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May 2015 issue - No 47

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#47 EDITOR

I lost count of the times I heard 'really good show' or 'lots of positive leads' during my three days at the Interwire exposition in Atlanta, USA, last week.

This was from overheard conversations or from speaking directly with exhibitors and visitors alike during my time in Georgia.

But that theme seemed to continue, at least until lunchtime on the last day, when there was an obvious drop in the number of visitors. But prior to that you could have been mistaken for thinking that the Atlanta Hawks had been at home during the day and certainly more than just the Wednesday night at the home stadium of the Phillips Arena, just across the road from the center.

An impressive number of exhibitors and visitors from abroad can only strengthen Interwire's place as the leading show for North America for the wire and cable industry.

I would also like to say a big thank you old and new friends who visited the wiredInUSA booth and made us very welcome. See you next time!

David Bell
Editor

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ASIA & AFRICA NEWS / The latest news from Asia & Africa

PRODUCTS, MACHINES AND TECHNOLOGY / The latest news from machine industries

NEWS

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DIARY SHOW EVENTS

2015

MAY

12-15 May 2015
wire Russia
 Moscow, Russia
 Exhibition
www.wire-russia.com

SEPTEMBER

16-18 September 2015
wire Southeast Asia
 Bangkok, Thailand
 Exhibition
www.wire-southeastasia.com

OCTOBER

6-8 October 2015
wire South America
 São Paulo, Brazil
 Exhibition
www.wire-south-america.com

2016

APRIL

4-8 April 2016
wire Düsseldorf
 Düsseldorf, Germany
 Exhibition
www.wire.de

SEPTEMBER

26-29 September 2016
wire China
 Shanghai, PR China
 Exhibition
www.wirechina.net



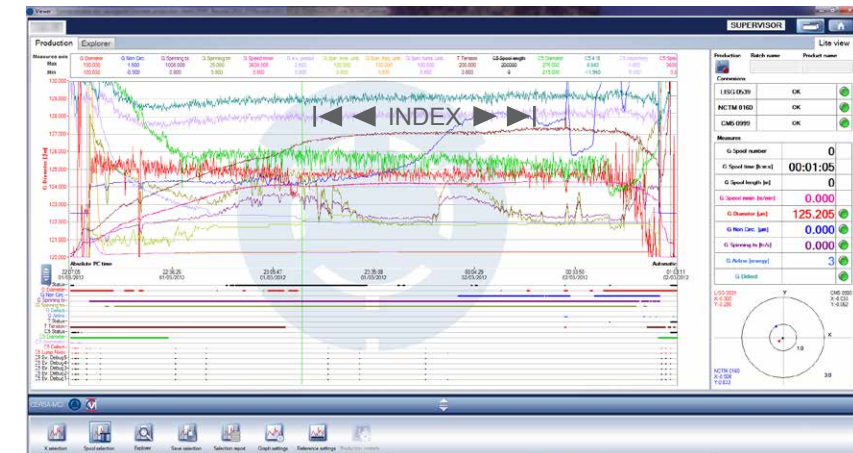
Measure & Control
Instruments



OPTICAL FIBRES Measurement Instruments

In line data collection,
display, record and report

CIM PC software:



LIS-Glass:

Laser Interferometric Sensor

- Diameter repeatability: $\pm 0.005\mu\text{m}$ at 50kHz
- Diameter uncertainty: $\pm 0.15\mu\text{m}$
- Defect detection 75kHz, event recording
- Ultra fine air line detection, $0.3\mu\text{m}$, 400Hz
- Fibre position: $\pm 2\text{mm}$ range $\pm 0.1\text{mm}$, 1kHz
- Spinning frequency profile
- Fibre no circularity measurement

NCTM:

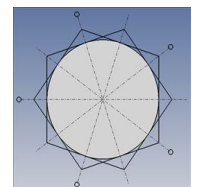
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- 0-400 grams $\pm 1\text{gram}$, 1kHz
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- $\pm 1\text{ gr}$ within 10-40°C ambient

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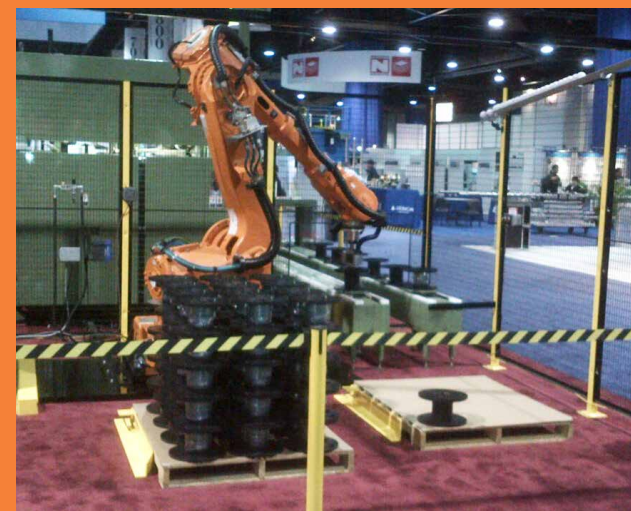
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MAKING THE NEWS

You really can't Beat It!

AC/DC's You Shook Me All Night Long, Michael Jackson's Beat It and the theme from Hawaii Five-O heralded Interwire 2015 at the Georgia World Congress Center, Atlanta, USA, last week.



Visitors were met by the soundtracks playing on the MGS booth where a baseball-pitching robot drew a large number of people during the three-day exposition.

While the ideally positioned booth did attract a large crowd on all of the days, new product launches from Clinton Instruments, an entire inline display from NDC Technologies, and an impressive exhibit from AIM also added to what can only be described as a very well received exhibition.

Add to this an abundance of conference papers, and all the ingredients were in place for a big shot in the arm for the American wire and cable industry. Also noticeable was a large contingent of exhibitors from China.

Outside of the center, the official reception at the nearby College Football Hall of Fame provided refreshments for exhibitors and visitors alike, while also providing an ideal networking opportunity at the end of the first day of exhibits on Tuesday.

Seven solar Sisters



SunEdison on Twitter: "Construction is officially underway at the Seven Sisters #solar project in Utah"

SunEdison has begun work on the Seven Sisters 22.6MW DC solar project in southern Utah, USA.

The Seven Sisters are seven separate solar power plants, four in Beaver County and three in Iron County, Utah. Rocky Mountain Power, a division of PacifiCorp will purchase the electricity under seven separate 20-year power purchase agreements with SunEdison. The projects are on the Call Right Projects List for TerraForm Power, a global owner and operator of clean energy power plants. SunEdison anticipates offering these projects to TerraForm Power for investment upon completion.

"We are pleased that the world's largest renewable energy developer has chosen to build these clean energy

power plants in Utah," said Gov Gary R Herbert. "These SunEdison projects will produce significant construction job opportunities and meaningful property tax enhancements in Iron and Beaver counties, while helping resource diversification – both geographic and technological – underway in the west."

Danny Stewart, Iron county's economic development director, said: "The three Iron County sites will have a significant impact on the local economy through the creation of construction jobs and new property tax revenue from the power plants that will be shared by the county, water conservancy district and school district. Iron County looks forward to this collaboration and the continued efforts to advance clean energy development in southern Utah."

WISCONSIN LINE GO - AHEAD

WISCONSIN



1848

Wisconsin regulators have approved the construction of the 180-mile, 345kV Badger-Coulee high voltage transmission line, destined to supply 1,400MW of renewable energy into the midcontinent independent system operator (MISO) system.

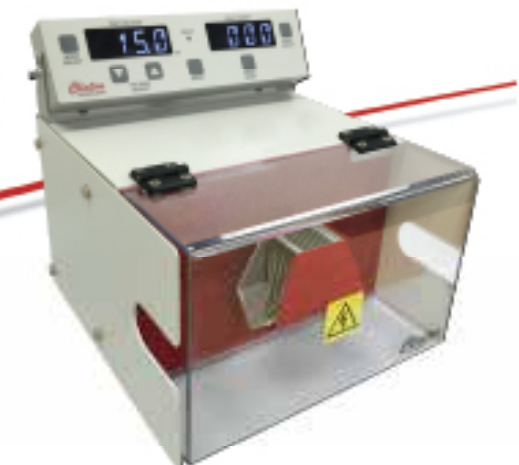
Opponents of the \$580 million line argued that the Xcel Energy-American Transmission Co (ATC) project is an unnecessary expense that will increase

utility-owned central generation but diminish the value of distributed generation development. They are said to be "appalled" by the decision.

The Wisconsin public service commission's unanimous decision completes the necessary approvals for ATC-Northern States Power (Wisconsin) and construction will begin later this year. The line should be in service by 2018.

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Wind developments in Tennessee

Tennessee Valley Authority (TVA) is planning to carry wind energy from Oklahoma and Texas to the Tennessee Valley via a 700-mile 4,000MW transmission line. The developer has spent six years in planning and seeking regulatory approval for the \$2 billion project, now expected to take a further three or four years to gain approval and construction.

TVA's draft integrated resource plan for the next 20 years states that under most scenarios TVA would benefit by importing 1,750MW of wind power from Texas and Oklahoma, half of the power that

Clean Line Energy LLC wants to bring to the Tennessee Valley. Prospective wind power generators in Texas and Oklahoma have offered over 15,000MW of electricity generation for Clean Line Energy.

"The wind industry has gotten quite mature and is better able to capture wind power to maximize energy output," said a TVA spokesman. "We think in today's market we can do that for under five cents per kilowatt hour, which we think will be the cheapest renewable you can get and a very interesting option for TVA."

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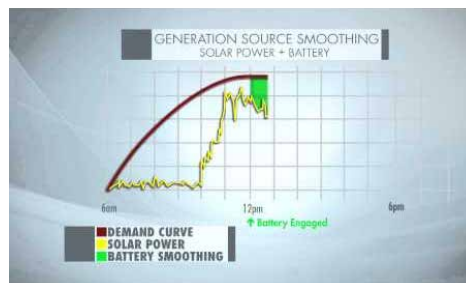
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Maintaining power with a microgrid



Development of an innovative microgrid to showcase the integration of distributed generation and storage technologies

Oncor Microgrid and Technology Demonstration and Education Center (TDEC) in Lancaster, Texas

David Chiesa of S&C Electric Company gives a tour of the microgrid control room during Oncor's ribbon cutting ceremony.

S&C Electric Company and Schneider Electric have delivered an advanced microgrid for Oncor, an electric transmission and distribution company serving ten million customers across Texas. The microgrid is engineered to maximize newly installed energy storage and renewable generation, and to improve reliability.

S&C collaborated with Schneider Electric to combine new hardware and software technologies for the facility, which includes an integrated demonstration center for Oncor to showcase the microgrid's advanced capabilities and customer benefits.

S&C and Schneider Electric built the microgrid at Oncor's system operating services facility (SOSF) near Lancaster, Texas. The system consists of four interconnected microgrids and utilizes nine different distributed generation sources, including two solar photovoltaic arrays, a microturbine, two energy storage units and four generators.

To turn these diverse generation assets into a microgrid, S&C and Schneider Electric developed a distribution automation scheme that leverages multiple intelligent grid solutions from both companies, enabling the four microgrids to operate independently or as one larger microgrid.

In the event of power loss, S&C's distribution automation equipment and Schneider Electric's microgrid controller automatically detect a problem on the grid, initially by recognizing an interruption in power and then testing to determine if the issue is temporary or permanent.

If permanent, the distribution system automatically reconfigures the distribution system: "In a matter of seconds," said David Chiesa, director, microgrid business development, S&C. "Faster than a customer could find their flashlight in the dark."

PLANT RISING FROM THE ASHES

Just five months after fire erupted in a hood on a bead wire line and caused extensive damage to Bekaert's New York steel wire plant, reconstruction of the wrecked section "is about 80 percent complete," said plant manager Gary Downey.

New equipment worth \$7million had been delivered to the Rome plant when the fire broke out, but it was stored in

a different section of the building and was undamaged. Bekaert brought in nine engineering and technical staff from its European operations to help install the new bead wire machinery.

Rex Rains, president of the CWA/IUE Local 33190 union, said of the activity at the facility: "It's just like building a new plant. It's just amazing."

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Sun and sand

Marubeni Corporation and EDF Energies Nouvelles, a wholly-owned subsidiary of Électricité de France (EDF), are to invest jointly in the 146MW Laberinto Project photovoltaic solar plant. Located in the Chilean Atacama Desert, which has the highest level of irradiation in the world, the finished plant will be connected to Chile's northern interconnected system.

The project is equally owned by EDF Energies Nouvelles and Marubeni, and will contribute to the Chilean government's aim to generate 20 percent of the country's power from renewable energies by 2025.

EDF Energies Nouvelles has a built and commissioned portfolio of over 10,000MW (gross) of renewable power plants. The Laberinto Project is the third joint project between Marubeni and EDF Energies Nouvelles following two projects in North America.

Upon completion, Marubeni's total worldwide generation capacity will be 35,434MW (gross), 11,022MW (net).

Joint plans to invest in the Laberinto Project photovoltaic solar plant. Photograph courtesy of www.thisischile.cl

FIBER ACQUISITION

Corning Incorporated has completed its planned acquisition of fiber optics assets from Samsung Electronics Co Ltd. Corning will integrate the business, with fiber optic manufacturing facilities in Gumi, South Korea, and in Hainan, China, into the Corning Optical Communications business segment. The acquisition is expected to augment Corning's market access and enhance its portfolio of optical communications products in Asia.

"We welcome Samsung Electronics' talented team to Corning, and together we look forward to expanding Corning's global presence," said Clark S Kinlin, executive vice president, Corning Optical Communications. "We are enthusiastic about the opportunities this operation provides in Korea and throughout southeast Asia."

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Cable consolidation

General Cable Corporation has completed the sale of its interests in various joint ventures including Dominion Wire and Cables and Keystone Electric Wire and Cable. In each case, the company's ownership interests have been purchased by its respective joint venture partner.

Proceeds from the sales, around \$21 million, will reduce General Cable's outstanding borrowings.

This is General Cable's second announcement since launching a divestiture plan. The company is focused on simplifying its geographic portfolio and reducing its organizational complexity by shedding manufacturing operations in Asia Pacific and Africa.

Gregory B Kenny, president and CEO, confirmed: "This announcement builds on the momentum generated at the end of 2014 with the previously announced sale of our interest in the Philippines for \$67 million. We are focused on the continued execution of the divestiture program, as well as our restructuring program, which is centered on improving profitability and returns in our core operations in North America, Latin America and Europe. We are pleased with the progress we are making in reshaping the organization as we position the company for sustainable success while increasing shareholder value in the near term."

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Ontario solar power



Canadian Solar Solutions Inc, a wholly owned subsidiary of Canadian Solar Inc, has completed the sale of a third 10MW AC solar power plant to Renewable Energy Trust Ontario Holdings (RET Capital). The plant, known as 'CityLights', will use Canadian Solar's CSX-P-300/305P panels.

The CityLights solar power plant is located in the town of Chesterville, Ontario. Electricity generated by this power plant, currently in operation, will be sold to Hydro One under a 20-year independent energy systems operator feed-in tariff contract. Canadian Solar provided engineering, procurement and construction services, and will provide further operations and maintenance services.

"By purchasing CityLights, we now have a portfolio of more than 40MW DC of solar assets in Ontario," said John A Bohn, CEO and chairman of RET Capital. "We look forward to continuing our close working relationship with Canadian Solar in the future as we expand our North American solar network."

Dr Shawn Qu, chairman and CEO of Canadian Solar, said: "We are pleased to close our third solar power plant sale to RET Capital. Not only does this sale highlight the successful collaboration between Canadian Solar and RET, it also underscores our success in creating sustainable jobs and furthering the use of renewable energy from the sun in Ontario."

Broadcasting products

LEMO and Northwire Inc, a LEMO Group company, introduced new HDTV SMPTE and ARIB cable products during April's National Association of Broadcasters show (NAB).

Northwire has extensively designed, tested and validated its latest product to provide a cable that meets or exceeds SMPTE (311-M) and ARIB (BTA S-1005B) standards.

LEMO continues to serve the broadcast marketplace with its connection solutions for outdoors (harsh environments) and studio (indoor) applications. LEMO's products include the 3K.93C HDTV connection system (SMPTE 304 compatible), audio/video connectors, digital media converters, portable fusion splicing, cable assemblies, fiber optic maintenance, and inspection and cleaning tools.

LEMO's NAB stand featured a live demonstration using RED Digital's Epic Dragon® 4K broadcast module linked to LEMO's Serbal™ fiber optic converter. This configuration exhibits the performance of LEMO's connections, media converters, terminations and new SMPTE cable.

Also on show was LEMO's HD Z-Link™ fiber optic camera link system for multi-channel camera-style video and audio connections, and control for studio cameras and camcorders over a single hybrid cable using 3K.93C connectors. High bandwidth fiber optics and the multiplexing of numerous forward and return video, audio, talkback and data channels are said to provide full communication with any camera position.



In the loop

Global Capacity will expand its One Marketplace™ with a metro fiber ring in Dallas to provide access and local loop capabilities for IP transit and traditional point-to-point bandwidth needs. The dedicated metro ring addresses growing demand for secure, scalable Cloud connectivity between multiple data center facilities.

The Dallas–Fort Worth region is a major Internet and network peering exchange point. Global Capacity's new PoP in Bryan Street, Dallas, provides an additional access point to One Marketplace with network

reach to over 9.6 million commercial locations across the country.

“Customer demand for more competitively priced connectivity and lower latency in the Dallas-Fort Worth metro has fueled Global Capacity's network expansion,” says Ben Edmond, chief revenue officer of Global Capacity. “Global Capacity will continue to expand the One Marketplace footprint in ways that complement our existing customers and suppliers, while maintaining the highest level of interconnectedness.”

Arkansas investment

Entergy Arkansas will invest \$62.2 million in a new transmission line from Monticello to Reed, USA. The transmission project involves construction of a new 24-mile transmission line and expanded electrical facilities, including a new substation in Reed, to transfer power more reliably and efficiently into the region.

The proposed route involves a segment to the Monticello industrial park, where a new distribution substation will be built to serve industrial and commercial customers.

Entergy Arkansas president and chief executive officer Hugh McDonald said: “The Monticello project is a productive investment into the long term future of our state's economy, that will enable us

to enhance customer reliability. [It] is one of several significant investments that will enable us to support any prospective large industrial customers that may choose to locate along the Mississippi River corridor between Reed, and Greenville, Missouri.”

Entergy Arkansas plans a total investment of \$2.4 billion in generation, transmission and distribution improvements to the state's electrical infrastructure up to 2017, with a further \$25 million to be spent on a 27-mile transmission line between Lake Village and the new Reed substation.

The Lake Village project is being developed in phases and is slated for completion by June 2017.

EUROPE NEWS

DESIGN IN ACTION

UK's National Grid has constructed working versions of its new electrical transmission pylons. Designed by the Danish architecture and engineering firm Bystrup, the new pylon is a monopole T-shaped mast with two suspended diamond-shaped elements holding three cables on each side of the central pole.



Six of the pylons have been erected at the National Grid's training academy in Nottinghamshire, UK, each demonstrating a different function in the network including

the F10 flying angle suspension pylon, which can allow a turn of up to 10 degrees along the route. Taller versions can be used as 'tension towers' where a change of direction of 30 degrees is required.

National Grid's existing 88,000 pylons are typically 165ft high and will not be replaced by the new 120ft pylons, which are intended to be used in the construction of new lines.

"Our aim was to minimize visual impact and create a design that could adapt well to the English landscape," said Brian Endahl, project manager at Bystrup, which won the project in a design competition in 2011.

"We have built similar pylons in Denmark and found that the monopole structure works well in hilly areas as it requires less space and can follow the contours of the land."



French/German partnership aids Faroes

French company Saft is partnering with German-based Enercon to create an energy storage system (ESS) to help the Faroe Islands.

The 2.3MW project will be Europe's first commercial deployment of a lithium-ion battery system working in conjunction with a wind farm. The combination of the two will aid SEV, producer and distributor of power for the Faroe Islands, to address the Faroe Islands' issues with grid stability. The project will deliver ramp control which, according to Saft, will decrease the sporadic tendencies in the running power, as well as frequency response and voltage control services.

Those involved in the project are looking for big improvements in Denmark's renewable generation. The goal is to offset the country's growing energy production by raising its share of renewable energy to 75 percent by 2020. The country's renewable generation share in 2011 was 38 percent.



New cable facility

The opening ceremony has been performed for Electrocables Bulgaria – Nexans' new automotive cable systems factory in Pleven, Bulgaria. The development of the plant was actively supported by the InvestBulgaria agency, whose deputy executive director attended the ceremony. Also present were the president of the national assembly, Tsetska Tsacheva; the mayor of Pleven, Dimitar Stoykov; and numerous representatives of local and central government.

The plant is located in Pleven industrial and logistics park. Construction started in May 2014 and production of automotive wiring systems for BMW began in early 2015. Currently employing around 60 people, the plant is expected to employ over 500 once working at its full capacity.

"We are very impressed with the motivation, dedication to quality and desire to produce efficiently by our Bulgarian colleagues," said Ingo Herzog, managing director of Electrocables Bulgaria, adding: "We hope this will be a solid basis of our desire to grow in the future." Andreas Wolf, managing director of Nexans autoelectric GmbH, confirmed that the company's plans in Bulgaria are long term.



Broadening the company scope

At an offshore wind auction held by the bureau of ocean energy management in January, RES America Developments Inc secured the rights to develop one of the two awarded leases. The lease comprises an area with potential to accommodate over 1,000MW. Following approval from the bureau the lease will be taken over by DONG Energy, the first for the company outside of Europe.

A draft policy bill to support the regulatory conditions for offshore wind has been introduced with the Massachusetts government, aiming to provide a stable framework that will enable the build-out of projects. The Massachusetts lease has a total size of 760km² and is located approximately 90km from shore at water depths of 40 to 50 meters.

"The site conditions are quite similar to those we currently work with in north-western Europe, which means that the project could be developed using well known technology and logistics," Mr Leupold from DONG Energy explained.



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Combined solution for gas field

The Statoil-operated Gullfaks gas field in the Norwegian Sea will use Nexans' power umbilicals combining power, fiber optic and hydraulic lines in a single cross section. The subsea gas compression station will be installed on the seafloor at the Gullfaks Sør satellite field, 15km from the Gullfaks C platform, where it will increase total gas extraction by 22 million barrels.

The cables will power two 5MW gas compressors at a depth of 135m. The 650-tonne station will be housed in a 420-tonne protective structure, managing a flow rate of ten million cubic meters per day.

Subsea compression is used when reservoir pressure falls below a critical level, reducing gas production. By compressing the gas on the seafloor, pressure in the pipelines is increased and gas flows faster allowing more to be extracted from the field.

The Gullfaks field is located 160km west of Sognefjorden, Norway. The subsea gas compression station will be only the second of its kind in the world. Nexans delivered umbilicals to the first subsea compression station at the Åsgard gas field, also operated by Statoil, in 2014.



German connection contracts

Prysmian Group has secured a new contract with 50Hertz Offshore GmbH to design, produce and install a power cable system for the offshore wind park cluster West of Adlergrund in the German Baltic Sea.

The award is the result of 50Hertz exercising an option for a further grid connection already provided for in the existing contract for the West of Adlergrund project when secured by Prysmian in May 2014.

The project scope comprises the design, supply and installation of multiple high voltage submarine cable systems, now including this additional connection, between planned offshore wind parks, approximately 40km north-east of the island of Rügen, to the Lubmin substation in north-east Germany (and consequently with the mainland electricity grid) along a route of approximately 90km (submarine) and 3km (land).

The 220kV HVAC three-core extruded cables (including fiber optic) will be produced at the Pikkala (Finland) and Arco Felice (Naples, Italy) facilities, recently been upgraded to manufacture and test large cross section three-core cables up to 400kV AC.



German Bight wind project

Siem Offshore Contractors (SOC) has accepted a contract for the supply and installation of an inner array grid cable system for the 400MW Veja Mate offshore wind farm (OWF) located 115km off the German coast, within the German Bight sector.

Under the €100m contract, SOC will provide associated materials and services, including the supply of submarine composite cables, cable protection systems and related accessories as well as post-installation termination, trenching and testing services.

The inner array grid will connect 67 wind turbines with 33kV medium voltage alternating current (MVAC) submarine composite cables.

The offshore project is owned by Highland Group, and under development by K2 Management, as technical advisor, with Green Giraffe as financial advisor and CMS Hasche Sigle as legal advisor.

The IAG cable system offshore works are scheduled to begin in 2016, with the project due to enter service by the end of 2017.



Future secured for cable fleet

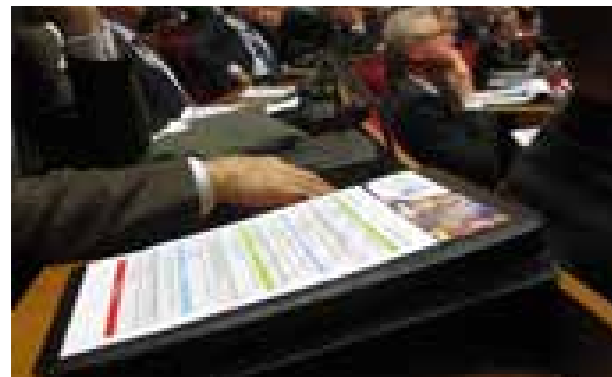
Alcatel-Lucent and Louis Dreyfus Armateurs (LDA) have renewed a long-term partnership and streamlined their cable ship operations. With the completion of the transaction, Alcatel-Lucent Submarine Networks (ASN) has now full ownership of ALDA Marine and its fleet, while LDA remains ASN's long-term partner for cable ship management and fleet development.

A joint venture between Alcatel-Lucent and Louis Dreyfus Armateurs, ALDA Marine was established in 2000 to build, own and operate a fleet of cable ships. Through this collaboration, ASN has positioned itself among leaders in the field of subsea telecom cable systems, with its marine operations a key differentiator in the market.

ASN's cable ship fleet features high engine power, thrusters and dynamic positioning to maintain position and operation in almost any weather conditions; high-tow force and heavy-duty ploughs for cable burial and cable-lay control systems; and fully redundant GPS navigation and positioning systems for real-time vessel positioning to an accuracy of better than ±10m.



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With Thailand anchoring as the region's manufacturing and production hub, Southeast Asia is set to achieve a real GDP growth rate of 5.4% per annum between 2014-18, thereby setting its wire and cable industries to greater heights in the years ahead.

wire Southeast ASIA is expected to continue on its upward trend, presenting a wide range of innovative machinery in wire manufacturing and finishing, fastener manufacturing and spring and wire formed parts manufacturing alongside new and upgraded machines, tools and auxiliary materials in process engineering, as well as wire and rod materials. Also, new processes will be shown in measuring, control and test engineering as well as in other specialist areas. The biennial trade fair is co-located with the synergistic Tube Southeast ASIA 2015.

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ASIA & AFRICA NEWS

MALAYSIA ROPES IN RIGGING

KTL Global's rigging subsidiary, KTL Offshore Pte Ltd, a company headquartered in Singapore, plans to hire more staff for its new manufacturing facility in Tanjung Langsat, Malaysia.

"We expect to increase our manpower from 18 to 50 people by the end of 2015 as we move more and more facilities across [from Singapore] to Malaysia," said Mark Beretta, chief operating officer and executive director at KTL Global.

KTL Offshore is a manufacturer of premium steel wire rope, synthetic rope and subsea rigging equipment for the oil and gas industry.

The company's Tanjung Langsat operations, extending to over 217,800ft², will be the largest dedicated facility in Malaysia and will focus on the manufacture of steel wire rope slings and storage for rigging gears.

"[The Malaysian facility] will really help us to reduce our operational costs. That's the reason why we do it," explained Mr Beretta.

KTL Offshore expects to complete relocation of its steel rope slings and rigging production to the Tanjung Langsat facility by June. The relocation to Malaysia is a result of high labor costs, utility charges and government levies in Singapore.



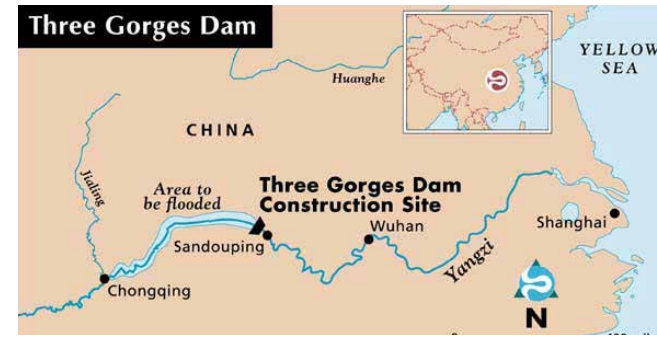
Lighting Harare streets

Local authorities in Zimbabwe's capital, Harare, will use solar power to light the city's streets, in a move to reduce street robberies.

"We are starting with the central business district, then we will move on to other parts of the city," Micheal Chideme, the Harare city council's media officer, told the Anadolu news agency.

The council plans to install nearly 4,000 solar powered street lights across the city. The \$15 million project is in partnership with a Zambian advertising agency, which will erect 3m poles around the city bearing small solar panels and a battery. Batteries will last between ten and 12 hours and will be equipped with timers.

Asked for his opinion, a resident of the capital said: "It's a good deal, considering crime was increasing and that the Harare city council had completely failed to repair the streetlights."



Power plans for Nepal

China's main hydropower developer has approval to develop a 750MW hydroelectric power plant in Nepal.

China Three Gorges International has secured approval from Nepal's investment board to develop the long-delayed \$1.6billion hydropower project to be sited on the West Seti river in northwest Nepal.

The Nepalese are keen to exploit the country's hydropower potential to ease power shortages in the region, prompting investment commitments from India and China, Nepal's largest neighbors.

Reuters was advised that some of the power generated by the project will be given for free to local inhabitants, while the rest will be sold to Nepal. Expected to be complete by 2022, the plant is estimated to be capable of producing about 42,000MW. At present, Nepal generates 800MW, failing to meet a demand of 1,400MW.



Ireland power deal

LS Cable & System is contracted to supply 220kV power transmission cables to ESB Networks, the Republic of Ireland's state-owned electric power transmission and distribution company. The manufacturer will provide the subterranean power cables, expected to be worth around \$43.34 million, over the next four years.

"ESB Networks inspected our factories last November, as technology and product quality were also key evaluation factors in the bidding alongside price," said Lee Heon-sang, overseas energy sales division senior vice president of LS Cable & System.

ESB Group distributes 100 percent of the power supply in Ireland and Northern Ireland, and produces 50 percent of electricity for the regions.



New line for new lines

Zenith Steel (Changzhou Zhongtian Iron & Steel) of Changzhou, China, has signed a contract with Primetals Technologies to upgrade a complete wire rod mill. The new line will allow Zenith Steel to expand into high carbon wire production.

For increased cooling capacity and uniformity, the project will include upgrading the existing Morgan Stelmor conveyor with the first Optimesh system in China. The Optimesh system controls the air distribution across the width of the Stelmor conveyor, ensuring uniform cooling of the rings for consistency of both mechanical properties and metallurgical structure.

The contract's scope of supply also includes a prefinishing mill, shear, Morgan Vee No-Twist mill, a Morgan intelligent pinch roll, laying head and water boxes. The mill will be used to roll rod in 5.5mm to 20mm diameters, operating at an increased speed of 110m per second, and is expected to be commissioned in early 2016.



High speed from Asia to US

Work has begun on a \$250 million undersea fiber optic cable project to add capacity to the growing Internet traffic between Asia and the US mainland. The project, via Guam and Honolulu, is under construction by GTA Teleguam and a consortium of international companies.

“GTA is excited about this consortium,” said Robert Haulbrook, GTA president and chief executive officer, adding, “With this system, collectively, we are well positioned to meet the growing demand for increased bandwidth and strengthening our position to enhance overall network redundancy.”

Known as the south east Asia–US system, the undersea cable will link five areas and territories: Manado in Indonesia; Davao in southern Philippines; Guam; Honolulu, Hawaii; and Los Angeles, California. It involves laying over 9,000 miles of cable along a path engineered to bypass earthquake-prone areas in east Asia.

When completed, the cable system will provide an initial 20TB per second capacity, with 100GB per second technology.



Subsea spread for central Africa

Huawei Marine has been awarded a contract by the government of the republic of Equatorial Guinea to build the Ceiba-2 submarine cable system, expected to be ready for service by the end of 2015.

Utilizing Huawei Marine’s wavelength division multiplex (WDM) and optical transport network (OTN) technologies, the 290km system will feature a design capacity of 8TBps and link the capital of Malabo to Bata, the country’s economic hub, with a branching unit towards Kribi, Cameroon.

The system will enable Equatorial Guinea to connect, via Kribi, to larger submarine cable systems including WACS, SAT-3, and Main One. It will also provide restoration or redundancy routes for existing traffic on Ceiba-1, the direct link between Malabo and Bata, and the Africa coast to Europe (ACE) submarine cable branch to Bata.



Boost in connectivity

Broadband service provider Menatelecom, an investment subsidiary of Kuwait Finance House of Bahrain, has built an independent and redundant core network using fiber optics ring topology. The company says it is operating three simultaneous networks, with WiMax and 4GLTE as the two main wireless networks.

Menatelecom chairman, Abdul Razak Jawahery, said the company has invested millions in the latest network to provide services to its over 80,000 subscribers. He said the company believes itself to be the first telecom provider to launch nationwide 4G LTE, nationwide WiMAX 802.16e end-to-end network, and free on-net calls within the kingdom.

Quoting data from the telecommunications regulatory authority, a company statement said that Menatelecom, with the other telecom providers in the kingdom, has contributed four percent to the national GDP, generating annual revenues of \$1.1 billion.



Data down under

A Sydney company has been hired by the Tasmanian state government to investigate the viability of a \$20 million submarine cable to Tasmania.

Supporters say the cable could “change the face” of the state’s information and communications technology sector, and now the company, Advisian, has been awarded a \$180,000 contract to help determine the viability of the project.

The contract is the strongest indication yet that the government is seriously considering the proposal.

Telecommunications infrastructure company SubPartners is building a new undersea data cable that will pass around the southern coast of Tasmania and up to Sydney. The company has discussed the project with the government, offering the state the opportunity to tap into the cable for about \$20 million.

Tasmania currently has three fiber connections – Basslink has one and Telstra two. Digital Tasmania spokesman Andrew Connor said a fourth cable would help drive down costs and offer opportunities for the state’s growing ICT industry.

PRODUCTS & MACHINES TECHNOLOGY

Get spliced

TE Connectivity (TE) has released its D-200 high temperature, flexible splice kit specifically designed for use in demanding high temperature aerospace and defense applications.

TE's D-200 splice kits are rated at 200°C and are designed to give a reliable cable connection. The product's circumferential (360°) shielding provides protection from electromagnetic interference (EMI) and shield continuity equal to or greater than the original cable. The splice kit also offers environmental protection, making the cables resistant to fluid immersion, including aircraft fuels, lubricating oils, hydraulic fluids and cleaning agents.

"TE Connectivity has a long history of manufacturing and supplying robust and reliable splice kits for military and commercial aircraft platforms," said Janeann Avants, product manager, global aerospace, defense and marine, TE.

The D-200 splice kit allows bending of the cable without cracking of the outer insulation. Cables can be spliced with existing crimp and heating tools, and the additional sealing ring allows splicing of 1-to-1, 2-to-1 and 2-to-2 constructions.

The splice kit is said to work well with shielded single, paired and triplet cables, and has a wire range of 26 to 10 AWG.

Armored test cable

Pasternack's latest line of rugged 75ohm test cables are available in two configurations,

a type-N male to type-N male or a type-N male to type-F male. The type-F connectors are designed to perform up to 3GHz.

Featuring threaded connectors for an accurate and secure connection between device and analyzer, the new cables are suitable for engineering laboratories, production environments and quality testing facilities and for use with 75ohm S-parameter test systems.

The flexible armored cables are said to exhibit excellent insertion loss of <0.5dB at 3GHz, with typical return loss of 28dB. The armored jacket meets ANSI/SCTE 99 2009 pull force and ANSI/SCTE 98 2009 tightening torque standards, and is capable of a minimum 100,000 bends.

Blown fiber anywhere

General Cable has demonstrated its blown optical fiber system (BOF). Blown optical fiber technology provides flexibility in broadcast cabling infrastructure design, while allowing for future changes as the network evolves. General Cable's BOF system offers a system for every application using its individual and bundled systems.



▲ Blown optical fiber system from General Cable. Photograph courtesy of General Cable

Thought to be the only blown fiber system on the market to feature dual-blowing technologies within a single installation machine, General Cable's BOF system allows the user to match the technology to the type and severity of the installation route.

The BOF system is designed to provide significant time, cost and service benefits to the cabling infrastructure throughout its life cycle. Offered as '2 through 12 fibers' per microduct, or as 6, 12 or 18 bundled fibers per microduct solution, its advantages over conventional fiber optic systems include a reduction of the total lifecycle cost and an increase in flexibility for fiber optic network designers. Blown optical fiber can accommodate moves, adds and changes (MACs) with minimal disruption.

General Cable's use of compressed air, instead of the nitrogen, means the system can be safely installed in any environment.

Cable for tight spaces

Cicoil has introduced a new lightweight and flexible cat 6A cable, designed to provide consistent data transmission even when flexed, twisted or routed through tight spaces. In repeated flexing applications the cable demonstrates a repeated bend radius of 0.9", and a cycle life exceeding 10,000,000 repetitive flexing cycles.

A patented extrusion process places four individually shielded, 28AWG 100ohm pairs in a small, flat profile, precisely controlling the spacing of each component, the insulation thickness and the overall cable shape. The flat design allows for easy stripping and shorter

preparation time, but is also compatible with standard manual and automated stripping and crimping equipment.

While meeting or exceeding the requirements of the cat 6A standard, Cicoil's Flexx-Sil™ rubber encased cable is designed to provide high speed data transmission rates of 10GB per second, frequencies of 500MHz, and above average suppression of electromagnetic interference, especially in continuous flexing applications.

The outer jacket is self-healing from small punctures and resilient to long-term exposure to vibration, sunlight, temperature extremes (-65°C to +165°C), mechanical stress, humidity, UV light, autoclave and many chemicals.

Substation product line

AFL has expanded its swage product portfolio, introducing a swage cable accessories product line, a new swage 45-ton press assembly, and adding five and six-inch bus accessories to its four-inch bus range. The new five and six-inch bus accessories are necessary for high voltage applications between 345kV and 765kV, while the assembly produces 360° of compression on swage accessories, ensuring that the connection is electrically and mechanically sound.

"AFL's swage products allow electric utilities to install accessories faster and more efficiently, lowering installation costs. These accessories can be installed by anyone and replace the need for a certified welder," said AFL's commercial manager, Gary Harter.

The swage accessories complement AFL's substation range, designed for all substations with voltage up to 765kV. The product line provides a full series of fittings involving end caps, expansion joints, couplers, tee and vee connectors, stirrup and ground studs, and terminal connectors.

Identifying fiber

Fujikura Europe has launched new optical fiber identifiers, the FID-30R and FID-31R, said to feature the world's highest TONE signal-detection sensitivity. The FID-30R includes an optical power meter and succeeds the FID-25R, while the FID-31R, the updated standard model, replaces the FID-26R.

The fiber identifiers, used for identifying the light power presence in optical fibers, include three detecting functions: TONE, TRAFFIC and ONU. Both models include a trigger operated clamp to macro-bend the fiber. The fiber then leaks light which is detected by two photo sensors. The fiber identifiers can detect the presence of several kinds of light signal and indicate signal directions.

"Our new fiber identifiers deliver the best performance over any other product currently on the market, delivering 96dBm – the highest sensitivity for TONE signal in the world," said Neil Bessant, fusion splicer divisional manager at Fujikura Europe.

The trigger lock function ensures the fiber is clamped with constant pressure, while the 2.4" color LCD touch panel allows the user to view the estimated optical power in the fiber and select the desired wavelength of

1,310nm, 1,490nm or 1,550nm. Identification of modulated tones at 270Hz, 1kHz and 2kHz is provided, along with continuous wave and ONU signals. Users are also able to select from normal, fast and fine detection sensitivity modes.

The fiber identifiers can be used for UV-coated fiber, 0.9mm diameter tight buffered fiber, fiber cord up to 3mm in diameter, and fiber ribbon with up to 12 fibers.

First run for composite cable

Ziebel AS has given its Z-Line®, a gravity-deployed slim carbon composite cable, an inaugural run to acquire distributed temperature and distributed acoustic fiber optic data during a commercial well intervention.

Work was carried out for a major offshore operator in Norway. The system accessed a platform well to a depth of 9,684 feet with standard wireline-type gravity deployment and dry sealing pressure control equipment. All mechanical requirements of the line functioned successfully, and high quality distributed fiber optic (DFO) data was acquired for the operator.

"We are very pleased with the Z-Line's successful performance during its first commercial well intervention," said Stig Hognestad, CEO for Ziebel. "It marks the culmination of a thorough process of development and rigorous testing by the Ziebel team.

"The real significance for us – and the industry – is that it proves that the system functions

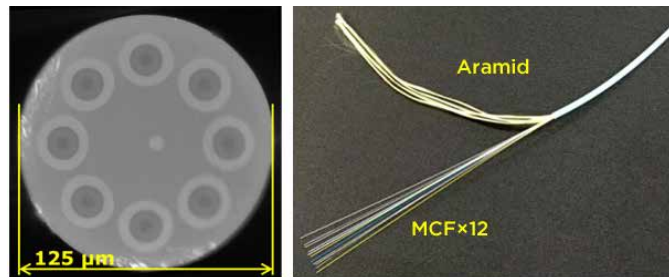
as intended in an actual live pressured well environment. With the success of this launch, the service is now available to all operators."

The Z-Line is a 3/16" (4.8mm) diameter carbon composite line with a core of embedded optical fibers. This enables distributed temperature sensing (DTS) and distributed acoustic sensing (DAS) to be performed along the full length of the line.

The carbon composite material enables the line to have an extremely high strength-to-weight ratio, with a breaking strength (6,600lb/3,000kg) in excess of that achievable with a similar diameter of steel wire or braided line.

High density fiber

Sumitomo Electric Industries has developed an ultra-high density fiber optic cable of eight cores in a standard 125µm cladding, for use in multi-core cable.



▲ The ultra-high density fiber optic cable. Photograph courtesy of Sumitomo Electric Industries

Designed to cope with growing data traffic, multi-core optical fiber (MCF) usually requires a thicker cladding diameter to increase core count while maintaining the optical properties of each core and suppressing core-to-core crosstalk.

Sumitomo has produced a 12-core fiber cable in which 96 cores were included within an outer diameter of 3mm. The achieved core density is believed to be double that of any previously reported fiber optic communication cable.

An evaluation of transmission characteristics in a 1.3µm band of the 1.1km MCF cable, using a 100G Ethernet (100GBASE-LR4) transceiver, suggests that the MCF cable will provide error-free transmission for 800Gbs (8 cores × 4 wavelengths × 25 Gb/s) signals. The results of the transmission experiment indicate that the developed MCF cable has transmission capacity of 9.6Tbs (12 fibers × 8 cores × 4 wavelength × 25Gbs).

The gas is greener...

Alstom has unveiled two high voltage applications using green gas for grid (g3), a gas mixture that can replace sulfur hexafluoride (SF6) for high voltage air-insulated or gas-insulated switchgear applications.

SF6, commonly used as an electrical insulator, is a potent greenhouse gas and top of the list of six gases targeted by the 1997 Kyoto protocol to reduce greenhouse gas emissions worldwide. In August 2014, Alstom claimed a world first by offering the electrical industry "a technically and economically viable alternative to SF6." The first application is a pilot project for the UK's National Grid, a 420kV g3-insulated busbar for use at temperatures as low as -25°C. A 300m line will be located in the southeast of the UK, and commissioned by mid-2016.

The second application using g3 is a 245kV current transformer type SKF. This high voltage equipment for outdoor applications uses g3 as an insulation medium, with the capability of reaching temperatures as low as -30°C. The current transformer protects substations by providing current measurements used for metering.

Philippe Ponchon, vice-president of product marketing at Alstom Grid, said: "After having launched g3 technology less than one year ago, it is a great achievement to present the first g3-enabled high voltage equipment and be selected by one of our long-standing customers to supply a revolutionary, environmentally sound solution."

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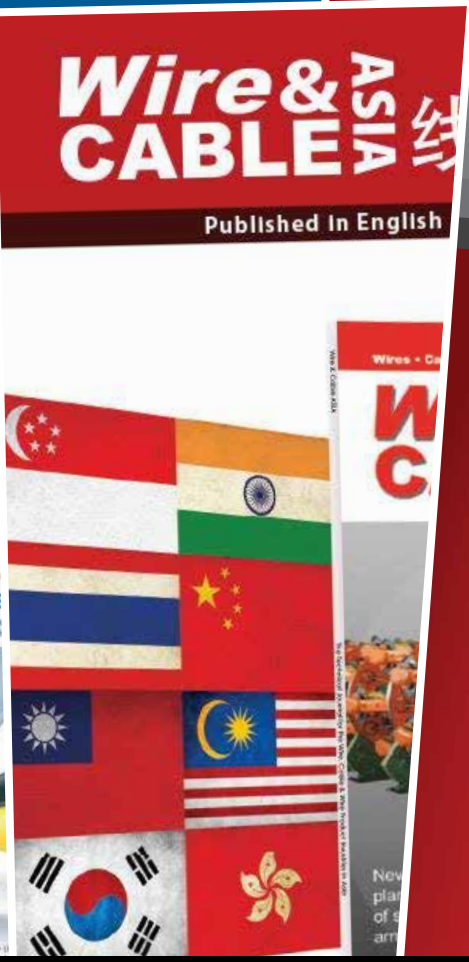
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