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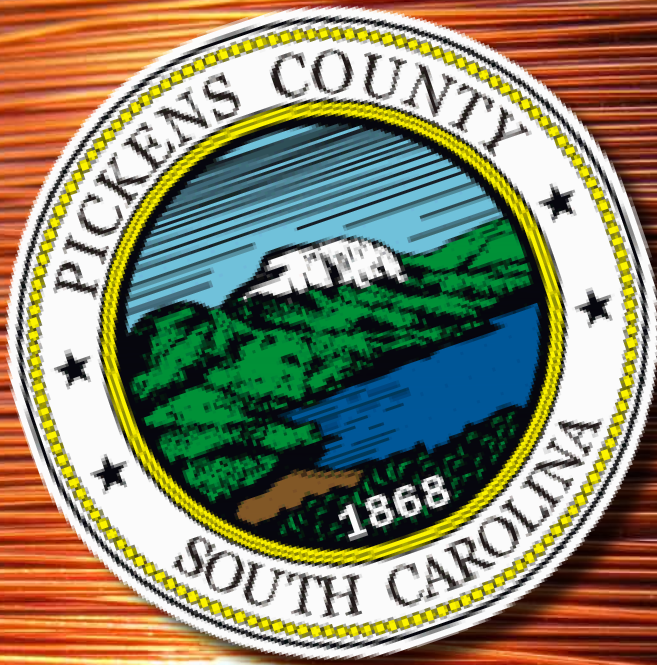
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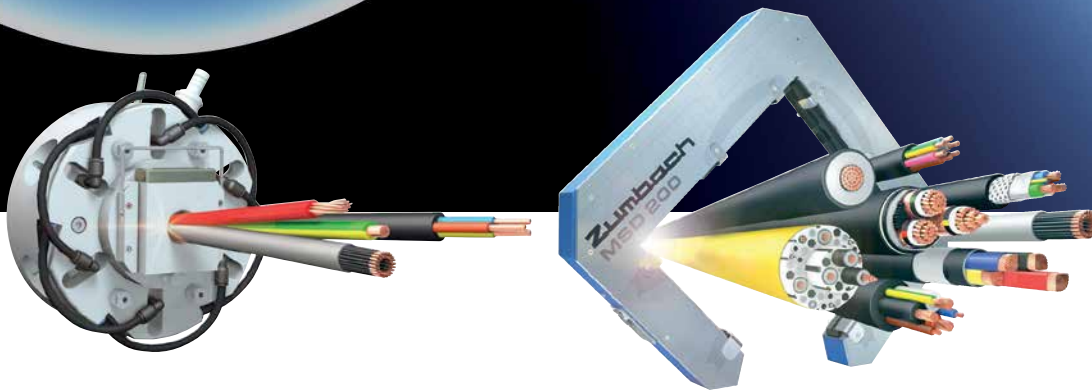
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#60 EDITOR

An investment of \$1.3m and the creation of 72 new jobs is the order of the day for Zero Connect, a fiber optic and copper cable production and marketing company, as it prepares to launch operations in Pickens County, South Carolina. President Larry Kendall highlighted the search for a skilled workforce as one of the main reasons for the decision.

The new jobs will be for custom cable and assembly positions as the company produces and distributes off-the-shelf fiber and copper products used in the voice, data and video fields. You can read the full story on page 9.

Wire Expo takes center stage in this issue with many exhibitors giving a highlight of what they will be displaying during the three-day event at the Mohegan Sun Casino and Resort in Connecticut, USA, from 7th to 9th June. Organized by the Wire Association International, Wire Expo attracts attendees and exhibitors from around the world and includes technical paper presentations, a comprehensive exhibition, on-floor production solutions demonstrations and networking activities.

You can preview some of the exhibitors, starting on page 34. And please feel free to stop by Booth 1009 to collect your free CDs of wiredInUSA, and copies of sister publications EuroWire and Wire & Cable ASIA.

David Bell
Editor

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PRODUCTS, MACHINES AND TECHNOLOGY / The latest news from

NEWS

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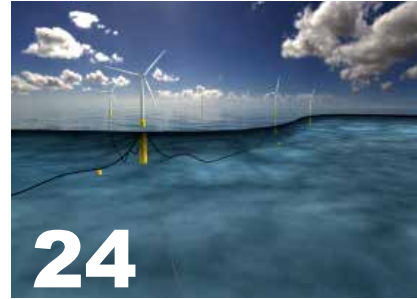
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DIARY SHOW EVENTS

2016

JUNE

7-9 June 2016

Wire Expo

Uncasville, Connecticut, USA
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MAKING THE NEWS

New assembly facility

Fiber optic and copper cable production and marketing company, Zero Connect has announced that the company will launch operations in Pickens County, South Carolina, following a \$1.3 million investment that will create 72 new jobs.

“Our expansion to Pickens County in South Carolina will allow Zero Connect to be within a one-day ground shipment of the majority of our customers,” said Zero Connect's president, Larry Kendall.

“Our rapidly increasing fiber optic cable assembly business dictated that we find an area with a dedicated and skilled workforce. We feel our new Easley facility will allow us to maintain our leadership in the copper and fiber optic cable assembly and data center businesses.”

The new jobs will be for custom cable assembly positions. Zero Connect produces and distributes off-the-shelf fiber and copper products used in the voice, data and video fields.

The Pickens County plant will be housed in a renovated section of an existing facility and will have 18,000ft² of production space.



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Closure plans for two of Exelon's nuclear power stations?

Power plants face closure

Exelon is considering closing two nuclear power stations in Illinois because they are no longer profitable.

According to Exelon, the Clinton and Quad Cities nuclear power plants have cost the utility over \$800 million over the last six years, blaming the loss on the effect of natural gas driving down prices on the electricity market.

In an effort to keep the facilities open, Exelon and ComEd are lobbying legislators to pass the “Exelon Bill” (SB-1585) which, by granting a rate increase, would subsidize the two plants.

If the rate increase was not approved by 31st May, when Illinois legislature adjourned, and Exelon was unable to source any additional income, the plants look set to close.

Illinois is a net exporter of electricity, and the closure of the two nuclear power plants will not affect grid capacity or stability.

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Cabling overview

In its most recent world cabling overview the market-intelligence firm BSRIA concluded that the global cabling market declined 3 percent during 2015, to \$6 billion. BSRIA commented: “The strong dollar has reduced market values in 2015 in many countries, measured in US dollars, and has therefore expanded the decline to 3 percent.”

Russia and Brazil are identified as faring particularly badly last year. “Russia suffered from sanctions and contra-sanctions, and from low oil prices,” BSRIA said. “Projects were postponed and fierce competition pushed cabling specifications and prices down.” Meanwhile, in Brazil: “Some unusual large projects were completed in 2014 and early 2015, and the country is in economic and political turmoil after some years with significant growth.”

The China market grew, but at a rate of 2.3 percent in US dollars: “The data center segment performed very well, but it was not enough to boost the overall increase.”

The Indian market increased by over 7 percent in US dollars, and BSRIA said the

country is “expected to continue showing healthy growth in the forecast period to 2018.”

Cabling products used in LANs account for approximately 80 percent of total global consumption, with data center cabling products accounting for approximately 20 percent. BSRIA’s study tracks back to 2009; in that span of time, 2015 was only the second time the data center segment contracted rather than growing, falling by slightly more than 2 percent last year.

According to BSRIA, fiber optic products represent over two thirds of all cabling installed in data centers, and the uptake of fiber continues to increase. “Most of the hyperscale data centers are 90 to 100 percent fiber, and both medium and large data centers are seeing an increase in use of fiber,” BSRIA said. “Copper cabling continues to be installed in computer rooms and small data centers, and are more common in co-location data centers.”

Web development

Teknor Apex Company has launched a completely new website, designed to give designers and processors access to extensive information on the company's flexible and rigid PVC, thermoplastic elastomer (TPE), nylon, flame retardant compounds, and color concentrates.

"We have designed this new website to provide manufacturers with ready access to the wealth of resources available from Teknor Apex for helping them solve problems or develop new opportunities," said William J Murray, president. "It exemplifies our company's

intensively customer-centric way of doing business and our commitment to providing solutions through innovation and technical support."

As well as latest news, events, and the "Pellets to parts" blog, the Teknor Apex website offers a direct line to technical experts, access to technical data sheets, downloadable processing guides and white papers, webinars, and product selection tools.

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It's a tie!

Panduit Corporation has released its next-generation PAT 4.0 automatic cable tie installation system.

The PAT 4.0 is designed to maximize bundling productivity with gains of up to 25 percent over other automatic cable tie systems and over six times the speed of manual cable tie methods.

The PAT 4.0's lightweight, ergonomic tool head is capable of installing up to 84 cable ties per minute, while reducing user fatigue and improving tool maneuverability.

The redesign of the tool dispenser introduces a user-friendly, touchscreen display with an easy to use icon-based menu. A 30 percent reduction in size over its predecessor frees up valuable

work station space and improves system mobility.

Rami Mishal, director of product development and engineering for Panduit, commented: "For the past year we have been working closely with our customers to design, build, and test our new PAT 4.0 system, and are seeing an overwhelming response from customer pre-launch trials".

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Maldives cable on the move

Pioneer Consulting, an international submarine cable consulting firm, has supervised the relocation of two shore-ends for the telecommunications service provider Dhivehi Raajjeyge Gulhun Plc (Dhiraagu) on its Dhiraagu undersea cable system (DSCS).

Located in the republic of Maldives and originally installed in 2006, DSCS is a four-fiber pair unrepeatable telecommunications system with a 12.14km segment between Malé and Hulhumalé and a 5.9km segment from Malé to Villingili. Construction of a new bridge has made relocation of both shore-ends necessary, as the planned area of the bridge works extends over the existing submarine cable locations.

Throughout the length of the contract Pioneer Consulting provided project management and engineering expertise for all aspects of the project, from desktop study to factory acceptance testing, through to marine operations and final system commissioning.

Iain Ritson, Pioneer's senior project manager, said: "It was a pleasure working with Dhiraagu and its entire team to ensure that the DSCS system continues to serve the people of the Maldives. Dhiraagu has worked hard to develop a solid telecom infrastructure that is sure to be supportive of continued economic growth of the islands."

Development tool

Pasternack has introduced a PEM009-Kit 60GHz development system to provide designers with the facility to perform product development and experimentation of single and multi-carrier high bandwidth modulation covering 57GHz to 64GHz in the globally unlicensed ISM frequency spectrum. Applications include baseband development up to 7Gbps data rates using WiGig/WiFi 802.11ad and 802.11aj IEEE standards, GigE wireless LAN, FMCW Radar, uncompressed HD video, RFID, radiometry, remote sensing, and campus networks.

The new development system incorporates the use of compact transmit (PEM001-MIM) and receive (PEM002-MIM) WR-15 waveguide modules that utilize SiGe BiCMOS semiconductor technology. The modules are controlled by integrated Rx and Tx circuit board assemblies that provide processing

functions, power supply regulation and include reference crystal oscillators that offer improved phase noise performance that results in enhanced signal to noise ratio and receiver sensitivity. The Rx and Tx circuit boards can also be phase-locked to an external reference source. Command control functions are made via a USB interface with a host PC (running GUI software).

The PEM009-Kit 60 GHz system supports a variety of I/Q (vector) and FSK/MSK modulation schemes from a user-designed baseband system or from a vector modulated programmable arbitrary waveform generator.

The new PEM009-Kit 60 GHz development system, 60GHz Tx and Rx waveguide modules, and accessories are available now.

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New look for cable website

Cicoil has launched a new website, featuring the company's entire product catalog with part number and keyword searches.

Located at www.cicoil.com, the website features a customer support section with on-line literature/sample request forms, technical support and a sales rep locator function, where users can simply search by region to locate their Cicoil representative, stocking distributor or value added reseller.

The new site also offers site membership registration, giving members access to online catalog pricing, auto-filled forms and access to existing online configurator cable designs. There will also be exclusive site member benefits.

An entire section of the website is dedicated to Cicoil's flat cable configurator. The configurator allows a user to design, within minutes, a custom cable with shielded signal pairs, power conductors, video and coax wires, special modules and tubing for liquid and air transfer. Any of these elements can be combined in a flat cable, which means that millions of flat cable designs are available for immediate production and delivery. Once the flat cable design is completed, users receive a price quotation and engineering drawing within seconds.

Other updated sections include a blog, product/company news, photo gallery, articles and whitepaper section, an expanded technical support, video and PDF library.



Astronomical fiber

Molex has developed a Polymicro Technologies™ optical bench to test and validate optical fibers for astronomy applications. The optical bench measures focal ratio degradation (FRD) in specific optical fiber samples to determine if the fibers are appropriate for astronomy applications.

“Multimode optical fiber has revolutionized the way astronomers look at stars and other objects in space by enabling highly stable, remotely mounted, multi-object spectrographs,” said Teodor Tichindelean, global product manager for Polymicro Technologies, Molex. “Optical fibers allow the observation of hundreds of objects in the sky simultaneously by transporting light from a telescope to a spectrograph.”

However, light loss in systems employing multimode optical fibers can be manifested as beam spreading, or FRD. Beam spreading produces resolution loss and inconsistent images in spectrographs.

To reduce light losses, instrument designers must quantify FRD and minimize its impact prior to developing key components. The new optical bench performs those measurements.

Existing measurements for optical fiber include real-time geometry (1,000 measurements per second), online tensile strength (100,000 psi), and optical testing (attenuation and numerical aperture). The Polymicro Technologies optical bench adds the FRD measurement method for optical fiber astronomy applications to that list. Previously, astronomy equipment developers had to take their own FRD measurements but now, with the optical bench, Molex can measure and verify optical fiber samples.

“Optical fibers that are pretested for FRD performance can reduce the time and cost of developing new spectrographs,” said Mr Tichindelean.

EUROPE NEWS



GEORGIAN UPGRADE

TE SubCom and Georgian telecommunications provider Caucasus Online have upgraded the 1,200km Caucasus undersea cable system.

In service since 2008, the Caucasus system was designed, manufactured and installed by TE SubCom. The system provides high bandwidth connectivity between Poti, Georgia and Balchik, Bulgaria, serving Georgian markets by providing direct access to western Europe. Utilizing TE SubCom's 100Gb/s coherent transmission technology, the system can now support over 9Tb/s, over seven times the initial design capacity.

The recent upgrade will increase lit capacity to 780Gb/s.

“As the project supplier for both the full system construction and previous upgrades, we greatly value Caucasus

Online's confidence in TE SubCom,” said Aaron Stucki, president, TE SubCom. “We look forward to continuing our support of this essential cable route by providing state-of-the-art technology that enables Caucasus Online to bring high-volume capacity to its customers.”

“Our system has proven vital to achieving connectivity throughout the Caucasus region, and a network upgrade will only improve our service offerings,” said Nikolai Tchiaureli, CEO, Caucasus Online. “TE SubCom's familiarity with the system will bring with it a seamless capacity increase, and we're pleased to continue our longtime collaboration with them.”



Copper wire report

The recently published “Global pure copper wire market professional industry 2016 market research” report offers a complete analysis of the industry for the period 2016–2021. It provides an overview of the market, considering all the major industry trends, and market dynamics, while focusing on definitions, market segmentation, end-use applications and industry chain analysis.

The study examines the Chinese market trends, recent developments and the competitive landscape. Competitive analysis includes the leading players in China's market, their company profiles, product portfolio, capacity, production, and company financials. In addition, the report provides upstream raw material analysis and downstream demand analysis along with the key development trends and sales channel analysis.

Opportunity areas for investment are also discussed.

Over 150 tables and figures provide key statistics on the state of the industry, and the report is designed to be a valuable source of guidance and direction for companies and individuals interested in the pure copper wire market.



Farm afloat

The world's largest floating wind farm is set to be built off the coast of Scotland, after its developers were granted a seabed lease by the Crown Estate. Statoil, the Norwegian energy company, expects to have five 6MW turbines on the North Sea and generating electricity by the end of 2017.

The company has already operated a single turbine off Norway.

Over 40 projects are in various stages of development around the world. Most are inspired by rugged oil and gas rigs that have weathered storms for decades.

The Hywind windfarm will float 15 miles off Scotland's east coast by Peterhead. The base of each turbine is a floating steel tube containing ballast, which is tethered to the sea bed.

Over 90 percent of the world's offshore capacity is installed in northern Europe, but offshore wind is just 3 percent of all wind power. Most wind turbines are sited on land, but obtaining planning permission for onshore farms is difficult in some countries.



Pilot plant

A whollyowned subsidiary of BASF New Business GmbH, Deutsche Nanoschicht GmbH, has opened a pilot plant for the manufacture of high temperature superconductors. The facility, located in Rheinbach, Germany is based on an in-house developed chemical manufacturing process and is an important step to market launch of the superconductors. BASF New Business provides customers with samples of the wire to produce prototypes for high-efficiency developments in power grids, such as current limiters and cables for direct and alternating current.

Superconducting cables can transmit current with negligible loss, and can transport a much greater amount of energy in relation to the conductor cross-section. High temperature superconductors conduct current at the temperature of liquid nitrogen (-196°C) without resistance. This temperature can be cost-effectively achieved and maintained by commercial refrigerating machines.

The ten to one hundred times higher current-carrying capacity, compared to copper, allows very compact new cable applications and more lightweight systems for generators and motors. Current limiters compensate current peaks in supply grids and can prevent power failures caused by short circuits.

Cable forum

nkt cables' head of power cable monitoring, Udo Bendig, will speak at June's advanced submarine power cable and interconnection forum in Berlin.

The three-day forum will give an overview of current HVDC projects and, in particular, will showcase analytical insights into how industry leaders optimize performance, minimize environmental impacts while optimizing cable protection, meet increasing demands, explore new possibilities and market trends, and analyse risks.

Udo Bendig's lecture, "Fiber optic power cable monitoring, protection and failure localization", will focus on distributed monitoring solutions, opportunities to address threats and faults of power cables, TCO reduction opportunities, and the lessons to be learned from past experience.

The 5th annual advanced submarine power cable and interconnection forum will take place between 14th and 16th June.



Copper cable acquisition

Prysmian Group has entered into an agreement for the acquisition of Corning Optical Communications' copper data cable operation located in Coburg, Germany.

The acquired business consists of a plant for the production of Cat5, Cat6 and Cat7 cables.

The investment will allow the group to further expand its presence and hasten its growth strategy in the multi-media solutions business segment. In particular the copper cable acquisition will broaden the group's product offering for high-capacity and flexible cable for data transmission and data center solutions.

The closing of the acquisition will be subject to standard closing conditions.



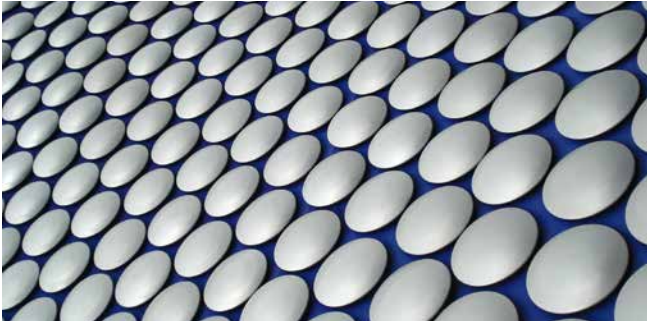
Sustainable appointment

Solvay, producer of fluoropolymers, ultra polymers, sulfone polymers and cross-linkable compounds for wire and cable applications, has appointed Pascal Chalvon Demersay as chief sustainability officer.

Mr Demersay succeeds Jacques Kheliff, who will be retiring after 44 years within the group.

In his new role Mr Demersay will reinforce sustainable development as Solvay's strategic growth driver and core contributor to the group's corporate social responsibility commitments for 2025. These include reducing the CO₂ intensity of the group's operations by 40 percent, generating 40 percent of revenues from sustainable business solutions, and doubling the number of employees involved in societal projects.

He will combine the new assignment with his current role as president of Solvay's energy services global business unit. His background as business manager and his expertise in energy and climate complement and serve Solvay's goal to become a leader in sustainable development.



Perfect symmetry?

Nokia has announced a breakthrough in the effort to meet surging data demand. The company has demonstrated 10Gbps symmetrical data speeds using traditional hybrid fiber coax (HFC) cable plant. Using a prototype technology called XG-Cable, said to be based on unique access technology and applications developed by Nokia Bell Labs, the test demonstrates how existing cable systems can be used to deliver symmetrical ultra-broadband access services.

Nokia Bell Labs began to explore the feasibility of delivering symmetrical service over HFC cable plants in 2014. Demonstrating for the first time that the concept is valid, the XG-Cable test used point-to-point cable topologies to deliver 10Gbps symmetric data speeds over coaxial cable using 1.2Ghz of spectrum.

Still considered a proof of concept, XG-Cable will integrate into the CableLabs new full duplex DOSCIS® 3.1 concept. By leveraging the XG-Cable technology, operators can effectively use existing HFC cables over the last 200 meters to provide previously unachievable upstream speeds. This will enable operators to bring ultra-broadband services to consumer locations that were not physically or economically viable unless fiber was brought all the way to the residence.



End to fastener measures

The European commission has issued notice of the impending expiry of the anti-dumping measures on certain stainless steel fasteners from People's Republic of China, Taiwan and the Philippines. EU manufacturers have until October to lodge a request for an expiry review.

Notice 2016/C 131/06 confirms the measures imposed by council regulation 2/2012 and extended to the Philippines by regulation 205/2013 are due to expire on 8th January 2017.

According to the usual procedure, the notice offers EU manufacturers the opportunity to lodge a written request for an expiry review which, if accepted, would result in the prolongation of the measures while a review is conducted. Manufacturers have until early October (three months before the expiry date) to lodge a detailed request, which must contain sufficient evidence that removal of the measures would result in continuation or recurrence of dumping or injury.

ASIA & AFRICA NEWS

4

POWER OF FOUR

Telstra has announced four new projects for improving its subsea cable system in Asia: a fiber overland route between Taiwan and Hong Kong; a fiber ring network in South Korea; a submarine cable connecting its networks in Asia to India and the Middle East; and a new cable system connecting Asia with the US.

The measures were announced as part of Telstra's ongoing investment in the 36,000km cable network system connecting China, Japan, Singapore, South Korea, Taiwan, Hong Kong and the Philippines, which the company acquired as part of purchasing Pacnet in 2014.

Unlike existing cables between Taipei and Hong Kong, Telstra's new overland fiber network in Taiwan circumvents the natural

disaster-prone Luzon Strait region. The fiber link will be connected to Telstra's submarine cables in that area.

"This new dual-fiber network is enabled as part of Telstra's optical transport network," said Darrin Webb, Telstra's executive director of international operations and services. "It will introduce the shortest and fastest route available in the market between Taipei, Kaoshiung and Hong Kong, with lower risk of disruption than services passing through the Luzon Strait."

Telstra will also build out a new fiber ring to connect its current points of presence in South Korea, providing eight 100Gbps interconnection routes in and out of the country.



Solar investments

Thailand's Banpu mining and power company has announced its expansion into China with the acquisition of four solar PV parks with a combined capacity of 78.5MW.

All four parks are located in the Shandong province in eastern China. The purchase, valued at \$93 million, comes as the company's power plant subsidiary, Banpu Power PCL (BPP), works toward generating 20 percent of its power from renewable sources by 2025.

The company's CEO, Somruedee Chaimongkol, said: "Entry into solar power in China is part of BPP's strategy to invest in markets with attractive growth fundamentals and strong government support." Banpu is reportedly also looking to increase its PV portfolio in the Japanese market.

The China deal remains subject to a successful connection to the grid in the middle of this year.

New silk route

Multinet Pakistan, Omantel and Xtera Communications Inc have signed a turnkey supply agreement for the new subsea cable system Silk Route Gateway 1 (SRG-1). The new cable will be a direct highway from Muscat in Oman to Karachi in Pakistan, with a future extension to Gwadar in Pakistan.

"The SRG-1 project is our ambition to restore the significance of the traditional silk route by establishing a digital gateway to the most budding telecom markets of the Asian subcontinent," said Mr Rashid Shafi (SEVP and chief strategy officer, Multinet Pakistan).

Xtera will supply its turnkey 100G/100G+ optimized submarine system solution, including Nu-Wave Optima submarine line terminal equipment (SLTE), undersea optical repeaters, undersea branching units, cable, all marine services, project management, installation and commissioning.

Jon Hopper, president and CEO of Xtera, said: "This new build project represents a second cable project for Xtera in the region after the award of the G2A subsea cable system between Oman, Puntland and Somaliland."



New rope

One of Japan's leading wire rope manufacturers, Tokyo Rope, is planning a production plant in Georgia.

Tokyo Rope chairman, Shigeto Tanaka met Giorgi Kvirikashvili, Georgia's prime minister, to discuss the possibility of building a plant in the region. The government has plans to develop infrastructure projects in Georgia, to which Tokyo Rope is looking to contribute.



Capacity in the cloud

Hawaiki has announced that Amazon Web Services (AWS) has purchased capacity in the Hawaiki submarine cable to speed performance and reduce latency for cloud customers operating between Australia, New Zealand and the US.

The Hawaiki cable, due to go live in June 2018, is planned to be the fastest link between the US and Australia and New Zealand, offering more than 30Tb capacity, which is considerably larger than the network capacity currently available.

Hawaiki will complement Amazon Web Services' global infrastructure, which comprises 33 availability zones across 12 geographic regions worldwide (including one in Sydney), with another five AWS regions (and 11 availability zones) expected to come online during the coming year in Canada, China, India, Ohio and the UK.

AWS Australia and New Zealand MD Paul Migliorini said: "Our customers in Australia and New Zealand will benefit significantly from the arrival of the Hawaiki submarine cable. The role of the network, as well as the many AWS regions around the world, is especially important for our customers looking to run global businesses and become more agile."



Tanjung Bin Energy Power Plant
Photograph courtesy of Malakoff.com



Coal power assured for 25 years

Malaysian independent power producer Malakoff has begun commercial operations at a coal-fired power unit at the Tanjung Bin power plant in Johor, Malaysia.

The 1GW Tanjung Bin T4 unit entered commercial operation in March, according to reports, after first synchronization in October 2015. Construction took four years and was carried out by a GE-led consortium under an engineering, procurement and construction contract.

Unit 4 was built adjacent to three existing coal-fired units at the plant that generate a combined 2,100MW. GE supplied the key equipment, including the steam turbine and generator, the ultra-supercritical boiler, and environmental control systems, and was responsible for the overall integration and commissioning of the plant.

Processing in port

South Korean steel producer POSCO is to establish a processing unit at the Port of Indiana-Jeffersonville.

POSCO America will invest \$19 million in a ten-acre site to construct a wire rod processing facility, producing rod for use in the manufacture of nuts, bolts and shafts for the automotive industry. The facility, the company's second steel processing line and fourth steel production line in the US, will house process machinery for the production of cold heading quality wire (CHQW) including heat furnaces and pickling, coating and drawing machines. All imported steel wire coils from domestic and foreign mills will be received via barge.

"This new project will allow POSCO to supply world premium wire rod and bar to our customers in the United States quickly and efficiently," said Kyu Tae Kim, finance director at POSCO AAPC. "Indiana's central location and the convenience of the Jeffersonville port are ideal as we look to tackle the US automotive market and increase our supply chain."



Iran power agreement

Iran is reported to have signed an agreement with Kazakhstan towards building a 50MW wind power plant in the west of Kazakhstan, on the Caspian Sea coast, within 18 months.

The agreement was signed between Iran's power and water equipment and services export company (SUNIR) and Eurasia Invest group in Tehran, the Iran Daily reported, adding that the Kazakh government will finance the \$110 million project.

Tehran and Astana have also signed a deal to establish a joint shipping company to boost bilateral trade via the Iranian port of Bandar Anzali and Kazakh port of Aktau, both on the Caspian Sea.

Production line expansion completed

On 9th May, Yangtze Optical Fibre and Cable (Sichuan) (YOFC (Sichuan)) celebrated the successful completion of its optical cable expansion and renovation project.

YOFC (Sichuan) Co Ltd was established in 1993, jointly invested by YOFC and Sichuan Chuantou Energy Co Ltd, and located in Emeishan City of Sichuan Province. The company specializes in production and sales of indoor and outdoor communication optical cable products such as the central tube type, layer stranded type, banding type, ADSS and indoor optical cable.

In 2015, shareholders made the decision to expand the production capacity of YOFC (Sichuan) from four million core kilometers to eight million core kilometers. The expansion and renovation project was completed in March 2016.



Image: Mohegan Sun Resort (<http://newsroom.mohegansun.com/>)



WAI Operations Summit Wire Expo 2016

Mohegan Sun Casino Resort, Connecticut, USA
Tuesday 7th to Thursday 9th June

Convention: 7th - 9th June
Exhibits: 8th - 9th June

Organizers: The Wire Association International, Inc
Website: www.wireexpo16.com

American Kuhne

Booth: 818

American Kuhne will exhibit examples of market-driven innovation. The American Kuhne FlipOpen™ feed section for rubber and silicone extrusion provides quick and complete access to all feed section components for easy cleaning, adjustment and maintenance.



▲ The SMED Quick-Change™ dual head from American Kuhne

American Kuhne SMED Quick-Change™ design options minimize change-over time and maximize production availability. These include: rapid screw change via quick-mount pusher; fast material change via rotary hopper design; and instant tooling change via dual-hinge design.

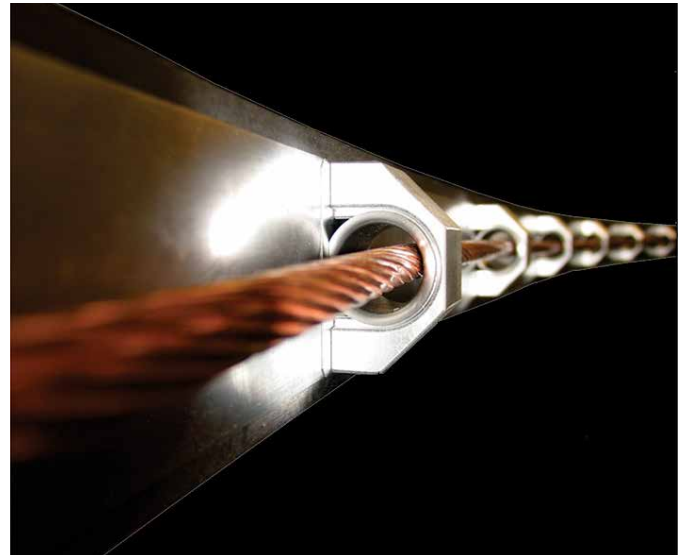
American Kuhne – USA

Website: www.americankuhne.com

Bow Technology

Booth: 103

Based on more than 60 years' experience in double twist, Bow Technology – a member of the Gauder Group – designs and manufactures high-technology bows in a technical partnership with renowned cable makers.



▲ Bow Technology large bows

The dedicated team carries out comparative analysis and trials to customise and upgrade obsolete designs, as well as technical studies of bow parks.

The result is a wide range of over 500 customised bow designs – as well as the exclusive and patented GreenBow2 enabling energy savings.

All are available for more than 25 well-known brands of double twist machines (560-2,500mm) such as Cortinovis, Lesmo and Niehoff.

Bow Technology – France

Website: www.bowtechnology.com

Cable Services & Systems

Booth: 103

The C2S division of the Gauder Group takes care of all wire and cable production lines, whatever the brand of the rotating equipment. C2S recently reinforced its engineering and commissioning team with ex-Lesmo and ex-Cortinovis engineers.



▲ C2S services and upgrades

70,000 identified spare parts references are distributed worldwide through four logistic platforms, including high technology bows.

A team of over 55 technicians is continuously trained to handle troubleshooting and urgent repairs.

The division also offers dedicated services such as periodical visit contracts, transfer and restart operations of complete lines, training and consulting possibilities.

C2S is also being assigned upgrading projects for all brands, either mechanical/ electrical interventions or process improvements with transfer of know-how.

Cable Services & Systems – France

Website: www.cable-services-systems.com

Clinton Instrument Company

Booth: 609

The Clinton Instrument Company, specialist in spark test technology for the wire and cable industry and inventor of the high frequency sine wave spark tester, will be exhibiting its newest offering, the model HF-15B high frequency sine wave spark tester, the flagship model of the new B-series.

This new design combines the latest in control technology with the robust and reliable 3kHz spark test platform.

There are many new features of the HF-15B, including a split electrode design for easy string up, and digital signal processor (DSP)-based voltage regulation and fault detection.

The fault detection circuit has been upgraded and test voltage is now monitored directly from the electrode, instead of a transformer winding.

The fault circuitry can now differentiate between four types of fault conditions: simple pinholes, a series of closely spaced pinholes, direct metal contact from the centre conductor to the electrode, and gross lengths of bare wire.

The new “RC” controller comes fixed to the unit, but can be detached and mounted remotely up to 60 meters away from the test module/electrode.

It has a large alphanumeric display/user interface and can be rotated in its bracket

to accommodate different viewing angles. The display makes configuration of the equipment easy; all configuration parameters can be changed directly from the front panel menu structure.

Once configured, the system can be passcode protected. In cases where a local display is not required, or centralised process control is desired, the equipment can be configured and controlled directly from PLCs or computers using Modbus RTU (RS-485 full duplex).



▲ The new HF-15B series from Clinton

Optional communication protocols include Ethernet/IP, Profinet, and Profibus, Modbus TCP and analog communications, making the system compatible with previous Clinton equipment with analog control.

When simple control output is all that is required, there are four sets of relay contacts that provide information without requiring advanced programming. These include “high voltage ON” signals to alert operators of the presence of high voltage, a fault relay which actuates when a fault

is detected, a “Voltage Watchdog” which will change state when the test voltage has risen above or dropped below a preset level, and a “Bare Wire Alarm” which will signal when long lengths of bare wire are detected.

Clinton will also exhibit and demonstrate the STCAL automatic spark tester calibration system. The STCAL system will calibrate high frequency AC, mains frequency AC, and DC spark testers to all major specifications. Calibration is automatically performed and documented on all of Clinton’s new B-Series spark testers and selected A-Series models. Manual or assisted calibration can be performed on older Clinton units as well as equipment manufactured by others.

When paired with Clinton’s model SM sensitivity tester, a complete calibration solution to IEC and NEMA standards is provided.

Clinton Instrument Company – USA
Website: www.cicsparkers.com

Condat
Booth: 117

With over 160 years of expertise, Condat’s extensive lubricant range is recognized as a global reference for the wire drawing industry. Its Vicafil and Steelskin range gathers together a wide choice of wire drawing soaps, surface treatment, neat and soluble oils, and degreasing products.

Condat will exhibit its new developments for safer lubricants for both operators and the environment, such as:

- For high carbon steel, steelcord, spring wire, ropes and PC strand: wire dry drawing lubricants with low or zero borax (sodium tetraborate pentahydrate) – Vicafil Sumac 5 and Vicafil Santale 6
- For low carbon steel, wire to be galvanized and CO² welding: minimizing the use of titanium dioxide in dry drawing lubricants – Vicafil Decal 440
- For stainless steel spring wire and cold heading wire: products with new formulations in its range of drawing oils and greases so that they are not labelled under the GHS regulations and avoid the use of short and medium chain length chlorinated paraffins

Condat proposes whenever possible low HSE impact technologies, using formulations with least severe labeling possible.

The show will also be the opportunity to highlight the company's specific offer for electrical wire and cable, including:

- For aluminum wire drawing, the Vicafilm TFA neat oils range has been designed to offer both low residues and extended operating life. Its specifically formulated additives package minimizes thermal oxidation, maintaining longer lubricant performance. The bath life is increased and maintenance costs reduced.

- For the drawing of bare copper wires, Vicafilm TCU concentrated soluble lubricants provide consistent and reliable performance. The high lubricity of the emulsions reduces wire breakage while the additives package has been formulated to keep the machine clean, reduce foaming and increase the emulsion stability.

A full range of complementary products that helps in the management of the bath are available, including products to clean installations, bath maintenance additives as well as protection products for bare wires in order to avoid corrosion and extend shelf life.



▲ Condat – responsible dry drawing lubricants

2016 represents the 20-year anniversary of Condat Corporation's presence in the USA, serving the wire drawing industries across North America.

Condat – France
Website: www.condat.fr

Daloo

Booth: 103

Daloo, a member of the Gauder Group, is the logical extension of the group's global offer for cable producers wanting an attractive alternative between new machines made in Europe – with higher cost – and second-hand machines – without guaranteed performance. Its complete stranding lines and accessories for the production of power and communication cables are delivered worldwide.

This includes rigid cage stranders, taping lines, rewinding lines, take-ups and pay-offs, pulling caterpillars and tubular stranders.



▲ Daloo large pay-offs and take-ups

The designs, as well as the manufacturing (in Changzhou, China), are based on

European experience (proven Gauder Group methods) following strict quality criteria. On the stand will be a large portal type take-up (4,000mm/35 tons).

Daloo – China

Website: www.daloo-machines.com

Flymca and Flyro

Booth: 420

Flymca continues to offer its well-known range of machines with customized solutions for stranding and cabling purposes. Standard machinery is adapted to customers' needs, thanks to many years' experience of the workforce, and using the available facilities to study projects with 3D designs and finite elements.



▲ Full order books for the current year

This is all done with modern CNC machinery for parts fabrication, and a well-prepared test laboratory.

Last year ended with new growth thanks to special machinery for stranding CTC

(continuous transposed conductors) and big closers for steel wire ropes, together with new cable manufacturing plants established in North Africa.

Although a new year means new challenges, the company already has a full capacity of orders for 2016, and investment in the business continues. Customers can also find a large stock of related used and refurbished equipment from sister company Flyro.

Flymca & Flyro – Spain
Website: www.flymca.com
Website: www.flyro.com

Gauder
Booth: 103

Gauder SA, on which the Gauder Group was founded, is at the head of the largest stock of machines for the wire and cable industry in Europe.

“Creating solutions together”, the company is an ideal partner to set up “ready to manufacture processes” from its warehouse housing over 1,000 machines (drawing, stranding/cabling, screening/taping/armouring, wire coating, extruding, coiling/rewinding) for the production of wires, conductors, cables, ropes or steel products.

The Belgium-based supplier is a key player in reconditioning second-hand machines. The company has specific know-how in

revamping lead extruders. The company also markets new Mapré extruders ranging from 38 to 150mm, complete with accessories.



▲ Gauder second-hand reconditioning equipment

A free shuttle service is organized daily from the stand to see the stock in 20,000m² warehouses, as well as to see a reconditioned drum twister for power cable.

Visitors can see the online stock at www.gauderonline.com to prepare for the visit.

On the stand will be a reconditioned gearbox for lead extrusion.

Gauder – Belgium
Website: www.gauderonline.com

Keir Manufacturing
Booth: 804

Keir Manufacturing Inc is a US-based manufacturer of high-purity 99.8 percent alumina ceramic guides, the Frontiersman™ line of air wipes, and

Composite Flyer Bows, serving the global wire and cable industry.

These items will be displayed and highlighted at Wire Expo. The company is dedicated to making products that enable manufacturing processes to run more efficiently and productively through the application of leading edge materials.

Its solutions are focused on continuous process improvement, energy savings and longer operating life.

Keir's patented SureShot and SplitShot air wipes provide an effective drying method that does not depend on high-volume air consumption. Their efficient design yields effective drying using a very low volume of compressed air and lasts longer than other brands due to the rugged ceramic insert lining the wire path. This equates to more than 25 percent reduction in compressed air usage and an operating life of years versus months.

Keir's triaxially braided composite standard and BackBone™ flyer bow constructions have greater durability than layered/laminated designs allowing them to take more hits and endure higher stress, yielding increased operating life and less machine downtime.

The more aerodynamic BackBone™ design functions at lower power consumption and higher TPM with improved wire quality and a further reduction in bow breakage. Up to 40 percent less energy (AMPS) is used along with a decrease in wire scrapped.

Keir Manufacturing Inc – USA
Website: www.keirmfg.com

Magnetic Technologies

Booth: 303

Magnetic Technologies Ltd, USA, is now offering open loop constant tension payoffs with non-contact ultrasonic sensor using electric hysteresis brakes, in addition to the traditional constant tension permanent magnet hysteresis brakes.

The new offering incorporates one of the company's ten sizes of electric hysteresis brakes plus programmable power supply, non-contact ultrasonic probe (for diameter calculation), and spool support. Also available are custom re-spoolers using the same technology. Electric hysteresis brakes are DC current controlled brakes where the current supplied to the coils creates drag torque in proprietary magnetic materials nearly linearly throughout their torque range.

A constant current programmable power supply having a 0-10VDC follower input is used to power the brake. This power supply is programmed to supply a specific output current depending on the torque demanded by the specific brake program. Ultrasonic probes having 0-10VDC output are used to supply the control voltage based on payoff diameter. The power supply also features E-Stop and end of tape sensor capabilities.

The new payoff system and re-spooler will be featured at Wire Expo.

Magnetic Technologies Ltd – USA
Website: www.magnetictech.com

Mathiasen Machinery

Booth: 1016

Mathiasen Machinery Inc (MMI) buys and sells used wire and cable machinery internationally. Machinery is purchased for inventory or it can be sold on an exclusive basis. MMI has interest in locating individual machines, complete lines or entire plants.

Consignments, warehousing, appraisals and liquidation services are also offered. MMI has buyers seeking all types of good quality used wire and cable machinery, serving the domestic and international ferrous and non-ferrous wire machinery markets.

The booth will display photographs of a wide variety of second-hand machinery. Customers are encouraged to bring their surplus machinery list and photos for evaluation.

Mathiasen Machinery Inc – USA

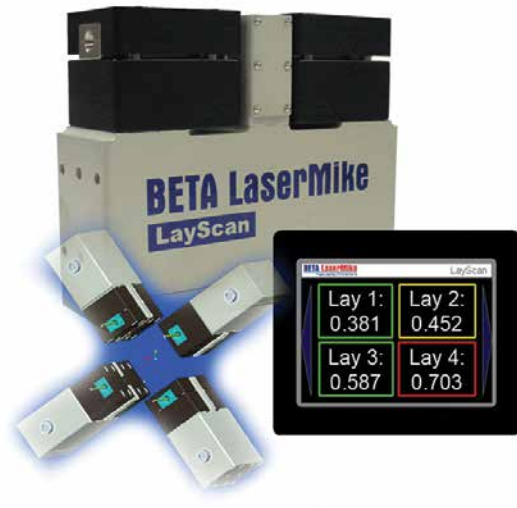
Website: www.mathiasen-machinery.com

NDC Technologies

Booth: 502

NDC Technologies will be presenting its broad range of Beta LaserMike in-process and off-line dimensional monitoring systems for wire and cable. NDC will present the latest AccuScan 6012 four-axis diameter and ovality gauge, innovative LayScan lay length measurement system and most recent DCM ES-2G four-pair LAN/data cable testing system.

The Beta LaserMike AccuScan 6012 is a four-axis scanning diameter and ovality gauge that provides high measurement accuracy to ensure wire and cable products meet tight design and quality specifications.



▲ *The range on display from NDC Technologies*

With communication cables, such as coaxial and twisted-pair LAN products, any error in the diameter or roundness of the conductor or insulation directly impacts the cable's performance characteristics – rendering the product useless for the designed application.

The AccuScan 6012 solves this by providing comprehensive measurement coverage on wire and cable products up to 12mm. It offers several distinct advantages not found in competitive diameter and ovality gauges, such as:

- Improved ovality accuracy up to 100 percent, unlike three-axis gauges
- Delivers an average ovality

measurement 42 percent closer to 100 per cent accuracy than three-axis gauges

- Provides the highest flaw detection accuracy with 25 percent improvement over three-axis gauges

The latest version LayScan accurately and consistently measures the lay length of twisted pairs in data communication cables, such as Cat 5e/6/6a/7a products. It solves scrap, costly rework and productivity loss problems due to manual, time-consuming lay length measurement methods and crosstalk performance issues from lay variations.

LayScan can be used to measure the four pairs at the cabler or to measure an individual pair at a twinner to confirm the accuracy of twisted-pair cable construction during production. A data acquisition and control system effectively collects and processes each lay length and enables the use of off-line analysis tools such as trend charts, statistical analysis or FFT analysis to readily observe, measure and report systematic lay variations.

LayScan measures lay lengths up to 25.4mm at throughput speeds up to 152.4m/min with a measurement accuracy to within 1mm on the same twisted pair. LayScan can be used in conjunction with the Beta LaserMike SRL Pro structural return loss measurement system for a total on-line cable performance quality solution. SRL Pro can be used before and/or after the extruder to identify potential causes of

structural return loss problems on data communication cables.

The most recent DCM ES-2G testing platform extends the high-frequency measurement range to test Cat 5e/6/6a/7/7a cables up to 2.2 GHz. This bench-top system is also optimized to test next-generation 40 Gb/s Cat 8 cables. The base unit includes automatic four-pair switching and the baluns needed to interface the cable under test to an external vector network analyser for fast cable testing. Testing can be performed in less than three minutes.

The DCM ES-2G cable testing system is also equipped with innovative technology that eliminates the effect of jacket removal on reflection measurements, such as input impedance and return loss. The heart of the system is the Windows®-based software engine that includes a simple-to-use test program with automatic comparison to the test specification, full test reporting and data management.

NDC Technologies – USA

Website: www.ndc.com/betalasermike

Paramount Die Company

Booth: 212

Paramount Die is more than just a die company, with its sales engineers averaging over 20 years of experience in the wire industry. In addition to helping its customers with their die needs, Paramount offers expertise in all areas of the wire drawing process.

Several wire industry trends have shaped the company's development over the past five years. Perhaps the most dramatic has been the ever-growing trend for wire drawers to outsource their finished die requirements.

This shift has caused wire drawers to become somewhat more dependent on die suppliers, placing great pressure on the company to increase capacity for die finishing, to reduce finished die costs, and to improve lead times.

Realising these trends and consistently aiming to meet customers' needs, Paramount has been able to reduce die costs in two ways. The first is by standardising on cost-effective carbide inserts. The second is by improving quality and increasing capacity through automation.

Many of the company's highly automated machines run on lights-out operation, meaning that they will continue to produce as long as there is raw material being fed into the system. The automated production equipment combines high volume speed and efficiency with accuracy and repeatability. Because of its investment in immediately available inventory, average lead times have been reduced from three weeks to less than a few days.

As the company continues to grow globally as a high volume producer of carbide drawing dies, it becomes very important for it to continually invest in new manufacturing technology.

Paramount is also a supplier of eco-friendly products to the wire industry as its die

design allows the carbide insert to be easily recycled. Thousands of kilograms of used inserts are returned to Paramount each year to be graded, sorted and transformed into good-as-new condition.

The company will exhibit a full line of wire drawing dies and related equipment. Products featured include the TR-Series carbide drawing inserts, shape dies, extrusion dies, polycrystalline diamond dies, ParaLoc™ pressure and non-pressure holders, as well as accessories.

Paramount Die Company – USA

Website: www.paradie.com

Pourtier

Booth: 103

Pourtier, France, develops and produces high quality stranders, cablers and armoring lines for ferrous and non-ferrous cables.

These machines are made in Europe with the highest standards in design and manufacturing for the production of all types of power cables, from low and medium voltage up to high and extra-high voltage, overhead cable (including new development with various shaped wires) and insulated cable, AC type (using high quality Milliken conductor) or DC type (using large round compacted cross sections).

Pourtier has recently made achievements in the field of submarine and umbilical

cables with the supply of large armoring lines and laying-up lines. The company is continuously extending its range of machinery to meet customers' needs.

Leaders in rotating machines, Pourtier and Setic (also a member of the Gauder Group), are offering a wide range of twisting/stranding solutions to cable makers and steel rope producers.



▲ Pourtier tubular stranders, 250-800mm

On display on the stand will be a tubular strander module for power cable and steel rope.

Pourtier – France

Website: www.pourtier-setic.com

PWM

Booth: 403

PWM's extensive range of manual cold welding machines will be on show, presented by Joe Snee Associates, exclusive distributor for PWM in the US and Canada.

PWM's largest manual machine, the M101, for welding copper wire 1mm to 3.6mm (0.04" to 0.141") and aluminum 1mm to 5mm (0.04" to 0.197") is also used to weld profiles and strips for armoring lines.

The M101 is low maintenance, quick and easy to operate and can be used on a workbench or supplied with an optional cart.



▲ The M101, PWM's largest manual machine

The smaller BM30 model, for use on a workbench or cart, provides strong, reliable welds on non-ferrous wire 0.3mm to 1.8mm (0.011" to 0.071") diameter.

PWM's handheld M10, M25 and M30 machines are comfortable to hold and simple to operate, using finger or hand pressure. Welding capacities range from 0.1mm to 1.8mm (0.0039" to 0.071").

PWM also produces powered cold welders for bonding copper wire and rod from 0.3mm (0.011") to 25mm (0.984") and aluminium to 30mm (1.181").

Joe Snee Associates is also the New England representative for NDC (Beta LaserMike), a global provider of measurement and control solutions; and AW Machinery, which produces ancillary equipment used on extrusion lines, from pay-off to take-ups and complete control systems.

PWM Ltd – UK

Website: www.pwmltd.co.uk

Joe Snee Associates – USA

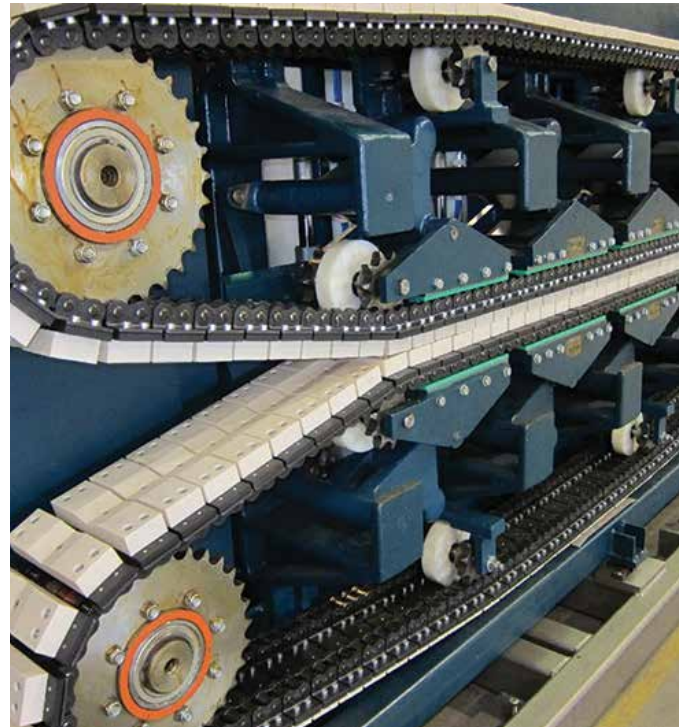
Email: joe@jsnee.com

Queins Machines, Stolberger-KMB

Booth: 602

Queins Machines GmbH together with Stolberger-KMB, both Germany-based companies, will show a number of large sized pictures and videos of delivered machines for the rope and cable industry.

The main products are all high-speed stranding machines, machines for CTC conductors, pay-offs/take-ups, taping heads, and disc- and belt-type caterpillars/capstans.



▲ *The chain-type capstan with two-ton pull from Queins*

Further information on the range of different manufactured lines for special applications such as power transmission, steel rope applications, subsea cables and other fields, can be given during the exhibition.

The second-hand department offers a full choice of machines and equipment for the wire and cable industry.

Queins Machines GmbH – Germany

Website: www.queins.com

Stolberger-KMB – Germany

Website: www.stolberger.com

Rosendahl and Nextrom

Booth: 603

Industry 4.0 – also known as ‘Smart Factory’ – is becoming reality and opening new doors for both suppliers and manufacturers.

Rosendahl and Nextrom take this revolution seriously and are proud to show the opportunities with its technology, not only for a single investment, but for the entire product life cycle.



▲ Rosendahl extrusion line for high temperature materials

Rosendahl and Nextrom have undertaken technological developments in:

- processing high-temp materials and silicone rubbers
- producing loose tubes with fiber overlength control at extremely high speeds
- recycling helium during fiber draw
- VAD/OVD preform technology

Rosendahl and Nextrom GmbH – Austria

Website: www.rosendahlnextrom.com

Setic

Booth: 103

Setic designs and manufactures high quality double twist bunchers/stranders for power cable and automotive industries, as well as complete solutions to produce special/LAN cables with enhanced performances (in one step or two steps according to product mix).

The company is continuously developing new lines and concepts for non-ferrous



▲ Setic backtwist pairing/quadding, 800mm

cables in order to meet customers' needs, such as tandem “mica taping/bunching”, special high-speed lines for battery cable, and new high speed lines for special and instrumentation cables.

Setic combined with Pourtier (also a member of the Gauder Group) offer a wide range of twisting/stranding solutions to cable makers.

On the stand will be a backtwist pairing/quadding line for special and data cables.

Setic – France

Website: www.pourtier-setic.com

Sikora

Booth: 1015

Sikora is presenting a full program of non-contact measuring and control devices for quality assurance and cost reduction in the wire and cable industry.



▲ The X-Ray 6000 Pro measures diameter, ovality, wall thickness and concentricity of cables

The company will showcase the Wire-Temp 6000, a non-contact conductor temperature measurement system that is now also available for diameters up to 50mm and suitable for installation in CV lines.

Another highlight will be the X-Ray 6000 Pro for online measurement of wall thickness, concentricity and diameter of up to three layers of different material for increased process stability, quality and cost saving during the production of cables.

In addition, Sikora will present its broad product range of devices for classic and

high-end diameter measurement with the Laser Series 2000/6000.

The precise and reliable Lump 2000 devices with double sensor technology for lump detection on the product surface will also be shown.

Sikora International Corp – USA

Website: www.sikora.net

Sjogren Wire Tooling

Booth: 707

Sjogren Wire Tooling has introduced several new innovations that represent new opportunities to increase spindle uptime.

These innovations include two new products: the spindle cartridge wire straightener, and the new wire puller. It also includes three technological advancements that can be applied in different ways depending on each operation's specific requirements: static wire guide technology, heat treat and coating technology, and high-speed cartridge assembly.

Spindle cartridge wire straightener: Designed to simplify the difficulties of straightening high-carbon wire with >0.1mm diameter, the spindle cartridges enable the rollers to turn on the bearings' inner race to allow an increase in line speed of +30 per cent over conventional rollers.

Its unique non-opening design also reduces the downtime required to re-string

the straightener to a fraction: a task that typically takes a half an hour or more can now be done in roughly five minutes.

New wire puller: This puller is designed to improve shop-floor efficiency and operator safety. Its distinctive ergonomic handle and jaws that easily lock open allow the operator a free hand to insert the wire while holding the puller in the other.

The pivoting head reduces wire breakage by allowing both direct pull from the die box and tangential pull on the capstan.



▲ *The spindle cartridge straightener from Sjogren*

Because the puller jaws have two work surfaces, they can perform once in the upper position and once in the lower position, providing 200 per cent longer work life before requiring replacement over conventional puller jaws.

Static wire guide technology: Bearing failure in wire guides (dancer rolls, traversing guides, roller boxes, etc) is a common cause of downtime in the dry drawing process.

Sjogren's new static wire guide technology solves this problem: instead of rotating, the wire is guided by two carbide rails.

A prototype has been in continuous operation at a USA wire mill for over 14 months, taking the place of bearing-based guides that required downtime for replacement/service every eight weeks.

Heat treat and coating technology: Sjogren has developed a proprietary heat treat and coating process for straightener rollers that achieves a groove surface hardness of HV 2500.

Compatible with any straightener and any wire diameter or shape, it offers a lower cost than carbide rollers and an extended working life over standard heat treat processes.

High-speed cartridge assembly: This innovative roller design improves the performance of any straightener by maintaining tighter wire centerline tolerances with a longer working life over conventional rollers.

Two pre-loaded bearings in the assembly reduce wobble to provide accuracy at faster line speeds. The roller surface is typically treated with Sjogren's proprietary heat treat and coating process; however, the assembly is compatible with any roller surface material an operation requires.

Sjogren Wire Tooling – USA
Website: www.sjogren.com

Wire & Plastic Machinery Corporation

Booth: 410

Wire & Plastic Machinery Corporation deals in second-hand wire, cable and optical fiber manufacturing equipment.

Featuring a comprehensive range of machinery with over 30,000 items in stock, equipment is offered as-is, checked for operability or completely reconditioned to customer specifications.

Machinery is available for: rod breakdown to fine wire drawing machines, stranders, bunchers, extrusion and jacketing lines, braiders, planetary and single-twist cabling, drum twisters, payoffs, take-ups, caterpullers, rewind lines, and more.

Wire & Plastic Machinery has eight North



American locations with complete rebuilding facilities in Bristol, Connecticut, and Bonham, Texas.

Wire & Plastic Machinery Corporation – USA

Website: www.wireandplastic.com

Zumbach Electronic

Booth: 100 and 614

Zumbach will showcase its extensive portfolio of dimensional measurement and inspection systems for wire drawing, wire

insulating and cable jacketing processes as well as for rod and bar mills.

In order to achieve high precision and best price-performance ratio, different technologies such as laser scanning, X-ray, ultrasound, light-section technique and linear sensor technology are used.

The production of offshore flexibles involves complex processes requiring varying individual performances for quality control.

Any deviations from the required standards can risk serious consequences if failure occurs, depending on the application scenarios.

In order that the risks for future product failure are eliminated during the manufacturing processes, such as wire drawing, profile rolling/extruding, stranding and sheathing, Zumbach provides reliable solutions for the measurement of all critical parameters.

The versatile high-tech ultrasonic system Wallmaster offers application-specific solutions for measuring and monitoring wall thickness.

The measuring data processor with touchscreen display gathers data and QC fully automatically. In combination with ultrasonic UMAC® scanners and various ODAC® diameter measuring gauges as well as with error detectors, the measuring and monitoring scale can be expanded to outside and inside diameter, statistics, SPC and processor communication.

Using Zumbach's Wallmaster measurement and control systems, manufacturers can economize their expenditure of raw materials. The ROI is achieved within a few months. The use of these systems also allows reduction of the start-up time.



▲ 3-axis ODAC 550 system, measuring an offshore cable of 500mm OD

One of the highlights on the stand will be the new ultrasonic scanners for flexible diameter adjustment.

In this novel construction (patent pending) the transducers can be either individually or simultaneously adjusted to the best possible measuring position within seconds.

The scanners represent a smart and simple solution for full non-contact, in-line eccentricity and wall thickness

measurement of cable jackets, tubes and hoses.

A complete line of measurement and control equipment for any on-line and manufacturing process will also be on display:

- New 1, 2 and 3 axis diameter gauges of the high precision ODAC® series for any wire and cable. New models with special beam geometry, fault detection function and high scan rate
- The advanced ODEX® concentricity and diameter gauge for wire extrusion. Fully non-contact, based on magnetic and laser technology
- New LSV length and speed gauges for down-to-zero speed measurement
- New spark tester AC and DST systems
- Advanced KW fault detectors with new local BAE control and display unit
- New economic, modular high performance USYS IPC data acquisition, processing and display units
- Rayex® D series: Zumbach's X-ray measuring and control system for CV lines, for wall thickness (three layers), eccentricity and diameter/ovality for CV lines
- Profilemaster® series: high-end, non-contact profile and shape measurement, combining laser and CCD technology for shaped wire and any other profile

Zumbach Electronic AG – Switzerland
Website: www.zumbach.com

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Forward-looking fiber management

Huber+Suhner chose its first appearance at Data Centre World Hong Kong to showcase its new fiber management system, lanos®.

The Switzerland-based company initially unveiled lanos at Data Centre World London in April as part of its “building blocks” exhibition – a portfolio of data center components.

“We chose Data Centre World to launch our new technology as it is the world’s largest gathering of key players in the data center field, making it the perfect platform,” said Urs Ryffel, COO fiber optics at Huber+Suhner. “We are very excited to make our Data Centre World Hong Kong debut at such an exciting time and to showcase lanos and demonstrate what it has to offer to our Asian customers.”

The new lanos concept facilitates base-2, 8, 12 and 24 pre-terminated cable systems for high levels of density, installation speed, handling and scalability, all key factors in future-proofing data centers.

lanos fiber management system is designed to accommodate a quick, simple upgrade path from 10G serial to 40G and 100G parallel optics.

“This is undoubtedly our most advanced and adaptable fiber management system to date,” said Ryffel. “We chose the name lanos – derived from Janus, the Roman deity that looks both to the past and the future – as it reflects the system’s ability to

both improve existing data centers when retrofitted and provides the most effective, efficient solution possible for new builds.”

Lightweight wind up

Increasing efficiency regulations around the world have resulted in an increase in the size of transformers. Without changes to design, manufacturing process, or materials, increasing transformer size can significantly reduce resistance and losses.

However, as the size of a transformer increases, so too does its weight, and in pole-top distribution transformers, traction transformers, or transformers for aerospace applications, weight is a significant factor.



▲ Transformer size on the increase

German metals specialist Wickeder Westfalenstahl produces lightweight

copper-clad aluminum winding wires. The combination exploits the advantages of both materials for a high performance yet lightweight transformer, so the company took the opportunity of May's CWIEME Berlin to hold a seminar to address the transformer weight issue.

“We have been supplying copper-aluminum combinations for busbars and connectors in switchboards, distribution boards, substations and battery banks to all the major players in Europe and North America for more than 30 years. However, the benefits of copper-clad aluminum for certain types of transformers are generally not very well known,” said Kevin Jürgens from Wickeder Westfalenstahl's product technology department.

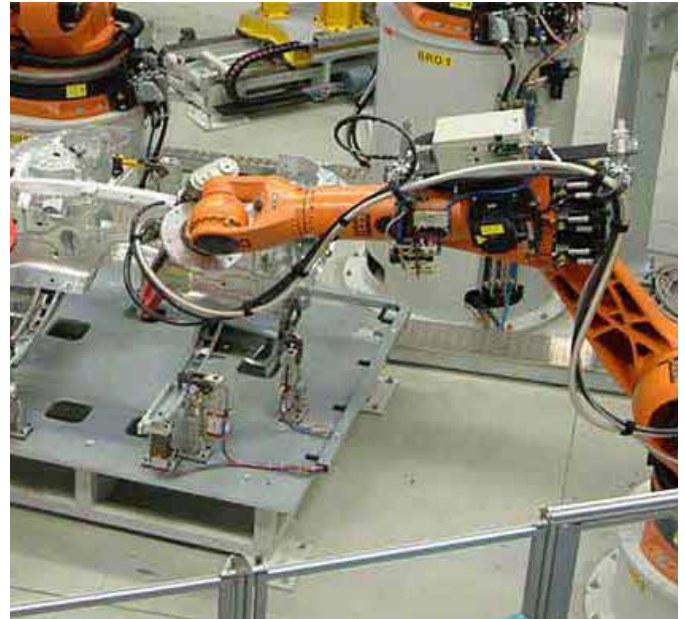
Jürgens' session, entitled “Transforming ideas: clad metal solutions”, explained how the cladding process works and which cladding designs Wickeder Westfalenstahl can produce, as well as cladding solutions for specific transformer applications.

New robot cable

SAB Bröckskes, a German manufacturer of special cables, has introduced a new control cable for robot drag chain applications, engineered for use in paint robots, axis 7.

When used within a paint shop, cables are in contact with highly aggressive chemicals such as coatings, solvents and

lubricants. SAB Bröckskes' new cable is said to have the necessary ruggedness for drag chain applications combined with resistance against the specific environmental conditions associated with robotic painting applications.



▲ *New control cable from SAB Bröckskes
Photograph courtesy of SAB Bröckskes*

The insulation and sheath compounds are especially engineered for flame and chemical resistance (it fulfills the FT4 flame test), while the robust construction is essential for continuous flexing.

In development, SAB Bröckskes put the construction elements and materials through extensive endurance tests under real operating conditions.

The materials were also exposed to harsh chemicals in the laboratory to simulate the environment of the paint shop before the cable was released for mass production.

The new control cable is in addition to an existing range for the robot industry

that includes primary and supply cables, welding gun, bus and camera cables.

Lightweight wind cable

Nexans has developed a new solution in low voltage aluminum loop cables and associated accessories, suitable for use in wind turbines. The flexible system, available for connections up to 1kV, can withstand the torsional cycling caused by rotating nacelles.

Nexans' Windlink aluminum loop cables, connectors and lugs for wind turbine generators are lighter than traditional copper cables.

The cable forms a loop in the nacelle to withstand torsions that arise as the nacelle moves with the wind's direction.

It transports power down from the nacelle to the fixed section along the tower to the transformer.

The lower density of aluminum makes the cables about 40 percent lighter than the traditional copper counterparts and therefore easier to install inside the wind turbines.

While developing Windlink Nexans tested multiple aluminum alloys to find the best performing solution. Under torsional tests, the chosen aluminum cables were able to withstand at least a torsion of ± 100 degrees/meter during at least 2,000 cycles

while providing the same performance as copper cables.

Philippe Michel, global product manager, wind OEM industry at Nexans, commented: "Nexans set out to reduce the cost of low voltage loop cables while maintaining the performance needed by wind turbine generators. Our new low voltage aluminum loop solution, the first of its kind on the market, meets these criteria."

The complete solution will be manufactured at Nexans' Bohain plant in France and at the Hof factory in Germany.

High core count cable

Yangtze Optical Fibre and Cable Co (YOFC) has developed a range of air-blowing micro optical cable products.

YOFC's optical cable development team has produced air-blowing micro optical cable products said to have the largest core number currently available in China.

The cables hold 432 optical fibers in a single optical cable with an 11mm diameter. The fiber density within the optical cable is up to 4.4F/mm², suitable for a 16/13.5mm pipeline for air-blowing laying.

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