms.

Nunes added: "Current cable systems, such as WACS, together with the SACS and Monet cables systems [and] complemented by local data centers, will improve connectivity, but also economically benefit Angola and the surrounding regions as tech companies, requiring high connectivity, establish and grow their operations in Africa.

Changes to the board



Ray Owen

Nokia's managing director for Oceania, Ray Owen, is leaving the company to take up an executive position as chief technology officer at Australia's National Broadband Network (nbn).

Owen's tenure will begin in November, reporting directly to JB Rousselt, the company's chief strategy officer. Rousselt commented: "We are delighted to welcome Ray to nbn and look forward to his vast experience in the global telecoms industry in helping us deliver the best possible network for Australians."

Owen joined Nokia in 2011 and has held several posts, being most recently head of Australia, New Zealand and the Pacific Islands.

Acquisition secured



Japan's Kyocera Corporation has acquired 100 percent ownership of the fastener and tool manufacturer Senco Holdings Inc, based in Cincinnati, Ohio. The enterprise has been renamed Kyocera Senco Industrial Tools Inc.

Senco, established in 1948, designs and produces fasteners and power fastening tools for residential, commercial, manufacturina construction and applications. Senco's range includes pneumatic and electric nailers and nails, staples and staplers, screws and specialty fasteners. Senco's manufacturing and marketing are concentrated in the US and Europe, selling in over 40 countries worldwide.

Subsea plans



Abu Dhabi Investment group (ABDIG) has acquired 62.5 percent of Fiber Prime Telecommunication's (FPT) shares. ABDIG is planning to invest up to \$5 billion in subsea cable projects and will restructure FPT to become a worldwide subsea cable company.

"We look forward to partnering with the Abu Dhabi Investment group management team to invest in critical global communications infrastructure," commented Luiz Fuschini, who will serve as FPT president and chairman. "This transaction provides the opportunity for immediate and substantial value to FPT, while also allowing FPT greater flexibility to execute on its long-term strategic vision," added Mr Fuschini.

The new company will operate under the FPT brand with Samir Auedd as CEO. "The breadth and depth of our combined product and service capabilities, delivered on a global scale, should enable us to provide a compelling value proposition to our customers," said Mr Auedd.

Products, Machines & Technology

Name that cable

RS Components (RS), the trading brand of Electrocomponents plc, has introduced a thermal transfer label printer designed for fast, customized identification of wires, cables and components.

The new BMP61 label printer from Brady targets installers, field technicians, maintenance technicians, site managers and electrical contractors, as well as workers in cabling, control panel and switchgear manufacturing or cable harness assembly.

Using high performance materials that can handle the toughest industrial identification applications, the printer is both fast and portable, making it suitable for use in the field.

AM: 100116
AM: 1001216
AM: 100

▲ Thermal transfer label printer from RS Components

The unit will print on a wide range of durable labels. Its wireless connectivity makes it particularly suitable for applications such as the identification of outdoor cables, and main electrical components in the field or within facilities.

It can also replace engraved identity plates with printable labels that are virtually identical to engraved plates.

RS will also supply consumables and labels for the BMP61, including personalized custom labels with a wide choice of options including layout, shape, color or logos.

These labels can be finalized in the field by adding options such as serialization code, barcode, number or text.

Maintaining contact

The standard method of connecting wires and cables to copper busbars is time-consuming, using screw clamps or fixed conductor connection clamps.

The new range of maintenance-free conductor connection clamps from Rittal offers a fast, easy and secure method for connecting conductors to busbars using push-in technology.

Rittal's push-in clamps can be used for many different types of conductors, and are available in two clamping ranges, 0.5–4mm² and 1.5–16mm², and for copper

busbars, 5mm and 10mm thick in each first cable for sewer relining robots with a clamping range. The push-in conductor connection clamps are quick and easy to attach to the busbar.

The stripped end of the conductor is connected to the busbar simply by pushing them together, and the connection is held securely in place with a separate spring mechanism. The spring optimizes conductivity by removing oxide layers that have formed on the busbar, and optimal contact is maintained by the integral contact block with its defined and raised contact points.

Quick and easy connections can be made with solid, multi-wire and ultrasonic welding conductors and also fine wire conductors with wire end ferrules and twin wire end ferrules.

The clamp can be used for numerous applications, such as connecting protective and neutral conductors to busbars or as short circuit-resistant voltage taps on the copper bars of a main busbar system.

With UL and IEC certifications, the new conductor connection clamp is suitable for use worldwide, including maritime and offshore applications.

Sewer lining specialists

Hradil Spezialkabel's drum-reeling 300V New Generation coaxial cable 4.0 is the UV-curing unit that permits the use of twocamera systems by using two internal 75 ohm coaxial conductors.

This has the advantage that two camera systems can be installed on UV-curing trains, each performing a different task – as front or reverse cameras, for example.



▲ Hradil's 300V New Generation coaxial cable 4.0

While one camera monitors the curing process, the other one inspects the results and logs them. At 75 ohm, both coaxial conductors offer a much higher power reserve than conventional 50 ohm coaxial conductors.

The New Generation coaxial cable also permits the use of two separate power supplies of 300 and 24 volts.

This 44-wire 22mm diameter cable is designed to withstand extremely harsh environments, chemicals, abrasion and high mechanical loads, while providing an

above-average service life. It can tolerate tensile stresses exceeding 5,000N in a temperature range from -50°C to +90°C.

Connectors suit mining applications

Harting has developed an expanded beam fiber optic connector to provide high bandwidth transmission in the harsh environments found in tunnel drilling and mining applications. Industrial Ethernet over fiber optic cable is in wide use in the industries, where the demands placed on the communication and control cabling are particularly stringent.

The long distances involved, together with the high bandwidths required, make the use of fiber optic cable essential, but as optical interfaces are sensitive to contamination, a rugged and more reliable solution is needed.

Harting's solution for high data rates under these extreme conditions is the expanded beam cable assembly. Its high bandwidth supplies high definition video signals for use in the vision systems that control boring machinery and associated equipment.

The fiber is safely packed in a connector housing that cannot be affected by dust, water or other environmental factors.

In addition, the hermaphroditic mating design of the expanded beam connectors

ensures that regular disconnection and re-connection of the cabling in these environments is easier than using standard fiber optic cabling. Even extending the length of the optical connection is as simple as connecting an additional cable.

Harting's expanded beam cable assembly can be used to link networks in other heavy duty application areas, including outside broadcast events, stage installations and container ports.

Space-saving variant

With its new ParaLink 25s variant of the ParaLink product line, Leoni brings a new product to the field of twin-axial cable technology.

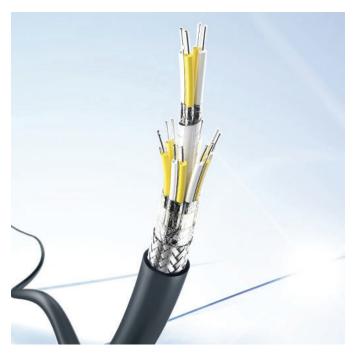
This new pair design is said to improve signal integrity when transmitting data at high frequencies. The improvement of the attenuation readings facilitates the use of thinner cables across the same transmission paths in tightly packed computer centers.

Leoni describes its latest ParaLink variant as "a new milestone" in the development of high performance copper connections with low attenuation loss for broadband data transmission in data centers. With optimized electrical properties, ParaLink 25s is prepared for future data center standards such as QSFP-DD and OSFP at a transfer rate of 400Gbit/per second. "25s" stands for 25Gbit/per second transfer per pair with

an additional skin, or coating, over each and the company has been invited by individual core pair.

German transmission system operators to

While ParaLink 23 will reliably transfer 25bit/per second per data pair via copper, a skin extruded onto the individual core pairs further optimizes the electrical transfer rates of ParaLink 25s. Attenuation readings are improved by up to 20 percent, compared with ParaLink 23, making longer transmission paths possible.



The new pair design from Leoni

Leoni produces ParaLink 25s cables with AWG 26, 28 and 30 as a single pair or in versions with 2-, 4-, 8- or 16-core pairs. The cable jacket can be either PVC or halogenfree, as required.

DC development

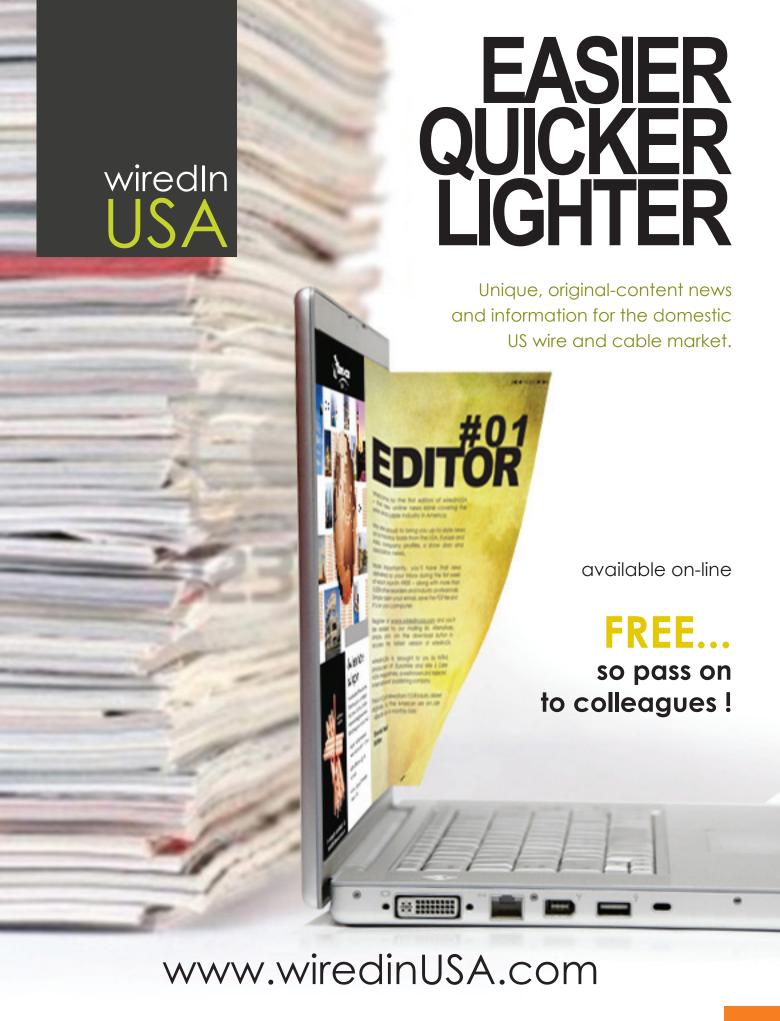
ZTT Group has announced that China's first ±525kV XLPE insulated flexible DC cable system has been successfully developed,

and the company has been invited by German transmission system operators to participate in planning the first 1,000km ±525kV XLPE DC cable line project.

Mr Xie Shuhong, professor level senior engineer and director of ZTT research institute and ZTT submarine cable research institute, said that ZTT began its research in 2015, together with Shanghai Jiao Tong university, Shanghai Electric Cable Research Institute, and Global Energy Interconnection research institute. The team has made a series of key technical breakthroughs in material testing, cable and accessory system design, performance parameters, manufacturing processes and testing.

Mr Yang Liming, professor level senior engineer and deputy chief engineer of State Grid Electric Power Research Institute, added that the ±525kV flexible DC cable system represents the highest level of domestic insulated DC cable.

He explained that it has four advantages: the largest cross-section of 3,000mm² water resistant conductor with the highest voltage, 525kV, in China; transmission capacity up to 3,000MW, an improvement of 135 percent, compared to the current operation of ±320kV DC cable; the integration of power transmission, optical fiber communication and real-time temperature measurement; and a new metal shield structure, with a ten percent decrease in diameter, compared to corrugated aluminum type cable with the same voltage level and specification.



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