WCN

WIRE & CABLE NEWS Spring 2011 ISSUE N° 44

OFFICIAL NEWSLETTER OF THE INTERNATIONAL WIRE & MACHINERY ASSOCIATION

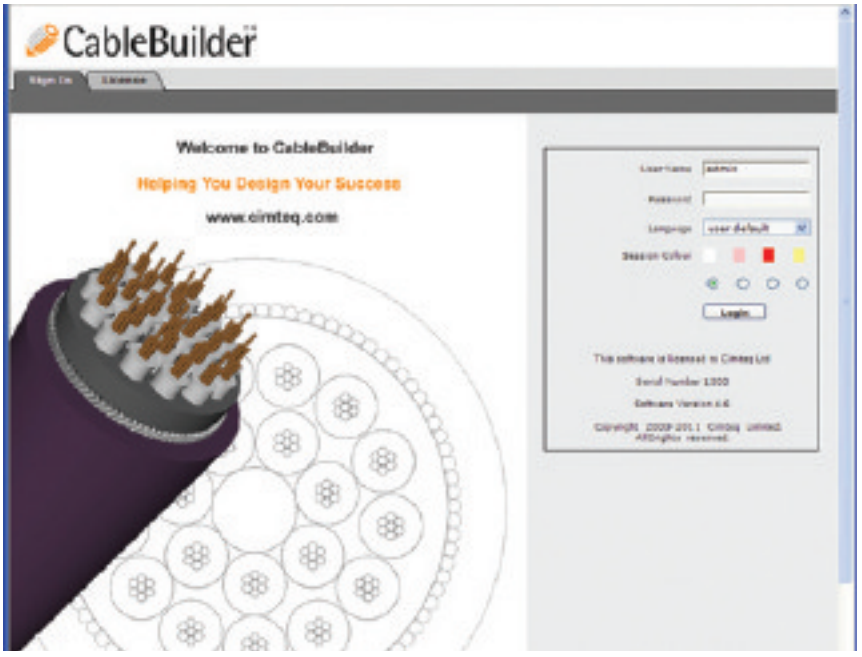
Cimteq is building for a stronger future

Cimteq, the supplier of the cable design and quotation software CableBuilder, is expanding its operations to support customers and supply new and innovative cable related software products and services.

The Cimteq brand has always meant more than good products. It means a promise to cable manufacturers that their investment in Cimteq's products is future assured. This is because Cimteq will always strive to find new and innovative products and services that can provide real step improvements to its clients' profitability.

There are two reasons for Cimteq's expansion. The first is the necessity to support a growing installed base, especially following the adoption of CableBuilder by the biggest names in the cable manufacturing industry. The second is the expansion of the research and development programmes to produce more innovative products and services.

The current expansion plan will run until the end of 2011. The first phase saw the recruitment of new skilled support staff, and also the acquisition and renovation of a historic 19th century building to serve as the main operation centre for the company. The new premises will house Cimteq's research and development centre, its customer support operation, and a state-of-the-art training facility.



▲ *The front page of the Cable Builder proram from Cimteq*

Cimteq recognises the trust of companies large and small to safeguard their investment in the company's products. With the latest expansion programme, Cimteq is guaranteeing the level of service its current customers enjoy and promising exciting new developments.

Cimteq – UK
Fax: +44 1978 667 005
Email: amanda.shehab@cimteq.com
Website: www.cimteq.com
Interwire stand: 2015

A technical conference co-organised by ACIMAF, CET, IWCEA, IWMA, WAI

Following successful events in Stresa, Prague, Bologna and Istanbul, ACIMAF (Associazione Costruttori Italiani Macchine per Filo – Italy), CET (Comité Européen de la Tréfilerie – France), WAI Inc (Wire Association International – USA) and the IWMA are collaborating again to hold a major wire and cable conference over one-and-a-half days at the Congress Center Düsseldorf in November 2011.

Joining the team of co-organisers for the first time is the International Wire & Cable Exhibitors Association (IWCEA).

The conference, apart from featuring a panel of both ferrous and non-ferrous expert speakers on 7th November, will also have table top exhibits and on the morning of 8th November the opportunity to go on a factory tour. There are also excellent sponsorship opportunities for interested companies.

Regular updates can be found on the website at www.cabwire-duesseldorf.com

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Wire & Cable News

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IWMA
46 Holly Walk, Leamington Spa, Warwickshire CV32 4HY, UK
Tel: +44 1926 834680
Fax: +44 1926 314755
Email: info@iwma.org
Website: www.iwma.org

Spring 2011
www.iwma.org

Entire range from Techna

As the UK representative, Techna is able to provide the entire range of wire drawing components from Naber & Wissmann GmbH, including capstans, cones and drawing rings for virtually any drawing machine including those of Niehoff, Henrich, Herborn, Samp and Syncro.

These components are available to manufacturers' specifications, in a wide range of materials.

NWZ-A material is a full ceramic (zirconium oxide/aluminium oxide) or ceramic-steel compound, tried and tested, even under unfavourable drawing conditions, and providing optimum wear resistance and high operational efficiency, in sizes up to 500mm Ø.

NWM-74 is for drawing of non-ferrous metals, especially copper and its alloys. This is thermally coated and alloyed to the basic material in a vacuum, providing a fine spread of hard materials such as carbides, borides and silicides, which guarantee an extremely wear resistant working surface.

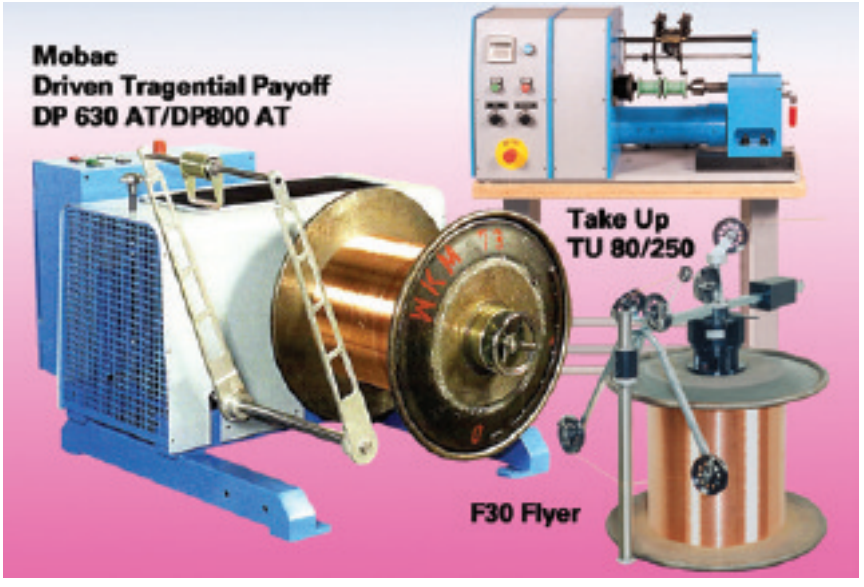
NWM-81/83 is built up in a thermal coating process but with a higher proportion of tungsten carbide, making it an ideal material for drawing steel cord wires. With a thickness of around 0.8mm and a hardness of HV=2,900 to 4,600 kp/mm, it may be repeatedly re-ground and is resistant to shock, breakage and thermal shock. NWK-78 material provides a surface coated with oxide-ceramic, providing components with high surface quality, being ideal for drawing of copper and plated copper wires. Worn draw-steps can be re-coated and returned to their rated diameters.

NWS-12 components are high-alloyed special steel, hardened to 65 Hfc, and with high stability and excellent surface finish, giving good performance for the drawing of steel, iron and steel-cord, whilst the NWS-90 is recommended for greater draw speeds.

Techna's Mobac range includes single and multiple payoff frames, flyers for insertion into bobbins, flyers with tension control, high-speed flyer payoffs, coil payoffs, payoff baskets, tangential and driven-tangential payoffs, spoolers, winders, and dancer accumulators, together with a comprehensive range of accessories and spares.

Flyers are available with various braking systems such as rolling friction braking, centrifugally controlled braking, combined rolling friction and friction braking, magnetic particle brakes and hysteresis brakes which are silent and operate without any physical wear (braking forces are created by magnetic fields, not friction), so making them highly suitable for use in payoff flyers due to their totally smooth torque, regardless of any rpm variations.

Techna International Ltd – UK
Fax: +44 1923 219700
Email: info@techna.co.uk
Website: www.techna.eu



▲ *Techna – available to manufacturers' specifications*

▲ *The G Star F Series from Eurobend*

New automatic wire bending machines developed by Eurobend

Eurobend SA has developed two new distinctive series of automatic wire bending machines, the 'G-Star F' series, which is a single head/line machine, and the 'G-Multi' series, which can have from two to six bending heads/lines working simultaneously, adapting the machine to any productivity demand.

Both the G-Star and the G-Multi series are available in four diameter ranges (from 2 to 12.7mm, 0.078" to ½"), and they offer:

- Unique combination of multi-slide production output and CNC wire bender versatility
- Unlimited flexibility and increased productivity
- Reliability, consistency, and minimum changeover and maintenance requirements

The automatic wire bending machines have a combination of features offering numerous advantages against the competition, including:

Adjustable counter-torsion (anti-twist) mechanism, ensuring control of wire twist regardless of wire quality, bending direction etc (patented).

Diameter changes can be completed in less than a minute, thanks to a diameter presetting system.

The two available types of wire bending heads, single and bi-directional, combined with one or both available versions of 3D bending options covers all wire forming applications achieving high production speeds and product accuracies.

The 3D wire twisting unit ensures fast production of small and mid-sized wire forms, where the 3D rotating bending unit, which can infinitely rotate around the wire, achieves high accuracies on large 3D wire forms.

Straightening unit with even straightening force distribution, due to power transmission to all lower straightening rollers. Modem communication for immediate technical support provision via Internet

The G-Star F and G-Multi wire benders are available with the following optional items:

- Bending table extension with inclination mechanism
- External hook and spring bending unit
- Ring forming attachment
- Automatic butt welding device
- Chamfering unit
- Automatic collection unit
- Various types of de-coiling station

Eurobend AS – Greece
Fax: +30 210 6206567
Email: eurobend@otenet.gr
Website: www.eurobend.com
Interwire stand: 158

Diary of world class cable events

2011 May

3-5 Interwire
Atlanta, Georgia, USA

Contact WAI
Fax: +1 203 453 8384
Email: info@wirenet.org
Website: www.wirenet.org

23-26 wire/Tube Russia 2011
Moscow, Russia

Contact Messe Düsseldorf GmbH
Fax: +49 211 4560 7740
Email: info@wire-russia.com
Website: www.wire-russia.com

2011 September

13-15 wire/Tube Southeast Asia 2011
Bangkok,Thailand

Contact Messe Düsseldorf Asia Pte
Fax: +65 6332 4633
Email: wire@mda.com.sg
Website:
www.wire-southeastasia.com

2011 October

4-6 WiCAB/Tubotech 2011
São Paulo, Brazil

Contact IWMA
Fax: +44 1926 314755
Email: info@iwma.org
Website: www.iwma.org

2011 November

7-8 CabWire World Conference 2011
Congress Center, Düsseldorf, Germany

Contact: IWMA
Fax: +44 1926 314755
Email: info@iwma.org
Website: www.iwma.org

2012 March

26-30 wire/Tube Düsseldorf 2012
Düsseldorf, Germany

Contact: Messe Düsseldorf GmbH
Fax: +49 211 4560 877793
Email: wire@messe-dusseldorf.de
Website: www.wire.de

2012 September

25-28 wire/Tube China 2012
Shanghai, China

Contact: Messe Düsseldorf GmbH
Fax: +49 211 4560 7740
Email: BurbullaK@messe-dusseldorf.de
Website: www.wirechina.net

At the forefront of cable and wire production

Wire and cable makers now have an affordable way to control tension in individual wires on rotating wire processing machinery, with the introduction of the PC-based RTM system.

This innovative system has been developed to provide for accurate measurement, processing and evaluation of material tension on bunchers and twisters.

The RTM X2 system can pay for itself in a very short time by reducing material breaks and eliminating overstressing and excessive slack in wires and cables.

Therefore overall finished product throughput is increased. The RTM system also improves the overall product quality and can open a wire and cable manufacturer up to new markets. Tension control – wireless and with digital speed: a distinctive feature of RTM X2 is its wireless operation.

It sends tension data by radio transmission, thus avoiding the many drawbacks of mechanisms such as slip rings (cost, wear, signal noise, installation issues, etc) and telemetry systems with its critical unidirectional analogue data transmission and multi-positional prohibitive cost.

▲ *New system from FMS*

The RTM X2 system equipment package consists of up to two tension sensors, a transmitter and a receiver unit. The EMGZ482R receiver/control unit displays the tension data numerically on an LCD in N, lb or another chosen unit.

Two analogue outputs can interface a PLC or equivalent devices for controlling purposes. Force limits or wire breaks are detected and can trigger alarms or emergency stops via two relay outputs.

FMS Force Measuring Systems AG – Switzerland
Fax: +41 44 850 6006
Email: info@fms-technology.com
Website: www.fms-technology.com
Interwire stand: 231

Fatigue testing from Bogimac

At Interwire Bogimac will present its strategy on how and why dynamic material fatigue testing empowers product leadership of wire producers and consumers.

Bogimac is dedicated to equipment for fatigue testing of belt, cable, cord, wire and rope. Leading manufacturers and users worldwide of wire products use their equipment to validate new product innovations, assure their product liability and monitor the quality of their production. To extend material and product knowledge beyond classic static testing, Bogimac supplies to the wire industry high speed machinery for fatigue bending, compression-tension, torsion and wear.

The complete portfolio is presented, with special attention to the latest high dynamic versions of their classic workhorses:

- BR-M/P-175 single and penta headed bend rotation Hunter tester for wire and cord
- BSC-M/D/H-3k single, dual and hex headed bend over sheave Shoeshine tester for belt, cable and cord
- BST-M-16k high speed rope bend over sheave tester for lift ropes

Bogimac – Belgium
Fax: +32 2722 4201
Email: info@bogimac.com
Website: www.bogimac.com
Interwire stand: 666

IWMA Educational Trust Fund Scholarships – a correction

In the previous edition of WCN, number 43, the maximum value of scholarships quoted was incorrect. The correct maximum value is up to US$24,000 (or equivalent) over two years.

Also of interest to trainees in the wire and cable industry who normally might not be able to visit the world's largest industry trade fair, wire Düsseldorf, which will run from 26 to 30 March 2012, are the John C Hogg Travel Awards.

These awards provide free travel and accommodation for qualifying applicants for a three-day, two-night trip to wire Düsseldorf. Full details about the awards and how to apply can be found on the IWMA website www.iwma.org

Machinery is sold to India

GER SA, Nessonvaux, Belgium, with worldwide activities in buying and selling second hand machines, recently sold the entire stranding and bunching machinery park of a medium sized wire and wire rope factory in Italy to one of its long-term customers in India, also a well-known producer of wire ropes.

The sale included 15 tubular stranders/closers of different configurations and sizes, six double twist bunchers, as well as accessories and more than 600 bobbins.

GER SA – Belgium
Fax: +32 87 26 02 01
Email: ger@ger.be
Website: www.ger.be

Reducing energy costs at Bechem grease plant

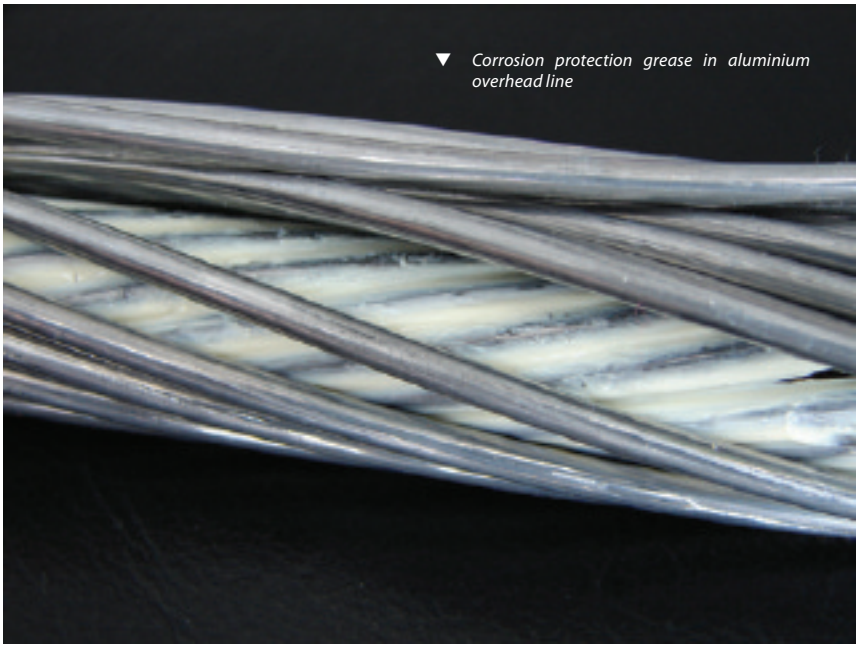
Bechem operates one of the most modern grease plants and has the largest production capacity of lubricating greases in Germany. Lubricating greases are not only important in the production and processing of wires, but also for the production of high voltage cables for overhead lines.

Overhead lines are not made of copper, since these lines would be too expensive and heavy. Aluminium cables are used instead, which are arranged around a steel core. A typical 110kV line can, for example, consist of a seven-fibre steel core which is surrounded by a braid of 30 aluminium wires. The task is to permanently protect the uninsulated conductor, offering for-life lubrication.

For this purpose corrosion protection greases are normally used, which have to be fused at a temperature range from 60°C to 70°C.

To save energy and costs it is recommended to use a product of the UNOPOL series made by Bechem.

With UNOPOL SV 2 KF, the protection grease can also be applied cold or at room temperature. During the stranding process the grease is supplied into the hollow spaces between the individual wires so that the entire cable is efficiently protected against self-corrosiveness as well as against external corrosive influences. UNOPOL SV 2 KF offers good thermal stability and is suitable for ambient service temperatures from 150°C up to a short term peak temperature of more than 200°C. Even after repeated heating there will be no reduction in the dropping point. At low temperatures the product is flexible up to -35°C so that the lubricant layer will not break by bending deformation.



▼ *Corrosion protection grease in aluminium overhead line*

In addition to the above recommended processing material Bechem offers an extensive product programme which covers all tribologic questions related to the operation of machines used for wire and cable production.

Carl Bechem GmbH – Germany
Fax: +49 2331 935 1199
Email: bechem@bechem.de
Website: www.bechem.com

Orchid exhibitor packages at wire/Tube SouthEast Asia

The IWMA and ITA have released details of their Orchid exhibitor package for wire/Tube SouthEast Asia, which takes place in Bangkok, 13th-15th September.

The 12m² package costs US$5,700, and features a fully carpeted booth, fascia board with name in black, square table with three leather chairs, one 5 Amp/220V power socket plus three spotlights, one information desk and a Thai/English interpreter.

Other supplied facilities include wastepaper basket, daily booth cleaning, overnight security for items left on the IWMA/ITA booths, free hospitality and beverages on

the IWMA/ITA booths, free Internet service on IWMA/ITA booths, and additional interpreter service.

Help, local advice and practical experience will be provided by the IWMA/ITA office, and there is no management charge for IWMA/ITA members.

Optional extras include preferential hotel rates at the conveniently situated Sheraton Grand Sukhumvit Hotel, Bangkok (subject to availability), and a meet and greet service at the airport (recommended).

Booths are also available in alternative sizes: 9m² for US$4,335; 18m² for US$8,400; 20m² for US$9,300; and 24m² for US$11,100.

The management charge for non-members is £175 plus UK VAT, and this includes one free year's membership of the IWMA or ITA.

Multi-wire drawing machine and electrolytic tinning plant from China

Well Gain Cable Systems Ltd, in association with Kunshan Hongtai, has added to its current range a multi-wire drawing machine and electrolytic tinning plant.

The multi-wire drawing machine, with continuous annealer, is the ideal solution for customers who are looking for efficiency, cost-effectiveness and reliability in drawing and bunching wire strands.

With maximum inlet wire diameter of 2mm, the machine is able to draw bare Cu, tinned Cu and silver plated Cu wires down to outlet diameter 0.15-0.4mm at a maximum line speed of 32m/s. Both 8-wire and 16-wire machines are available.

The electrolytic tinning plant, complete with water treatment system, is a waste water free process of producing the best quality tin plated copper wires of wire diameter 1-2.6mm at a maximum line speed of 13m/s.

The tinned wires are suitable for further wire drawing and continuous annealing. To achieve the highest production efficiency, the tinning plant can also work with an in-line rod breakdown machine.

▼ *An addition to the range from Well Gain Cable Systems Ltd*

Well Gain Cable Systems Ltd –
Hong Kong
Fax: +852 2259 3385
Email: info@wellgaincable.com
Website: www.wellgaincable.com

IWMA new members

Shanghai Yuanjun Precision Tungsten Carbide Manufactory	www.jiahecarbide.diytrade.com	Caledonian Cables Limited	www.caledonian-cables.net
Asia Sim Co (Wire Asia)	www.asiasim.ir	Zenith Enterprises	
Associated Engineers & Industrials Ltd	www.aeimachines.com	Bedmutha Industries Ltd	www.bedmutha.com
Bogimac nv-sa	www.bogimac.com	Zarhak Steels Ltd	www.zarhak.com
Sneham International	www.snehamtapes.com	Daloo	www.daloo-machines.com
Nirman Maschinen Fabrik		Techno Commerce Ltd	www.techno-commerce.com
Jiangsu Dawn International Trading Co Ltd	www.wire-drawing-machinery.com	CETC	
Interior Today Exhibition Pvt	www.interiortoday.in	Kiran Cables Pvt Ltd	www.kirancables.com
Super Link Holding Ltd	www.chinasuperlink.com	Dosani & Co India	www.dosanihealthcare.com
Pan-China Fastening Systems Co Ltd	www.panchinafs.com	Ratnamani Infra Power Pvt Ltd	www.ratnamaniinfrapower.com
Tulip 3p Media Private Ltd			
SANT Engineering Industries	www.santenggindia.com		
ATL Technology Ltd	www.atl-technology.net		
Dongguan Zhangli Machine Fitting Co Ltd	www.dgzhangli.com.cn		
Hind Engineering & Wire Products	www.hindengineering.in		
Bobbio Srl	www.bobbio.it		
Leevens Techpoint Company			

The IWMA is pleased to welcome these companies as new members to the Association.

If your company would like to join the world's largest corporate membership organisation for the wire, cable and wire product industries, just visit www.iwma.org and click 'Join the IWMA'

Make a song and a dance in São Paulo

It is now widely recognised that Brazil and a number of other South American economies offer tremendous opportunities to exporters with new technologies (see editorial on page 9).

Following the successful model developed in other key markets in the world by Messe Düsseldorf the original Tubotech tube and pipe exhibition, developed by CIPA in Brazil, will now be partnered by the concurrent WiCAB show for the wire and cable industry.

WiCAB/Tubotech 2011 will be held in São Paulo, Brazil, 4th-6th October. For companies interested in participating at the event, sister organisations the IWMA and ITA are offering their good value Samba exhibitor packages.

The 12m² packages consist of an octanorm white shell scheme booth, fully carpeted, with fascia board showing the company's name in black (up to ten letters).

Features include a square table with three chairs, one power socket plus four spotlights, one wastepaper basket, Portuguese/English interpreter and daily booth cleaning. Services on the ITA booth will include overnight security for items left at the booth, free hospitality and beverages, Internet service and additional interpreter service.

Help, local advice and practical experience will be available from the IWMA/ITA office, along with a meet/greet transfer from the airport to the hotel (an essential service!).

Optional extras include hotel accommodation at preferential rates, extra fitted space and additional fittings/furniture. The 12m² Samba package costs €4,250. 18m² and 24m² packages are also available.

There is no management charge for IWMA/ITA members. The charge for non-members is £175 + VAT, and this includes one year's free membership of the IWMA/ITA.

Please note that some IWMA facilities at WiCAB will be shared with the ITA on its nearby stand.

Dramatic increase in unique visits to IWMA website

According to data recorded by Matrixstats in the calendar year 2010 www.iwma.org attracted 174,244 unique visits, a record number since the website was updated in 2008.

The IWMA believes that a number of factors have led to this increase.

Members can now send editorials at any time throughout the year for posting immediately on the website in the "Latest News from IWMA Members" section, with the result that the site has become a "real time" publication.

Additionally the IWMA Secretariat reviews and updates the website at least twice per week and adds important new items as soon as received.

The IWMA believes that this has led to the website becoming an important source of information for the industry enabling readers to visit at their convenience rather than being bombarded with emailed news bulletins.

Borax and boron free lubricants ahead of legislation

Traxit International GmbH has been providing the wire drawing industry with a complete range of lubricants to suit all types of wire for all applications, since 1881.

Currently one of the largest manufacturers of drawing lubricants, coatings and emulsions, Traxit operates from its manufacturing bases in Germany, China and the United States.

More than 200 different formulations in the product range guarantee that the company has the right product for all users' needs, general and specialised. The choice of the ideal lubricant requires as much technical information as possible, so please contact Traxit or a local representative.
The lubricants are of the highest quality and constantly updated to ensure maximum environmental and health friendliness.

The much-delayed European legislation that classifies all products containing borax and boron compounds above a certain level as toxic is now effective.

Traxit is always at the forefront of innovation and it is the company's clear intention to be completely free of boron compounds in lubricant formulations specifically for the USA operation by the first quarter of 2011. By then all dry powder soap formulations and coatings for the North American market will have been changed.

Traxit's vision is not just to reduce the level of borax to below the classification level, but to eliminate it altogether, and it already has a full range of boron free coatings and dry lubricants available.

These innovative and first class products offer the following improvements over some of the traditional boron containing products:

- Longer die life
- Higher drawing speeds
- Reduced wire breaks
- Reduced drawing temperatures
- Sodium based lubricants with less moisture pick up

Traxit North American LLC – USA
Fax: +1 901 366 8414
Email: info@traxit.com
Website: www.traxit.com
Interwire stand: 758

Double capacity with a Roblon high speed server

▲ *Roblon's HSLT server*

Roblon is determined to support its customers in successfully meeting the ever-increasing demands for higher production speed and efficiency.

One example of this is the Roblon High Speed Low Tension (HSLT) server that enables customers to more than double the line speed compared to traditional servers.

The speed (rpm) of traditional servers is limited by the centrifugal forces that the bobbins can withstand – a limitation that has been eliminated in the Roblon HSLT server by using special materials and protective parts.

The maintenance-free hysteresis brakes on the HSLT offer precisely controlled tension down to as little as 0.6N. All contact points at the server are specially coated to reduce possible friction.

The low tension prevents the cable from contracting after production and thereby cause attenuation of the optical fibres.

The Roblon HSLT server is designed for very high speeds, using a principle of pulling off the yarns over the ends of the non-rotating bobbins.

This means that a few twists are added to the strength members during the process, and consequently lightly coated, flexible strength members are ideal.

Roblon has a range of these lightly coated glass strength members that have all been tested in the HSLT, including Roblon E-glass, Roblon WB E-glass, Roblon Light-flex and Roblon WB Light-flex.

The two Light-flex yarns are impregnated with a special formulation coating that offers high wear resistance despite being very soft and flexible to use. It is also possible to use aramid yarns in the HSLT.

Visit the Roblon stand at wire Russia (23rd-26th May 2011), where Roblon representatives will be available to discuss the latest developments.

Roblon A/S – Denmark
Fax: +45 9620 3399
Email: info@roblon.com
Website: www.roblon.dk

Forthcoming IWMA Social Events

IWMA Golf Day 2011
Wednesday 8th June 2011, Fairhaven Golf Club, Lytham St Annes, Lancs. UK

IWMA Dinner Dance 2011
Friday 25th November 2011, Royal Garden Hotel, London, UK.

IWMA AGM and Industry Lunch 2012
Wednesday 1st February 2012, Mere Golf & Country Club, UK

IWMA Industry Dinner, Düsseldorf 2012
Tuesday 27th March 2012, Düsseldorf Congress Centre

Please contact the IWMA office for further details,
Tel: +44 1926 834680 Fax: +44 1926 314755
Email: info@iwma.org or visit the website www.iwma.org

Linear drives – the Marldon solution

Rolling ring drives, used mainly on spooling machines, very simply convert rotary shaft motion into linear movement.

The principle is simple and generally well understood. However, a mechanism to harness it into practical application demands clarity of what that application is: almost always driving something along (other than itself), which logically means applying pressure somewhere.

So a rolling ring drive must a) move, while b) bearing some load.

The beauty of the Marldon design is that, uniquely, it handles these functions separately, and consequently there is no compromising performance for structure .

The body of the unit is load bearing while the independent driving mechanism controls movement.

Beyond the performance benefits there are also maintenance (ie cost) efficiencies to be gained from the simple construction.

There is rarely a requirement for specialist maintenance attention, as the process of bearing replacement can usually be performed by the user's own maintenance facilities.

Where customers feel they need assistance, this is offered via online videos and telephone support.

However, Marldon recognises that not all users have the facilities or desire to carry out such tasks. To accommodate this, Marldon offers a ten-year warranty covering all parts and labour on all traverses, for a small up-front fee. See the company's website for details.

The Marldon traverse is manufactured from robust materials and is designed to retrofit most sizes of traverse currently available in the market. It offers equal performance and a range of options.

Marldon – UK
Fax: +44 0870 907 0016
Email: sales@marldon.com
Website: www.marldon.com

Don't forget the CIVETS/SATCA countries

Since the acronym BRIC was created by an eminent economist a few years ago to denote the fast developing economies at that time – Brazil, Russia, India and China – there is no doubt that these markets have received a large amount of focus from potential suppliers eager to share in their success.

Despite Russia being affected much more than the others by the global downturn of the last two years there are signs that businesses in that market are once again considering investments in new equipment and projects.

The remaining BRIC countries rode out the global storm quite well thanks to strong domestic markets (especially so in India), major infrastructure projects (Brazil for example has an Olympics and a World Cup football tournament to look forward to) and very low cost bases to maintain exports despite the recession (notably China).

However, it is now being recognised that there are a number of other countries whose markets are developing strongly and which are worthy of attention from companies operating in the global market: South Africa, Turkey, Chile and Argentina.

The IWMA Secretariat proposes the acronym SATCA for these economies.

(The name CIVETS was coined recently to highlight some of these countries together with others offering markets with good potential: Colombia, Indonesia, Vietnam, Egypt, Turkey and South Africa).

For example the Turkish economy is growing at a rate similar to China's. South Africa is undergoing much change and was undoubtedly given a tremendous boost by the World Cup. Chile's stock was already on the rise even before the worldwide attention generated by the incredible rescue of the miners.

As one of the G-20 group of countries Argentina is considered by experts to be an emerging economy and benefits from having rich natural resources, and is an active exporter of goods and services as diverse as agricultural products and energy generated by hydro electric schemes.

The importance of the BRIC and CIVETS/SATCA countries has not been lost on the IWMA, which has been an established sponsor for a number of years of the definitive industry exhibitions for a number of these markets: Metaltech in Brazil (now to be superceded by WiCab in 2011); wire Russia; wire SouthEast Asia; Wire & Cable India; and wire China.

For all of these important gateways to the market the IWMA is able to provide great value exhibitor packages and practical help and advice about participating. The IWMA has also organised or supported technical conferences in some of these regions.

In addition the IWMA has established representative offices in some of these key markets, including Russia, India and China. In the near future the IWMA will be hoping to appoint representation in South America and Turkey.

Of course it is virtually impossible for companies to participate in every exhibition and the IWMA's philosophy remains this: we do not say members should be at all these events but if they are interested in any or all of these markets these trade fairs provide good showcases.

If members choose to participate at any of these exhibitions the IWMA will be there to support them. But when focussing on BRIC do not forget CIVETS/SATCA.

More than a facelift

Sikora's X-ray measuring systems set worldwide standards with their reliability and efficiency in the area of eccentricity and wall thickness measuring devices.

The new X-RAY 6000 will carry forward the success story of the flagship X-RAY 2000 from Sikora. Reliable measurements, easy handling and the typical Sikora face characterise the new X-RAY 6000.

The elaborate construction creates an optimum integrability in every cable production line.

Furthermore, there are a number of technological innovations: The X-RAY 6000 is equipped with XLL-X-ray tubes and guarantees a long-term operation along with the highest reliability.

An additional highlight of the new X-RAY 6000 is the selectable measuring rate from 1 to 3Hz (optionally 10, 100Hz) as well as an extremely high accuracy.

The integration of a universal power supply, which covers all common supply voltages, rounds off the technological innovations of the X-RAY 6000 series.

The technology of the X-RAY 6000, in combination with the display and control system ECOCONTROL 6000, allows for a fast centring of the extrusion tools and control of the line speed or the extruder rpm under consideration of the minimum values.

There are a variety of X-RAY 6000 models available for diameter ranges from 0.65 to 650mm. All devices measure wires and cables with up to three layers of different materials with the highest precision. The systems are factory calibrated and maintain their precision for the entire operating time.

▲ *X-RAY 6000 – technological innovations*

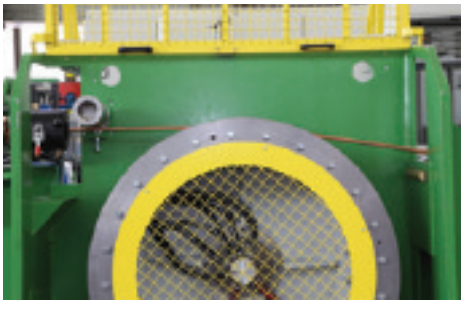
Sikora AG – Germany
Fax: +49 421 48900 90
Email: sales@sikora.net
Website: www.sikora.net
Interwire stand: 512

Speed increase thanks to Blackbox

Incredible results were achieved during the test run of Bongard's new Blackbox.

Thomas Bongard proudly presented the company's newest development, which allows for significantly increased speeds when drawing high-tensile Cu alloys, eg trolley wire. This is achieved by using several proprietary and innovative improvements.

Bongard Engineering GmbH & Co KG – Germany
Fax: +49 2378 915 300
Email: info@bongard.de
Website: www.bongard.de
Interwire stand: 650



▲ *Blackbox – incredible results*

wire Russia, 23rd-26th May, Moscow – returning at the right time

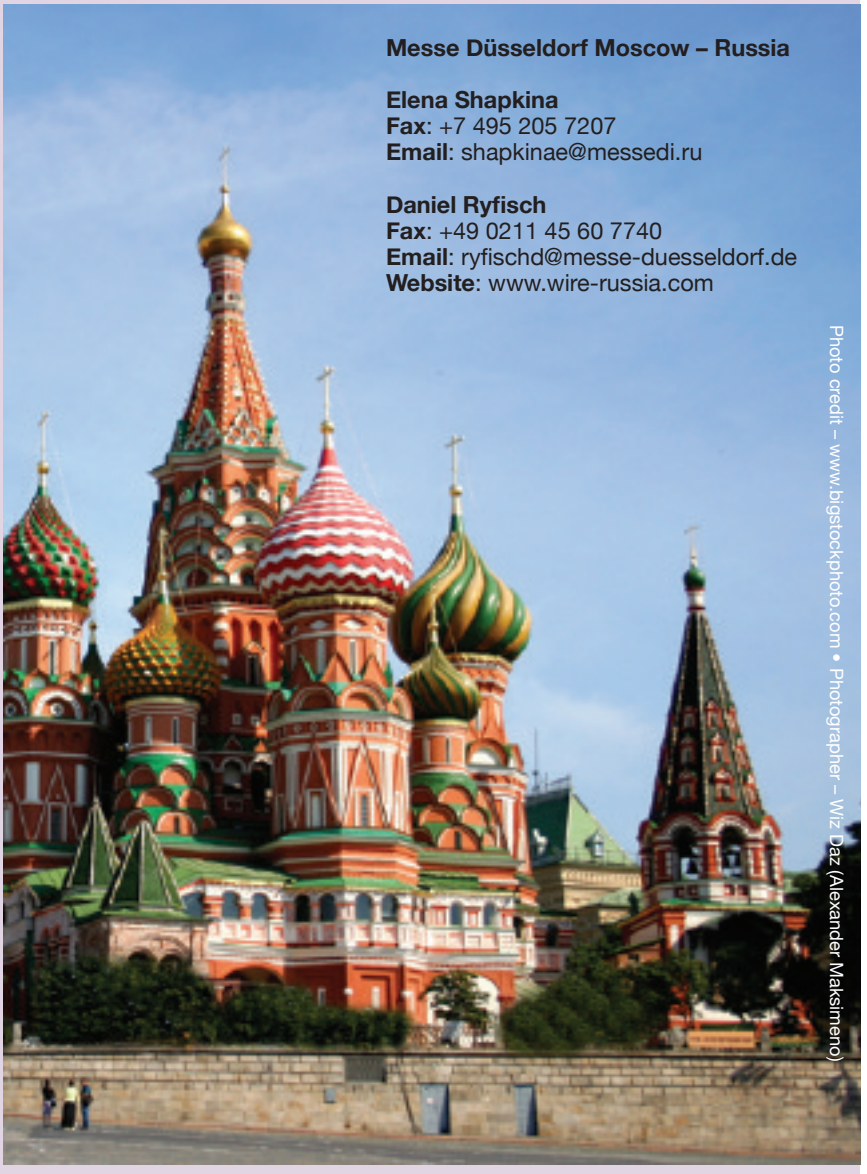
Despite setbacks to the economy during the global financial crisis there are signs now that the country's economy is moving forward, with local organisations once again planning very necessary investments.

Russia continues to have an enormous backlog in demand. Manufacturing equipment is still subject to immense wear and tear, with a huge technology gap and a low level of productivity, a situation that offers tremendous opportunities to organisations interested in penetrating the CIS market. The return of the CIS's most important trade fair for the wire and cable industry is well timed.

Wire Russia's exhibit profile includes: wire and cable manufacturing and finishing machinery; process technology tools; auxiliary processes and materials; raw materials, special wires and cables; measuring and control technology; test engineering; and specialist areas like packing, handling, transportation, safety and environmental protection.

The Krasnaya Presnya exhibition venue, located near the centre of the city beside the Moskva River, is one of the most modern and attractive locations for trade fairs in the entire CIS.

With an exhibition area of 55,000m² in seven halls and good open-air facilities, the site covers 20 hectares. The trade fairs' opening hours are 10:00 to 18:00 hours daily.



Messe Düsseldorf Moscow – Russia

Elena Shapkina
Fax: +7 495 205 7207
Email: shapkinae@messedi.ru

Daniel Ryfisch
Fax: +49 0211 45 60 7740
Email: ryfischd@messe-duesseldorf.de
Website: www.wire-russia.com

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wire Russia 2011 is supported by these industry partners:

International Wire & Machinery Association (IWMA)

International Wire and Cable Exhibitors Association (IWCEA)

German Wire and Cable Machine Manufacturers Association (VDKM)

Austrian Wire and Cable Machinery Manufacturers Association (VDKM–AWCMA)

International Wire and Cable Exhibitors Association–France (IWCEA – France)

Italian Wire Machinery Manufacturers Association (ACIMAF)

Wire and Cable Industry Suppliers Association (WCISA)

Eder expands its activities

A rate of 98% export of Eder products into the international wire and cable industry worldwide and a large pool of regularly satisfied customers in 84 countries, confirms its leading position for die-tools and machines produced under the umbrella of over 60 years' experience.

The ongoing committment to innovation and development of expertise as well as an active research programme serves to stay at the cutting-edge of the industry.

Eder-Austria has always taken a leading position in outstanding technical concepts and revolutionary developments in its field of activities and therefore has never been playing elsewhere other than the top league.

Founded in 1947, Eder Engineering-Austria has been a pioneer in launching the first PCD wire drawing and compacting dies and is one of the leaders in machines for the production and reconditioning of ultrahard precision die-tools, made from tungsten carbide or PCD materials.

While most of these machines have been designed to process drawing dies with round bores – among these, the revolutionary 'USP-Twin', a highly efficient ultrasonic machine with two workstations for doubling output when working PCD dies – Eder can now even offer a special 'R-2 Profiler conception' for the finishing of PCD die-tools with profiled bore shapes.

This development will attract innovative customers who are looking to replace their traditional tungsten carbide profiled dies against those made from more wear resistant PCD, but require the relevant potential to refurbish these special tools in-house themselves.

In the last quarter of 2010 Eder-Austria successfully took part in wire China (Shanghai) and in wire & Cable India (Mumbai), and for 2011 plans to take part in the forthcoming exhibitions in Moscow, Atlanta and Bangkok.

Representatives have also been appointed in China, Vietnam, Serbia and Spain.

▲ *EDER - a leading position.*

EDER Engineering GmbH – Austria
Fax: +43 1 367 49 49 49
Email: office@eder-eng.com
Website: www.eder-eng.com

New die polishing machines from Ajex and Turner

Ajex & Turner has been manufacturing a wide range of wire drawing dies, tools and machinery since 1962.

The company has been at the forefront of frequent technology development.

The company has developed new die polishing machines:

For PCD and ND wire and stranding dies up to 20mm, Model No SAU 450. This machine can re-grind and polish PCD and ND dies from 0.5 to 20mm with an in-built grinder, and can automatically grind the needles in any degree.

In one shift 20 dies of larger sizes can be re-ground and polished, depending on the PCD blank size.

For ND and PCD wire dies, Model No UPM-515 with swinging head.

This is a unique machine for polishing and re-cutting diamond and PCD dies up to 3mm. It has an in-built generator to save space and is easy to operate.

The ultrasonic frequencies of this machine are very stable and the oscillation head helps in removing sharp edges and producing well blended angles. For 3mm, it takes 20-40 minutes in shaping, depending on the PCD nib size.

For carbide dies, Model No TCD-11. This is a unique machine for in-house grinding and polishing of carbide dies from 1 to 50mm, and can hold casing sizes up to 100mm. In one shift the operator can re-grind and polish more than 50 dies, depending on the nib size.

Along with machines, accessories such as diamond powder/paste/steel and diamond needles, magnifying glass are supplied.

Ajex and Turner Wire Die Co – India
Fax: +91 11 274 52640
Email: sales@ajexturner.com
Website: www.ajexturner.com
Interwire stand: 717

Pushing the limits with the RX 25T

The Rosendahl Crosshead RX 25T for foamed RF cable cores is designed to manufacture the complete RF cable range, from ¼" SF to 2¼" F.

Its basic design consists of an oil heated crosshead with skin application which is equipped with an optimised temperature control to cover expansion rates of up to 86%. Two heating/cooling zones on the crosshead, one for the main body, the second for the die holder, provide perfect temperature control and even temperature distribution of the polymer gas melt.

Full natural balancing minimises the shear rates and provides smooth melt flow for perfect roundness, concentricity and mechanical stability. Superior manifold technology enables small formed cells and a very homogenous cell distribution at this high foaming degree. Temperature control, shear stress, pressure drop and flow speed optimisation in the crosshead are significant factors for achieving higher foam expansion rates on the final cable, up to 86%.

▲ *The RX 25T allows increases in productivity and cable performance*

This new design enables RF cable manufacturers to surpass limitations currently experienced with standard equipment.

Rosendahl Maschinen GmbH – Austria
Fax: +43 3113 5100 59
Email: office@rosendahlaustria.com
Website: www.rosendahlaustria.com
Interwire stand: 432

Zumbach hits the road

Zumbach will again be exhibiting at both wire Russia and Interwire in May.

On show will be the broad range of measurement and control systems for wire insulating and jacketing, wire drawing and rod mill applications. An extensive range of proven measurement solutions and the latest technological advances will be demonstrated. The company will be presenting the all new Speel 3000, a new length and speed measuring gauge, as well as Simaca surface quality inspection system.

Other equipment including the Odaca® laser diameter scanners; Wallmaster ultrasonic wall thickness measurement and control system; Odex® laser/magnetic non-contact concentricity gauge; Zumbach/WST preheaters and temperature sensors; Profilemaster, a non-contact profile measurement systems, based on laser contouring and CCD camera vision and processing. A complete line of Windows-based software packages for many different functions, such as data logging, remote viewing, multi part measurement and many more, will also be on show, at Interwire booth 1540.

In Russia at the end of the month, Zumbach will exhibit a selection of its broad range of measurement and control systems for wire insulating and jacketing, wire drawing and other applications in the wire and cable industry.

Zumbach Electronic AG – Switzerland
Fax: +41 32 356 0430
Email: sales@zumbach.ch **Website**: www.zumbach.com
Interwire stand: 1540

Hailing the success of IWMA at wire/Tube China 2010

▲ *Visitors at the IWMA booth at wire and Tube China 2010*

wire and Tube China 2010, considered to be the world's second largest and certainly Asia's largest exhibition, took place again at the Shanghai New International Exhibition Centre.

The four-day exhibition attracted 26,035 trade visitors (including 3,473 visitors from abroad), and its size hit a historic high with an exhibition area totalling 74,500m^2, up 30% from the previous exhibition.

wire China 2010 occupied 40,000m^2 and Tube China 2010 covered 34,500m^2. The two events attracted more than 1,300 exhibitors worldwide.

Visitor numbers stood up well on the first two days despite the national Moon Day holiday falling on the 22 September. The IWMA booth secured nearly 60 good quality enquiries as well as a good number of new member applications. Peter Large represented the IWMA at the Shanghai Electrical Cable Research Institute-organised supporting technical conference, which attracted approximately 150 attendees.

As the IWMA approaches the end of its 40th anniversary year the milestone was marked by its penultimate celebratory event during wire China 2010.

Over 50 guests enjoyed a drinks reception on the IWMA booth on 23rd September, with honoured guests from leading wire associations, Sinosteel Zhengzhou Research Institute of Steel Wire Products Co Ltd (IWMA's ferrous sector representatives in China), Shanghai Electric Cable Research Institute, Messe Düsseldorf China and Messe Düsseldorf GmbH, as well as many representatives from IWMA member organisations.

IWMA chairman Stephen Wood gave a short speech of welcome to the assembled guests, ending with a toast: "VIP guests, members, ladies and gentlemen, welcome to the IWMA's 40th anniversary reception at wire China 2010. Some of our guests here today have already joined us at one or more celebratory events around the world as the association marks this important milestone in its history. Our aim was to enable as many members as possible around the globe to celebrate with us this year.

"I am very pleased to see a good number of members represented here today. Also I would like to thank several presidents and executives from important industry organisations for attending...in no small way the success of the IWMA over the last 40 years is due to the cooperation and friendships established with all these organisations and we truly appreciate your support.

"I take this opportunity to wish everyone a very successful and profitable wire china 2010 and ask you to raise your glasses in a toast to: 'the IWMA, its members and many friends.' Thank you."

Overall, the 2010 wire China can be called a success, and it is to be hoped that more foreign exhibitors and local visitors can be attracted for the 2012 edition, which will take place 25th-28th September, just before that year's Moon Day holiday.

Upgrade for Aim's AFC series

AIM's highly robust and efficient AFC series, AccuForm Compact was recently updated and upgraded.

A new wire cutter designed for smoother cuts is also available to all existing customers. With up to 10mm wire capacities, the AFC machines set new benchmarks for cost effective, automatic wire bending operations.

With a very attractive price, complete with industrial PC running Windows® XP Pro and SmartEditor® – AIM's unique and world-renowned programming package – plus a host of features previously available only on much more expensive machines, AIM resets the bar for wire production automation.

AccuForm Compact comes complete with a two-plane straightener, maintenance-free servo quad-roller feeder, unlimited arm rotation and precision bender axes.

▲ AIM's AFC-6 AccuForm Compact

SmartEditor® features the world's most flexible programming language with intuitive commands and simple to use, conversational step-by-step programs.
All the user needs are length and bend angle to make parts, yet the language will allow programming sophisticated shapes.

The system has near-unlimited program storage and the ability to compensate each program with simple commands.

AIM Inc – USA
Fax: +1 630 458 0730
Email: info@aimmachines.com
Website: www.aimmachines.com
Interwire stand: 1014

European experience in China

With six rigid stranding lines sold to four renowned cable makers throughout the world, Daloo, a wire and cable machinery manufacturer based in China, forges itself an international reputation for the delivery of low cost equipment based on European experience.

As with the rest of the range, rigid stranders gather basic functions, simple design and steady quality. Made for stranding up to 91 wires, as well as steel wire armouring and copper wire screening, they exist in main shaft (KZ630) or independent motors (KM630) versions. Side loading carriage or tilting loader are also available.


▲ A Daloo stranding line for MV, HV and EHV power cables

Successfully launched by the Gauder Group in 2008, Daloo offers best quality-price ratio machinery for extrusion lines, screening/armouring lines, rigid stranding lines such as rigid cage stranders, taping lines, rewinding lines, payoffs and take-ups, as well as pulling caterpillars. The range is regularly extended to other cable machines.

Daloo – China
Fax: +86 519 8548 3557
Email: sales@daloo-machines.com
Website: www.daloo-machines.com
Interwire stand: 1502

IWMA Corpor

International Wire and

The largest corporate membership trade a

Exhibitors at Interwire 2011 are shown in blue. (C

ACIMAF	Italy	
AEI Compounds Ltd	UK	
Aim Inc	USA	1014
Ajex & Turner Wire Dies Co	India	717
Alecosa-Aleados del Cobre SA	Spain	
Alloy Wire International	UK	
AlphaGary Corporation	USA	
Altec Srl	Italy	
Anbao (Qinhuangdao) Wire & Mesh Co., Ltd.	China	571
Andrew Isaacs Machinery International	UK	
Anhui Hengzheng Technology Co Ltd	China	
Arab Co for Cable Polymers Ltd	Saudi Arabia	
Asia Sim Co (Wire Asia)	Iran	
ASMAG UK Ltd	UK	1173
Associated Engineers & Industrials Ltd	India	
AstroPlast, Kunststofftechnik GmbH & Co KG	Germany	
ATL Technology Ltd	China	
Atom Kablo Sanayi ve Ticaret AS	Turkey	
ATS S.A.	Poland	
Autoreel Limited	UK	
B & B Compounds Srl	Italy	
Balloffet SA	France	1949
Bar Products & Services Ltd	UK	
Barnfather Wire (Midlands) Ltd	UK	
Batoyle Freedom Group	UK	
Carl Bechem GmbH	Germany	
Bedmutha Industries Ltd	India	
Beijing Master Intl Trading Co Ltd	China	
Bekaert Limited	UK	351
Bennett Mahler Ltd	UK	
Beta LaserMike Inc	UK	732
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Bogimac nv-sa	Belgium	666
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E Braude (London) Ltd	UK	
Bridon International Ltd	UK	
British Diamond Wire Die Co Ltd	UK	
Buehler Wuerz Kaltwalztechnik GmbH	Germany	740
Building Research Establishment	UK	
BWE Limited	UK	
Cable Tapes UK Ltd	UK	
Caledonian Cables & Wire	UK	
Caledonian Cables Limited	Hong Kong	
Can-Eng Furnaces Ltd	Canada	
Ceeco Bartell Products	Canada	1908
CeramTec GmbH	Germany	
CETC China Electronic Technology Group Corporation	China	
Chaplin Bros (Birmingham) Ltd	UK	
Chemetall Ltd	UK	1906
China Southern (Group) HK Ltd	Hong Kong	
G Church - Consultant	UK	
Cimteq Ltd	UK	2015
CJ Wiretech Limited	UK	
Clynder Cables Limited	UK	
Carlo Colombo SpA	Italy	
Cometo di Tocchetti E & C snc	Italy	
Commission Brokers Inc	USA	705
CommScope BiMetals	USA	
Condat Ltd	UK	1550
Consultex Sp. z.o.o.	Poland	
Control and Power Engineering Ltd	UK	
Costa Machinery GmbH	Germany	
Crownhill Consultancy Services	UK	
CRU Group	UK	
CRU International Ltd	UK	
Daloo Machinery	China	1502
Danross Engineering	UK	
Data M Sheet Metal Solutions GmbH	Germany	
Dodhia Techno Engineering Pvt Ltd	India	
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Dosani & Co	India	
Drahtwerk Waidhaus GmbH	Germany	
Draka Wire (Part of Draka UK Ltd)	UK	
DSE Test Solutions A/S	Denmark	
EDER Engineering GmbH	Austria	
Er-Bakir Elektrolitik Bakir Mamulleri AS	Turkey	
ESAB Group (UK) Ltd	UK	
ESM Elektro Sistem Muhendisligi AS	Turkey	
Esteves-DWD	Spain	640
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F D Sims Limited	UK	
FIB Belgium s.a.	Belgium	1850
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Fort Wayne Wire Die Inc	USA	1532
Fox Wire Ltd	UK	
Foxton Dies Ltd	UK	
Frontier Composites & Castings	Canada	1503
T Fukase & Company Ltd	Japan	
G & A Engineering Ltd	UK	
G S A (Import Export) Limited	UK	
Gauder & Co SA	Belgium	858
GCR Eurodraw SpA	Italy	1350
Geca-Tapes bv	France	
GER SA	Belgium	
Goodwin Machinery Ltd	UK	
GP CFF Econom-Servis	Ukraine	
Gupta Power Infrastructure Ltd	India	
H & R ChemPharm (UK) Ltd	UK	
H Folke Sandelin AB	Sweden	740
Haarlaender GmbH	Germany	
Häfner & Krullmann GmbH	Germany	771
Hangzhou Dunli Stainless Steel Microwire Co Ltd	China	
Hanil Machinery	Korea	
Harrison Spinks Beds Ltd	UK	
Hasemann Maschinen	Germany	
Havel Wire Equipment (Pty) Ltd	South Africa	
HB Cables & Components Ltd	UK	
Hefei Smarter Import & Export Co Ltd	China	
Hempel Wire Ltd	UK	
Henan Zhongwei Steelwire Products Co Ltd	China	
Hetran Engineering GmbH	Germany	
August Hildebrandt GmbH - Kabeltrommeln	Germany	
Hill International (Non Ferrous) Ltd	UK	
Hind Engineering & Wire Products	India	
Hod Metal Products & Manufacturing Co Ltd	Israel	
Holton Crest Ltd	UK	
Huestis Industrial	USA	332
Huntstar Trading Ltd	UK	
IBA Industrial	Belgium	652
IMI Scott Ltd	UK	
Inductotherm HWT (Radyne)	UK	1912
Innovites B.V.	Netherlands	2013
Institute of Spring Technology	UK	
Interlink Import-Export Ltd	UK	
Intras Limited	UK	1806
Itaya Europe limited	UK	
Ito-Sin Deyang Wire & Cable Equip Co Ltd	China	849
Jersey Strand & Cable Inc	USA	
JG Tec Ltd	UK	
Jiangsu Dawn International Trading Co Ltd	China	
Jiangsu Gaohe Mechanical & Electro Equip. Co Ltd	China	
Jiangyin Huafang Electromechanical Technology Co Ltd	China	
Jyd Tech & Industry Co Ltd	China	
Kieselstein GmbH	Germany	1358
Kiran Cables Pvt Ltd	India	
Kiveton Park Steel Ltd	UK	
Koner SpA	Italy	
Kuwait Petroleum International Lubricants	UK	

rate Members

Machinery Association

association in the wire and cable industry.

Correct at time of going to press, February 2011).

Lamnea Bruk AB	Sweden	1860
Leevens Techpoint Company	Taiwan	
Leigh Cables Ltd	UK	
Maschinenf. Johann Leimbach GmbH	Germany	
Leoni Temco Ltd	UK	340
Leyer & Kiwus GmbH	Germany	
Locton Ltd	UK	
Longcombe Labels	UK	
Machinery International Corporation	USA	
Madem SA Ind E Com de Madeiras	Brazil	
Mahajan Engineering Works	India	
Maillefer SA	Switzerland	906
Manentimacchine Srl	Italy	
Marldon Group Limited	UK	
Mathiasen Machinery Inc	USA	1001
Medek & Schörner GmbH	Austria	
Meisenbach GmbH	Germany	
Meltech Engineering Ltd	UK	
Meltech-Confex Ltd	UK	
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Mikrotek Machines Ltd	India	
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Neptco Incorporated	USA	606
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Niehoff GmbH & Co KG	Germany	740
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NOTA- ZAKLAD MECHANIKI PRECYZYJNEJ	Poland	
OJSC Donbasscabel	Ukraine	
OMA (UK) Ltd	UK	1656
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Ormiston Wire Ltd	UK	
Outokumpu Stainless Ltd, ASR Rod Mill	UK	
Ozel Elektrolitik Bakir Mam. San. ve Dis	Turkey	
P F Consulting	UK	
Pakistan Cables Ltd	Pakistan	
Pan-China Fastening Systems Co Ltd	China	
Pave Automation Design & Development	UK	1612
Pentre	UK	1940
Pneuform Machines Ltd	UK	
Premier Cables (Pty) Ltd Pakistan		
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PS Costruzioni Meccaniche Srl	Italy	
QED Wire Lines Inc	Canada	752
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Ratnamani Infra Power Pvt Ltd	India	
Rautomead Limited	UK	1650
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Shanghai Nanyang Equipment Co., Ltd	China	
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Shanghai Yessjet Precise Machinery Co Ltd	China	
Shanghai Yuanjun Precision Tungsten Carbide Manufactory	China	
Sharp Tools	India	
SICTRA Srl	Italy	1739
Siddall & Hilton Products Ltd	UK	
Siebe Engineering GmbH & Co KG	Germany	
Sikora AG	Germany	512
Simplex Rapid Srl	Italy	
SIMS Copper Sdn Bhd	Malaysia	
Sinosteel Zhengzhou Research Institute	China	
Sjogren Industries Inc.	USA	1057
SKET Verseilmaschinenbau GmbH	Germany	712
Sleeve It Ltd	UK	
SMS Meer GmbH	Germany	
Sneham International	India	
Solvay Padanaplast SpA	Italy	
Spring Tooling Ltd	UK	
Stanaway Wire Consulting	UK	
Steel-Wire Europe Ltd (Capegate)	UK	
Stonepark Consultancy Ltd	UK	
Super Link Holding Ltd	China	
Supermac Industries India Ltd	India	
T M Associates	UK	
Techna International Ltd	UK	
Techno Commerce Ltd	UK	
Technokabel SA	Poland	
Tecnocable SA	Spain	
Tekab Co Ltd	UAE	
The Multiple Winding Co Ltd	UK	
The Worshipful Co of Tin Plate Workers Alias Wire Workers	UK	
Thompson & Hudson Wire Machinery	UK	
Tianjin Hengjiu Tongda Machinery Co Ltd	China	
Tratos Ltd	UK	
TRAXIT International GmbH	Germany	758
Triangle Cables	Australia	
Tri-Wire Ltd	UK	
Troester GmbH & Co KG	Germany	1750
Tulip 3p Media Private Ltd	India	
U Gear Automatic Machinery Ltd	Taiwan	
Joachim Uhing KG GmbH & Co	Germany	
UK Dies Group Ltd	UK	
UKP Ltd	UK	
Upcast OY	Finland	958
Warbrick International Ltd	UK	
WCISA c/o Wire Lab Company	USA	1562
Weber & Scher Mfg Co Ltd	USA	1050
Webster & Horsfall Limited	UK	
Well Gain Cable Systems (Shanghai) Ltd	China	
White & Street International Ltd	UK	
Whitelegg Machines Ltd	UK	
Wiedenbach A H GmbH	UK	
Wintwire Ltd	UK	
Wire & Cable Technology International	USA	1562
Wire & Plastic Machinery Corp	USA	1731
Wire & Steel Trading N.V.	Belgium	
Wire Association International Inc	USA	Floor
Wire Koerner GmbH	Germany	
Wire Lab Company	USA	706
Wire Machinery Consultancy Ltd	UK	
Wuxi Jiexiang Machinery Factory	China	
Wyrepak Industries	USA	664
XL Technologies UK Ltd	UK	
Zarhak Steels Ltd	India	
Zenith Enterprises	India	
Zephyr - One Ltd	UK	
Zhangjiagang Donghang Machinery Co Ltd	China	
Zumbach Electronic AG	Switzerland	1540
Zyklomat Erich Fetzer GmbH & Co KG	Germany	

Showcasing portable cold welders at Interwire 2011

British company PWM (Pressure Welding Machines) will showcase two of its best-selling portable cold welders at Interwire 2011, as well as the energy efficient EP500 rod welder, and a selection of manual machines. The PWM range will be featured at the show by Amaral Automation Associates (booth 1840), exclusive distributor of PWM cold welding equipment, spares and dies in the US and Canada.

The trolley-mounted HP100 air/hydraulic cold welder can be wheeled quickly to the work area to save down-time. Energy efficient and easy to operate, the HP100 provides strong, reliable welds on copper/aluminium wire from 1 to 5mm (0.039" to 0.197") diameter. Powered by an air/hydraulic intensifier, the HP100 can be used in normal or automatic mode.

A longer hose can be fitted between the welding head and the power source in order to make the welding head portable. This enables the operator to weld in areas where space is very limited, at a strander lay plate, for example, or inside a spooler casing.

Equally versatile, the M101 manual cold welder is a strong, low maintenance model that can be bench or trolley-mounted. The heavy-duty M101 will weld wire sizes from 1 to 3.6mm (0.04" to 0.141") copper and 1 to 5mm (0.04" to 0.197") EC aluminium. In addition, the M101 is widely used for welding aluminum strip, which is used for armouring applications.

PWM will also exhibit its powerful electro/pneumatic EP500 rod welder, which provides manufacturers with a cost effective way to weld large rod sections. This energy efficient machine, which has a capacity of 5 to 12.5mm (0.197" to 0.492" copper and 15mm (0.590") aluminium, is exceptionally simple to operate and maintain, reducing downtime and the need for operator training.

Three handheld manual machines, M10, M25, and M30, ideal for welding fine wire quickly in confined spaces, and two robust, durable bench-mounted models, the BM10 and BM30, will also be on show.

PWM's comprehensive range includes manual and powered cold welders, with capacities up to 25mm (0.984") copper and 30mm (1.181") aluminium. All PWM dies are hand made in the UK in PWM's own workshops, to standard or custom designs, using top quality tool steel.

Amaral Automation Associates is also the Northeast USA representative for Bardac, B & H Tool, W Gillies Technologies, Maag Pump Systems, Powertec, RS Powdertech, Rosendahl/ Nextrom, Teknikor Automation & Controls, TSM Control Systems, Tulsa Power, Yield Management, and Zumbach. AAA is also the North American Distributor for Subec AB.

▲ *The HP100 from PWM*

PWM Ltd – UK
Fax: +44 233 820591
Email: pwm@btinternet.com
Website: www.coldpressurewelding.com
Interwire stand: 1840

Nota's diamond experience

Nota Precision Engineering company is offering clients a range of new diamond tools.

The Polish company's core activity is manufacturing tools with super hard materials, and it is now offering diamond and CBN wheels, cutters and other tools with PCD and PCBN, diamond grain and diamond micropowders, diamond pastes, titanium carbide, boron nitride grains and calibres enamel, inserts for cutting PCD, PDC, PCBN, and diamond dressers.

The company has a wealth of experience in the production of diamond dies for drawing wire from carbon steel, stainless steel, copper, bronze, brass, aluminium, nickel and silver, with different geometries.

Nota Precision Engineering Co – Poland
Fax: +48 81 441 7396
Email: nota@nota.pl
Website: www.nota.pl

Innovative improvements

PS Costruzioni's team of engineers are always on the search for innovative improvements.

From this they have increased both the linear speed and the need for maintenance on their automatic coiling line, model PS470/16. The machine is now able to produce 20,000m per hour, equating to 3.35 coils per minute of 100m long 5x2.5 cable – that is an increase of 15 per cent prior to modification.

Maintenance has also been reduced with the main motor having been installed in the axis with the winding plates. This means there is no mechanic transmission.

Changes have also been made to the double head automatic spooling line, Mod PS200/6-B, giving an increase of 25 per cent on the linear speed.

The machine can now spool four spools per minute at 152m long for 12 AWG – giving 36,500m per hour.

PS Costruzioni – Italy
Fax: +39 689 8769
Email: ps@pscostruzioni.com
Website: www.pscostruzioni.com

▲ *PS Costruzioni's improved automatic coiling line*

Best practice from Rautomead

Single-minded focus on customer service was taken to a new level when Rautomead chairman Sir Michael Nairn flew to meet senior management of Bulgaria's largest cable manufacturer, Elkabel.

Rather than call or send an email, he paid a personal visit to the site of Elkabel, the first Bulgarian company to specialise in the production of cables and conductors.

Similarly, Rautomead has firmly established itself as one of the leaders in the design and manufacture of continuous casting equipment for the wire and cable, foundry and precious metal industries.

Founded in 1947 as a collection of small workshops for electro-technical production, Elkabel is now the biggest cable manufacturer in Bulgaria and a respected international business partner with exports to the UK, Germany, France, Belgium, Hungary, Italy, Cyprus, Egypt, Russia, the Ukraine, Uruguay and USA.

The Elkabel site, which occupies an area of 190,000m^2, is conveniently located near Port Bourgas, Bourgas Airport and even has its own railway line with a connection through to the capital, Sofia.

Rautomead's long-established and finely-honed philosophy of attention to detail and customer service ensured a faultless transition for Elkabel all the way through from the initial quotation to machine handover and operator training.

A fully functional 'contract kick off' meeting at Rautomead HQ on completion of the contract was immediately followed by the appointment of an internal project manager with full powers to manage the project from beginning to end.

Following the installation, commissioning and operative training, the Rautomead service continued six weeks later when a customer service engineer visited the plant to review the status and answer queries, and even now further repeat visits are planned on a regular basis.

Rautomead Limited – UK
Fax: + 44 1382 622941
Email: sales@rautomead.com
Website: www.rautomead.com
Interwire stand: 1650

▼ *Lyubomir Novakov, Elkabel's technical director with Scott Tocher, Rautomead's technical service manager in front of Elkabel's new model RS 3000/6 continuous casting machine.*

▼ *The latest CentreScan 2010 from Beta LaserMike*

Measurement solution at Interwire from Beta LaserMike

Beta LaserMike will exhibit its latest CenterScan 2010 eccentricity measurement system for wire and cable at the Interwire 2011 Trade Exposition, 3rd-5th May at booth 732 at the Georgia World Congress Center in Atlanta, Georgia.

Beta LaserMike's CenterScan 2010 measurement system uses highly sensitive magnetic and optical technology to precisely determine the location of the conductor and insulated wire.

This information is instantly processed to provide eccentricity, diameter, and ovality measurements, as well as detect product flaws. CenterScan 2010 can reliably measure diameters from 0.1 to 10mm (0.004" to 0.4") and determine eccentricity and diameter with ±0.0005mm (±0.00002") accuracy.

CenterScan 2010 also offers wire and cable manufacturers a number of key advantages, such as:

- Compact design for a wider range of gauge installation on the production line
- Robust electronics with superior noise immunity for closer placement to line devices
- Factory calibrated for fast, easy setup and simple recompensation
- Accurate product positioning with minimal alignment

Beta LaserMike will also be exhibiting a range of other high-precision, process measurement and control instrumentation for the wire and cable industry to help manufacturers improve product quality and lower production costs.

Beta Laser Mike – USA
Fax: +1 937 233 7284
Email: sales@betalasermike.com
Website: www.betalasermike.com
Interwire stand: 732

Whitelegg busy in the Middle East

Whitelegg Machines Ltd has been steadily increasing its business throughout the Middle East, primarily with equipment for the repair of electric motors. You may ask – what have electric motors to do with the wire industry? Well, they are wound with copper wire and strip!

The electric motor is vital for the operation of all industries and in particular in this region, for the production of oil and the generation of electricity.

New motors can be very expensive and require long delivery times, so the repair industry, which often works 24 hours a day, can offer a rapid response service to keep industry running.

Whitelegg Machines has just completed a €500,000 contract for the supply and commissioning of equipment in a new plant to support the new port of Nakilat in Qatar.

This involved the company's personnel working in temperatures of over 40°C at a site remote from shops and hotels.

Another substantial order for a cement factory in Syria is just being completed.

Whitelegg has been exhibiting at the Middle East Electrical Exhibition in Dubai, which is the largest and most important showcase for electrical products in the Middle East and the Electrix Exhibition in Cairo, for 20 years.

The company is currently building some coil winding machines for the Egyptian Navy.

Egypt is more industrialised than most Middle Eastern countries, hence Whitelegg has supplied several CNC wire bending and welding machines for the production of components from steel wire, which resulted from contacts made at the wire exhibition in Düsseldorf.

Whitelegg Machnes Ltd – UK
Fax: +44 1293 538910
Email: sales@whiteleggs.com
Website: www.whitelegg.com

Catalogue it!

RG Attachments Ltd, the Leicester, UK-based manufacturer of tape formers, now has a new catalogue showing its full range of tape formers. This catalogue is freely available upon request.

Since Düsseldorf 2010, the company now has a number of dealers around the world supplying its tape formers. A list of these is available on the RG Attachments' website. The RG tape former is used by cable manufacturers to longitudinally form a variety of insulating material around cable cores before entering the final jacketing stage.

RG Attachments Ltd – UK
Fax: +44 116 261 2403
Email: info@tapeformers.com
Website: www.tapeformers.com
Interwire stand: 2032

Busy time ahead for Gauder group companies

Gauder Group companies Pourtier and Setic will be exhibiting at wire Russia and Interwire in May.

Pourtier, part of the Gauder Group and based in Chelles, France, develops comprehensive solutions to produce high quality Milliken conductor for high voltage and extra-high voltage power cable (AC) and conductors for DC cables (round compacted and trapezoidal wires).

Setic, based in Roanne, France, offers complete solutions to produce high quality LAN cables with enhanced performances in one step or two steps according to product mix as well as double twist bunchers / stranders for PC and automotive industries.

Gauder, located in Liège, Belgium, has in stock more than 1,000 machines stored on 25,000m² premises in Belgium, ready for immediate delivery.

Gauder Group Inc is ready to welcome customers old and new at Interwire in Atlanta to booth number 858. At wire Russia 2011 at the end of May, both Pourtier and Setic will exhibit on a joint stand with Maillefer as they have done previously, and for the first time Gauder will have a separate stand promoting its comprehensive range of second-hand equipment.

Gauder Group Inc – USA
Fax: +1 336 856 8117
Email: ggi@gaudergroup.com
Website: www.gaudergroup.com
Interwire stand: 858

NEXT ISSUE DEADLINE: 30TH MAY 2011

Important reminder for all members: please send your editorials for free publication in the second WCN newsletter of 2011 by this date.

Editorials for publication on the IWMA website in the "Latest News from Members" section can be accepted at any time during the year.

This major free benefit of IWMA membership ensures that your editorials reach thousands of industry professionals worldwide in both hard copy and electronic versions.

WCN is also widely distributed at major wire and cable industry exhibitions and technical events attended by the IWMA.

The important upcoming events that follow publication of edition two in the summer are wire Southeast Asia 2011 in Bangkok in September, the new WiCAB exhibition in Brazil in October and the IWMA's major technical conference CabWire 2011 in Düsseldorf, Germany, in November.

WCN newsletter and the IWMA website (which in 2010 attracted 174,244 unique visits as monitored by Matrixstats) are major free media for members.

- **Communicate important messages worldwide**
- **Announce major new developments**
- **Celebrate winning of new contracts/orders**
- **Create interest worldwide**
- **Stay one step ahead of the non-member competition**

Please send your editorials (not advertisements) with supporting photos to: info@iwma.org

If marketing and public relations is not your area of responsibility please make sure that the relevant department/person is made aware of this great free benefit.

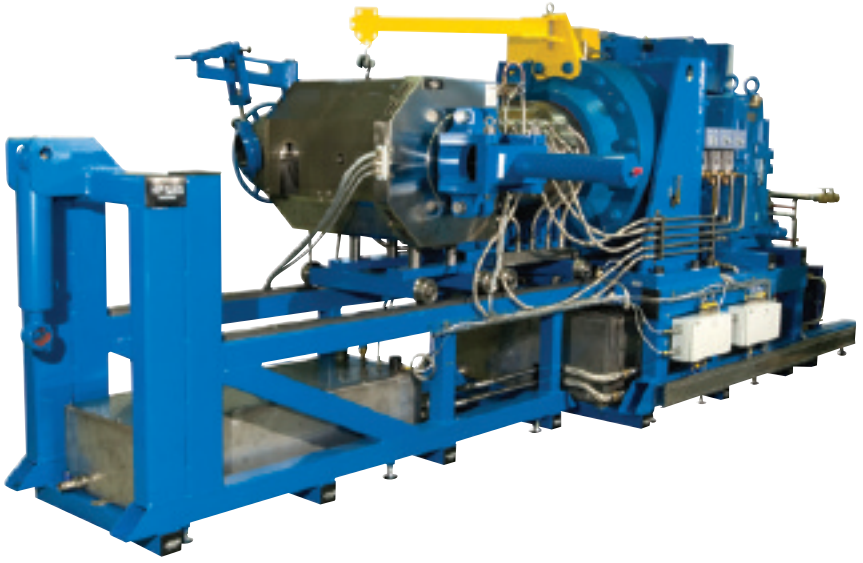
Heading for both Russia and Interwire

H Folke Sandelin AB (HFSAB) from Motala, Sweden, will be a co-exhibitor with Niehoff Endex North America Inc at Interwire 3rd-5th May, and with Niehoff of Russia at wire Russia 23rd-26th May.

H Folke Sandelin AB (HFSAB) has had a leading role worldwide in the following areas for over 50 years, supplying:

Continuous lead extrusion equipment and knowledge for trouble free lead sheathing of cables, providing a perfect moisture barrier.

Today the latest design lead extruder from HFSAB is horizontal, floor standing, easy to install and maintain, fully automatic, extremely reliable with its state-of-the-art control system, enabling continuous operation for weeks with little or no variation in temperatures and wall thickness/concentricity.



▲ *A leading role in the wire and cable industry for over 50 years*

The lead wall thickness can be kept to a minimum with corresponding savings in lead. A range of die blocks is available to cover an extensive diameter range of 6mm-225mm (over lead), and a range of melting pots is available for 10, 18 and 35 tonne capacities.

Additional equipment includes the cable repair and recovery system, CRRS, which has the possibility of removing individual layers, such as, the outer jacket, lead sheath or triple layer XLPE insulation, without causing any damage to the subsequent layer below. This enables the outer jacket, lead sheath or triple layer XLPE to be re-applied and the cable repaired.

Even if the cable is just going to be scrapped, the metal price differences for insulated or un-insulated cables are very large and the equipment would have a very short pay-back period, if the metals are scrapped in their "bright" form.

H. Folke Sandelin AB (HFSAB) – Sweden
Fax: +46 141 203639
Email: hfsab@hfsab.om
Website: www.hfsab.com
Interwire stand: 740

Stranders make a claim to top spot!

Sket central stranders have been making their claim to the top spot in the cable industry for over 30 years.

When Sket introduced the Central Strander, a totally new type of rigid strander, to the international cable industry in the 1970s, it was greeted by industry experts with a great deal of scepticism, as were most innovations at that time.

In spite of the significance of stranding speeds which made possible extremely high increases in productivity, this new technology had to earn its acceptance in a fiercely competitive market place step by step and over a long period of time.

Sket central stranders are now an essential part of efficient cable production. More than 100 stranders of this type, supplied to customers around the world and in a wide range of machine arrangements and sizes, demonstrate the durability and effectiveness of the principle and calculable competitive advantages for users.

The stranders prove themselves time and time again when compared with other like systems. And the Sket MKZ 700 is at the very top of the tree in terms of this unique technology when it comes to the production of stranded conductors.

On offer are practical stranding speeds of up to 500rpm and linear throughput speeds of up to 180m/min and this, together with consistency in conductor quality guaranteed by controlled tension in the product, ensures not only the high output of the system but also significant savings in material costs.

In response to technological developments in the cable industry Sket has recently introduced a range of machines suitable for larger stranding product volumes whilst maintaining all of the competitive advantages which the Central Strander otherwise offers.

With the MKZ 250, available as a single or twin machine, Sket has now developed a machine version which is particularly suited to the needs of aluminium wire stranding and overhead conductor production. A stranding product volume of 245dm³, which is three times the volume of a 630mm DIN bobbin, special wire guies and a hybrid bobbin braking systems set the standards for this new version.

SKET Verseilmaschinenbau GmbH – Germany
Fax: +49 391 4055 815
Email: info@sketvmb.de
Website: www.sketvmb.de
Interwire stand: 712

Reducing production costs while improving quality – from multiwire to high-quality strands

By Werner Bachmann, Maschinenfabrik Niehoff GmbH & Co KG, Germany

Abstract

In addition to energy savings during the manufacturing process from rod to cable, the wire maker should be aware of the impact and importance of product quality to securing and increasing his market position.

This article focuses on developments in the multiwire drawing and bunching processes to improve product quality while taking into consideration production cost savings. Quality stranded product spools are critical for a successful extrusion process as they considerably reduce scrap rates.

Introduction

The successful advances of multiwire technology seem to be never ending; this technology is now an integral part of the wire and cable industry.

Compared to single wire production the multiwire concept offers significant advantages. Some of these advantages are lower production costs and improved quality of wires, strands and, finally, of cables.

The change from single wire production to multiwire proved to be a quantum leap for many enterprises with clear advantages in production.

In a highly competitive market, with decreasing prices and production volume, only manufacturers who have carried out this change in time can survive.

But this also means that all wire manufacturers again compete in the market with the same or similar means and it is getting even more difficult to procure further competitive technical advantages.

State of the art is:

1. Actual Situation

- Multiwire Drawing
Machines up to 48 wires are available

Speed up to 40m/s. Wire range between 0.05 and 1.35mm

- Bunching
High efficiency speeds up to 6,500 T/min (630mm buncher)

- Extrusion
High speed up to 1,500m/min

- Drawing machines with speeds of up to 40m/s with up to 48 wires

- 630 bunching machines with up to 6,500 twists per minute

- And extrusion lines with line speeds of up to 1,500 m/min

1. Targets

- Reducing production costs
- Increasing production reliability
- Increasing product quality
- Reducing scrap rate

Being better than others

For wire manufacturers, it is becoming more important than ever to reduce production costs and mainly to improve production reliability and quality in several processes of their production.

In short: “to be a little better than the competitors in all respects”.

In order to meet the high requirements of its customers, Niehoff employs a team of 73 experienced engineers and technicians in the engineering and development departments. These skilled people are responsible for integrating new technologies and ideas in existing product series and for pushing new developments.

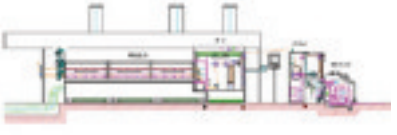
As physical limits are almost reached in the area of production performance, ie the number of wires and speed, it is getting more and more difficult to make any improvements here.

Some technical details are worth a closer look:

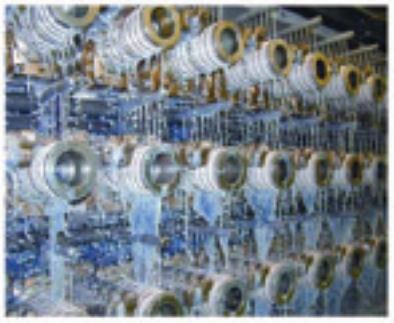
Multiwire Drawing Lines MMH Lines

1. Actual Situation

3.1 Multiwire Drawing Line



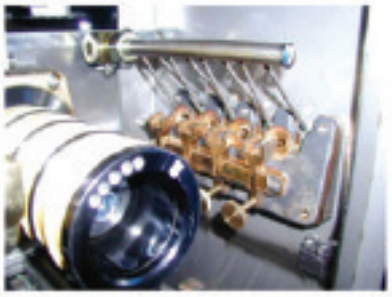
Lubrication of drawing materials



- Control of flow rate
- Control of temperature
- Spraying of capstans and dies
- Cleaning of lubricant
- Separate lubricant supply for final die holders

As mentioned before, drawing line speeds are increasing and thus we must turn our attention to wire lubrication in order to provide sufficient amount of emulsion at an adequate temperature and pressure at each critical point of the line.

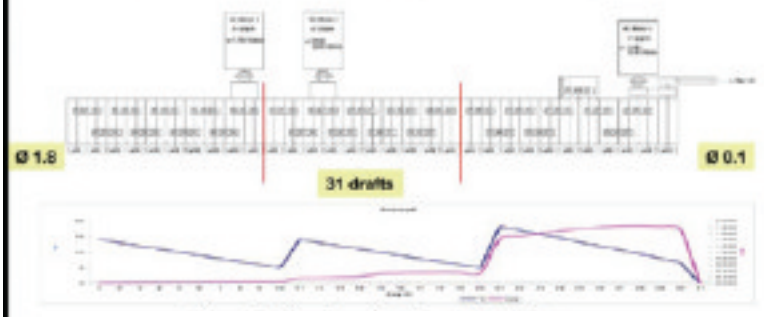
Drawing lubricant supply
Fine die holder



The importance of final die spraying is often underestimated.

At the final die the wire reaches its minimum diameter and the wire speed is the highest within the line. Due to the fact that the final die is located last in the drawing lubricant supply line, neither the pressure nor the quantity of the emulsion are adequate for proper lubrication and rinsing of the final die. For a sufficient grade of lubrication here, a separate line from the lubricant supply system with adjustable spraying is absolutely crucial.

Drive concept
Slip reduction for long wire drawing machines



Slip reduction by using 3-motor technique
- Less abrasion of tin and nickel
- Less wear of drawing capstans
- Reduced noise
- Smaller motor sizes, AC-technique becomes more reasonable

The increasing demand for reduced cross section reduction on the fine wire drawing lines requires an increase in the number of drafts. A high number of drafts in gearbox machines results in high cumulative slip towards the wire inlet side of the line.

High slip has a negative effect on the lifetime of the drawing capstans, on the quality of plated wires, on the noise level of the lines and on the frequency of wire breaks. Drawing machines with three drives reduce the slip at the passages to about 5% and the maximum slip at the wire inlet of standard lines from around 45% to 15%.

Power splitting from two to three motors results in the reduced performance of the single motors which makes the application of AC drives cheaper – another advantage of this concept. The advantage arising from the application of AC drive technology is self-explanatory.

Annealing

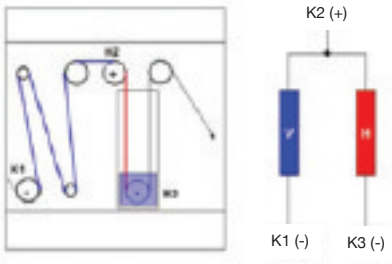
3.2 Annealing

Triple A
Advanced
Accessible
Adjustable
and
Attractive
in price

Up-to-date multiwire annealers have to treat multiple wires individually but equally throughout the annealing path to ensure equal electrical and physical properties of the wires for the downstream processes. They must be simply made 'Triple A' – Advanced, Accessible and Adjustable and, of course, attractive in price.

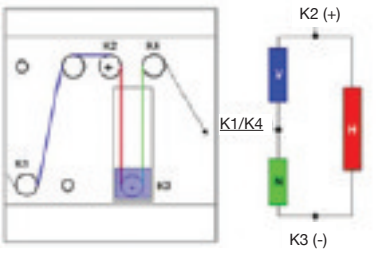
The market offers machines with various annealing principles. 2-zone annealers with preheating and main annealing zone or 3-zone annealers

2-Zone annealing



- **Less energy consumption**
- **Higher efficiency**
- **Diameter range > 0.25mm**

3-Zone annealing



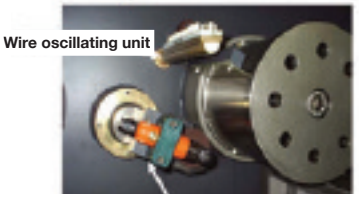
- **Higher energy consumption**
- **Better drying due to reheating zone**
- **Diameter range < 0.25mm**

with preheating, main annealing zone and additional post heating (re-heating) zone. 2-zone annealers consume less energy than 3-zone annealers.

This feature is surely desirable and is an advantage compared to 3-zone annealers. With small diameters of up to 0.25mm, however, this energy consumption turns out to have a negative effect on the wire quality.

The reason is that copper wires are not only able to absorb heat quickly, but they are also able to dissipate thermal energy again quickly.

Longer lifetime for contact



- **Longer lifetime of contact tubes**
- **Less wire breaks**
- **Cleaning during operation**

This feature depends on the wire diameter. Thick wires retain a part of the absorbed thermal energy in the wire core and dissipate this heat outside the annealer, ie along the wire path to the spooler or on the spool. Thus the wire is finally dried.

Thinner wires do not have this capability and cool completely in the annealer. As a consequence, the wire often leaves the line with a temperature lower than that of its environment. Additionally, though apparently dry after the annealer, the wire starts to sweat or to show moisture on the way to the spooler or on the spool.

As a consequence of such bedewing (wet wire), some of the wire bundles are coloured, or wires stick to each other, thus causing problems when the wire bundles are unwound and separated. Increased wire break frequency is often the result of poor wire drying.

The principle of a 3-zone-annealer includes post heating, ie additional energy is put in the wire after the wire has cooled. This prevents thin wires from being too cold when leaving the annealer and thus a bedewing of the wires (wet wire).

The market does not offer any wire dryer which could be a reliable substitute for the 3-zone annealing technique of thin wires.

This fact makes the continuous annealer with a switchable 2-zone or 3-zone annealing principle the ideal solution for saving energy whenever possible and for ensuring wire quality whenever necessary.

This principle is used as standard in annealers with respective wire range and was patented by Niehoff a few years ago.

Production efficiency is further improved by means of wire oscillation before the contact tubes and by a contact tube cleaning device.

Thus the lifetime of the contact tubes is extended considerably, especially in the production of tinned wires, and production costs are reduced.

Let us take a closer look also at wire drying after the annealing process. Compressed air directed to the wire does not dry the wire sufficiently in the majority of cases, and leads to more wire damage and copper abrasion.

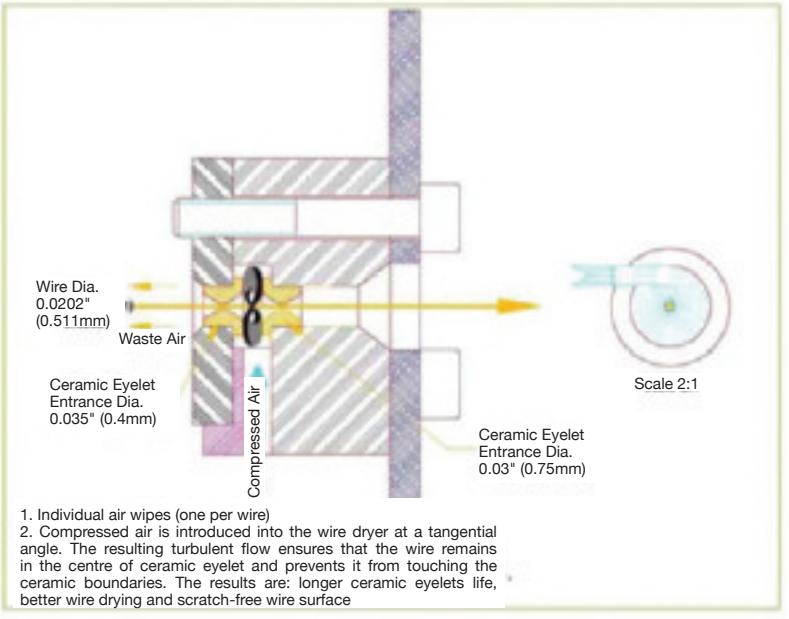
Niehoff has developed an individually adjustable wire dryer with air swirling around the wire and centring it. Thus wire treatment is softer and moisture removal is improved.

It has been proven that inappropriate wire dryers are often the reason for wire breaks in smaller diameter ranges.

Multiwire annealer Separate drive

- **Flexible speed adjustment**
- **Longer lifetime of contact ring**
- **Better wire quality**

Wire drying



1. Individual air wipes (one per wire)
2. Compressed air is introduced into the wire dryer at a tangential angle. The resulting turbulent flow ensures that the wire remains in the centre of ceramic eyelet and prevents it from touching the ceramic boundaries. The results are: longer ceramic eyelets life, better wire drying and scratch-free wire surface

Annealer with separate capstan drive

The wider the wire range in the annealer, the worse is the effect of an inflexible drive of the contact pulleys via belts. One common belt drive offers only one fixed rpm ratio which is the same for the smallest and the largest wire diameter. As the relative

Wire compensating device (dancer)

swivelling traverse pulley, wires do not cross

- **Load cell for indication of adjusted wire pulling force**
- **Automatic adjustment of wire pulling force, depending on finish wire diameter**

speed between wire and contact pulley changes with every diameter, no optimal adjustment is possible. This fact reduces the lifetime of the contact pulleys, increases production costs and causes surface damage.

The Niehoff single drive system for contact pulleys has proved its worth on the market.

This system enables speed setups adjusted to each individual wire diameter, which can be stored in a recipe administration in the PLC.

This is even a must in the annealing of alloy wires, which are used more and more in the automotive industry.

Wire compensating device

A dancer or wire compensating device appears to be quite simple. But here are also some features which have a positive effect on wire quality, for example a swivelling laying arm in order to avoid wire bundle crossing on the way to the spooler. Another example is the automatic adjustment of the wire tension towards the spooler, ie the control of the wire tension via load cell. Operator mistakes are reduced.

Selection of the right guide pulleys

The selection of suitable guide pulleys also has important influence on wire quality. Basically, in multiwire drawing lines only pulleys with cylindrical base should be applied with sufficient space to allow all wires to run in parallel.

The application of incorrect pulleys with insufficient base or V-shape pulleys cause the wires to overlap and this in turn leads to different wire speeds in the wire bundle.

The wires in the bundle are stretched to different extents, a fact that can only be compensated by increasing the wire tension in the dancer.

This in turn means a loss of wire elongation and an increase in electric resistance leading to a reduced conductance of the conductor.

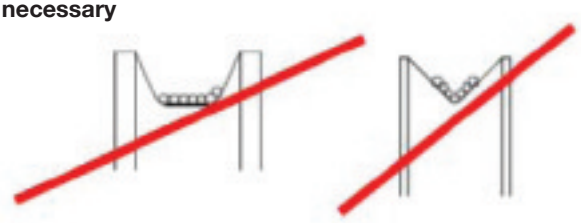
The economical meaning of this will be explained at the end.

Selection of guide pulleys

Pulley bottom width (L):
As large as wire diameter x number of wires

Correct

Too small bottom with causes:
different running diameter
different wire speed
higher winding tension for compensation necessary



Wrong

3.3 Take-up system
Pintle type spooler

Take-up systems

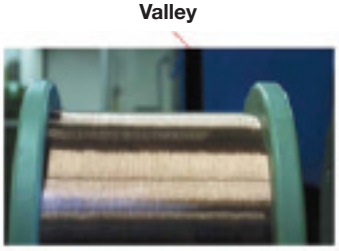
In order to prevent the wires in the bundle from overlapping and crossing it is essential to take care for the correct installation of the spooler, even if this might be logistically unfavourable.

Wire path to spooler

How to define poorly wound spools?

In addition to incorrect winding tension, most of the serious mistakes occur at the switchover points of the wire traverse.

Automatic traverse control



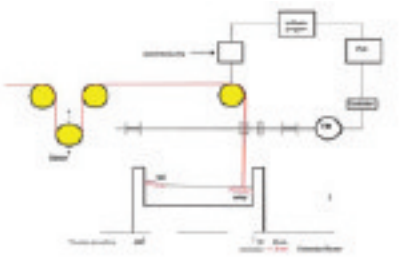
This does not look good and could be better

This picture clearly shows what a laying pattern should not look like. On the left you can see a hill, on the right there is a valley.

The Niehoff solution:

Automatic traverse width control in the spoolers

Automatic traverse control for spooler



The most time-consuming activity of the operator besides wire feeding is to control and to adjust the correct wire laying.

It is absolutely necessary for a safe and smooth paying-off of the wires in the downstream process step to watch the wire lay very closely.

Niehoff has developed and patented an automatic system which controls and corrects the traverse using a special software program.

The constant speed control at the traversing unit recognises the formation of hills or valleys due to the aligned change in wire speed.

A higher speed indicates the formation of a hill – lower speeds mean the formation of valleys. Special software detects and processes these points, and corrects them in the next traverse movements.

D631 with automatic traverse system

- Detection of flange and change-over
- Spooling without hills and valleys

- Target: pay-off speed up to 1,500rpm

- Traverse drive with stepper motor
- Electronic device NBAT2
- 2 laser sensors at the traverse pulley

The consequences of a poorly wound spool appear in the downstream process and are the main reason for wire breaks and slow speeds there.

Niehoff has also developed an automatic traverse control for bunching machines based on the optical control of the flanges.

In the stranding process, wires are often spooled on plastic spools with high winding tension. Here it is very important to determine the exact switchover point to avoid the flanges to flare out.

Two laser sensors control the flange position, and the traverse unit which is driven by a stepping motor moves towards this position.

This 'Niehoff Bunching Automatic Traverse' system (NBAT) was introduced to the market a few years ago and many cable makers have realised its benefits.

Spools wound with the help of this system enable a trouble-free paying-off before the extrusion lines at line speeds of up to 1,500m/min.

The constant winding tension throughout the spool filling is another important point in wire stranding. Niehoff has equipped its bunching machines with load cells and dancer pulleys to control, using a closed loop control system, the set winding tension throughout the spool filling.

Conclusion

As far as the basic machines are concerned, the processes for the production of strands do not differ considerably. If you want to be better than the standard and produce high-quality strands, the mentioned details help you and result in quality improvements of the finished products and high production safety with fewer mistakes as well as higher customer acceptance.

Back to the loss of elongation

A first-class annealer should produce wire elongation values much above DIN standard. The target should be to maintain them as far as possible through the whole process up to the final cable product by following all recommendations mentioned before. For the sale of cable its conductance is more often the determining/decisive factor than its cross section. This means the less the loss of elongation produced in the production line, the lower is the resistance and the higher the electric conductance of the cable.

This means that a bad conductance requires more copper in the cable; good conductance on the contrary needs less copper.

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46 Holly Walk, Leamington Spa, Warwickshire CV32 4HY, United Kingdom
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