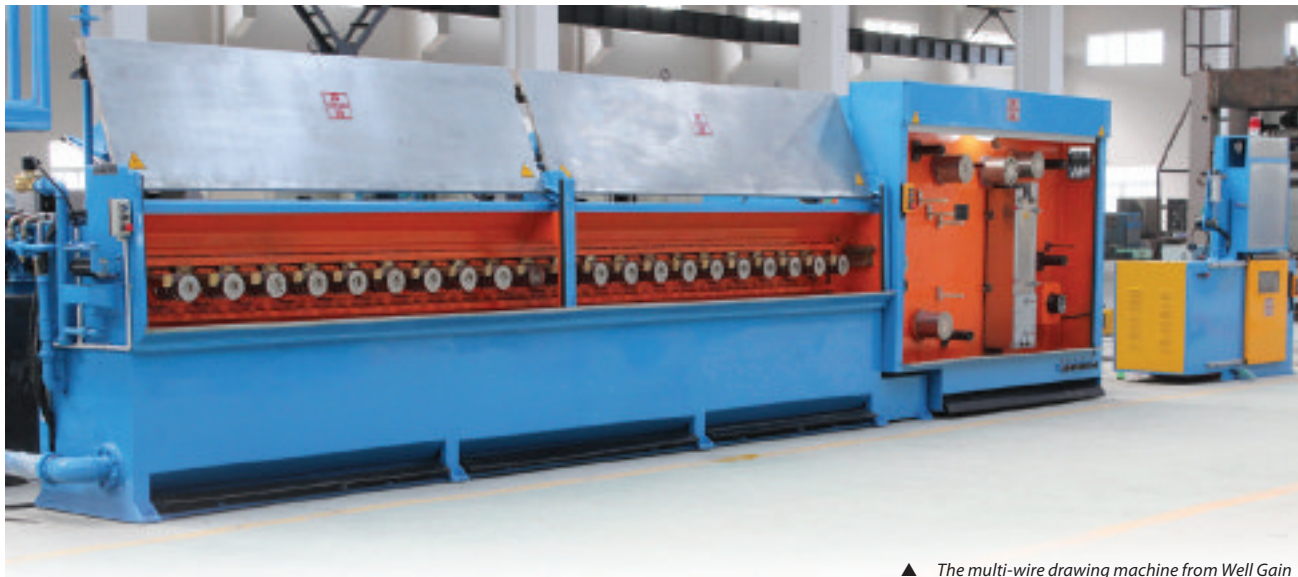


## Top quality performance



▲ The multi-wire drawing machine from Well Gain

Well Gain Cable Systems Ltd is proud to present a state-of-the-art multi-wire drawing machine from China with proven top quality performance.

The machine is manufactured by Kunshan Hongtai Machinery & Electric Equipment, which is specialised in manufacturing wire drawing machines and delivered its first multi-wire drawing machine to XiAn Xi Dian Group in the fourth quarter of 2010.

The machine has been working extremely well and up to the end user's full satisfaction. It has

substantially improved the production efficiency for the end user, who is very pleased with the investment and has ordered a second machine in less than 12 months.

In the meantime four more multi-wire drawing machines have been sold to other customers, including one machine to Sierra Cable in Sri Lanka and one machine to Manufacturera Conecel SA in Mexico. These successful experiences have provided an ideal solution to customers who are looking for multi-wire drawing equipment with proven performance at an affordable

cost. Well Gain can offer machines for 8-wire and 16-wire, with outlet wire diameter range 0.15-0.40mm and 0.40-0.90mm.

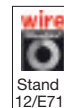
Well Gain Cable Systems is specialised in supplying top quality wire and cable machinery from China and is the exclusive export representative of Kunshan Hongtai.

**Well Gain Cable Systems Ltd – China**

**Fax:** +86 852 225 933 85

**Email:** info@wellgaincable.com

**Website:** www.wellgaincable.com



## Changes at the top for the IWMA executive board

The 41<sup>st</sup> annual general meeting of the IWMA is scheduled for Tuesday, 6<sup>th</sup> March 2012. Following advance nominations the association will see changes at the top.

Colin Dawson of Whitelegg Machinery Ltd has served as chairman since 2<sup>nd</sup> February 2011 and assumes the ceremonial position of president from 6<sup>th</sup> March 2012. The next IWMA chairman is Steve Rika of Bar Products and Services Ltd. He was

previously vice-chairman. Amanda Shehab of Cimteq Ltd is the new vice-chairperson.

These officer positions are normally held for a period of three years. Advising and supporting the officers and executive board is the IWMA's Executive Advisory Council (EAC), a panel of former chairmen of the association. Continuing as chairman of the EAC is Stephen Wood, and Terry Robinson remains honorary treasurer.



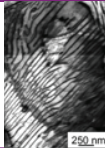
▲ Colin Dawson, IWMA president from 6<sup>th</sup> March 2012, Steve Rika, new IWMA chairman and Amanda Shehab, new vice chairperson

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## Wire & Cable News

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Spring 2012  
[www.iwma.org](http://www.iwma.org)

# WCN



## Playing a leading role worldwide

H Folke Sandelin AB (HFSAB) from Motala, Sweden, will be a co-exhibitor at wire 2012 with Niehoff GmbH.

For the last 50 years, HFSAB has had a leading role worldwide supplying continuous lead extrusion equipment and know-how for trouble free lead sheathing of cables thus providing a perfect moisture barrier.

Today the latest design lead extruder from HFSAB is horizontal, floor standing, easy to install and maintain, fully automatic, and 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.

The lead wall thickness can be kept to a minimum with corresponding savings in lead.

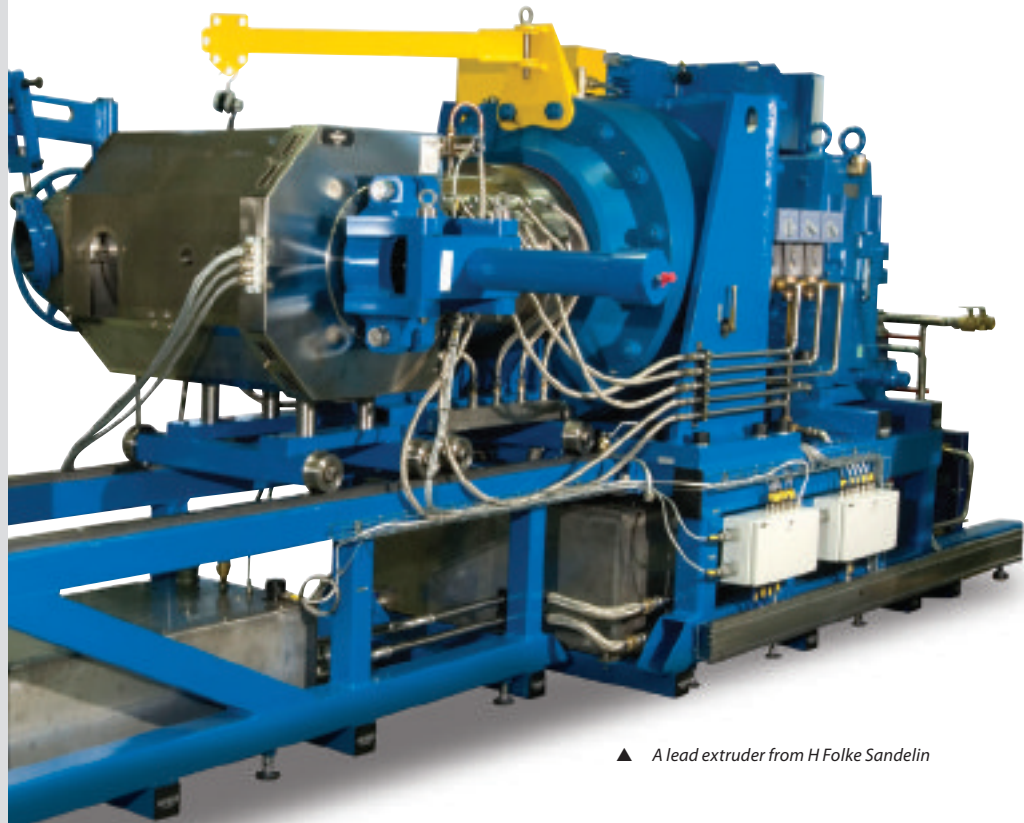
A range of die blocks are available to cover an extensive diameter range of 6-225mm (over lead), and a range of melting pots are available for 10, 18, 35 and 60 tonne capacities.

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 reapplied 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.

HFSAB is able to supply second hand, fully refurbished lead extruders to very high standards, and provide a full and extensive after sales service, know how, fully trained and experienced technician support and spare parts.

**H Folke Sandelin AB – Sweden**  
**Fax:** +46 141 203 639  
**Email:** hfsab@hfsab.com  
**Website:** www.hfsab.com



▲ A lead extruder from H Folke Sandelin



▲ Delivery is complete of the second compact winding station

## Compact winding station

Marldon is pleased to announce the delivery of its second compact winding station to a UK customer.

The machine comprises a dancer controlled payoff for reels in the range 310mm flange up to DIN630 (max weight 300kg), hydraulically operated liting table, caterpillar belt measuring unit and single head winder onto (max) 350mm flange dia, spools (max weight 50kg). Maximum spindle speeds speed, payoff 286 rpm and winder 660 rpm.

It is designed to work at full speed in the forward condition for paying off and at a lower speed in reverse for taking out of the line any excess material.

The direction and speed of the reel is dictated by the position of the dancing pulleys located on the dancer unit built into the machine frame above the payoff bobbin.

Bobbins are located and held at the operating height on interchangeable pintles.

Supply is single phase.

**Marldon Group Ltd – UK**  
Fax: +44 870 907 0016  
Email: sales@marldon.com  
Website: www.marldon.com



## DIARY OF WORLD CLASS WIRE & CABLE EVENTS FOR BUSINESS, TECHNOLOGY, EDUCATION & NETWORKING

### 2012

#### MARCH

- |       |  |   |   |
|-------|--|---|---|
| 6     | <b>IWMA AGM and Members Lunch</b><br><i>Mere Golf &amp; Country Club, UK</i><br><b>Lunch</b> | ➔ | <b>IWMA</b><br>Fax: + 44 1926 314755<br>Email: info@iwma.org<br>Website: www.iwma.org                 |
| 26-30 | <b>wire/Tube Düsseldorf 2012</b><br><i>Düsseldorf, Germany</i><br><b>Exhibition</b>          | ➔ | <b>Messe Düsseldorf GmbH</b><br>Email: wire@messe-duesseldorf.de<br>Website: www.messe-duesseldorf.de |
| 27    | <b>IWMA Industry Dinner &amp; Reception</b><br><i>Congress Centre, Düsseldorf, Germany</i>   | ➔ | <b>IWMA</b><br>Fax: + 44 1926 314755<br>Email: info@iwma.org<br>Website: www.iwma.org                 |

#### SEPTEMBER

- |       |  |   |  |
|-------|--|---|--|
| 25-28 | <b>wire/Tube China 2012</b><br><i>Shanghai, China</i><br><b>Exhibition</b> | ➔ | <b>Messe Düsseldorf GmbH</b><br>Email: wire@messe-duesseldorf.de<br>Website: www.wirechina.net |
|-------|--|---|--|

#### OCTOBER

- |               |   |   |  |
|---------------|---|---|--|
| 29            | <b>Mumbai Technical Conference</b><br><i>Mumbai, India</i><br><b>Technical Conference</b> | ➔ | <b>IWMA</b><br>Fax: + 44 1926 314755<br>Email: info@iwma.org<br>Website: www.iwma.org  |
| 30 Oct - 1Nov | <b>Wire &amp; Cable India 2012</b><br><i>Mumbai, India</i><br><b>Exhibition</b>           | ➔ | <b>Messe Düsseldorf GmbH</b><br>Fax: + 49 211 4560 7740<br>Email: ryfischd@messe-duesseldorf.de<br>Website: www.messe-duesseldorf.de |

### 2013

#### FEBRUARY

- |   |  |   |   |
|---|--|---|---|
| 6 | <b>IWMA AGM and Members Lunch</b><br><i>Mere Golf &amp; Country Club, UK</i><br><b>Lunch</b> | ➔ | <b>IWMA</b><br>Fax: + 44 1926 314755<br>Email: info@iwma.org<br>Website: www.iwma.org |
|---|--|---|---|

#### APRIL

- |       |   |   |  |
|-------|---|---|--|
| 23-25 | <b>Interwire 2013</b><br><i>Atlanta, Georgia, USA</i> | ➔ | <b>WAI</b><br>Fax: +1 203 453 8384<br>Website: www.wirenet.org |
|-------|---|---|--|

#### MAY

- |     |  |   |   |
|-----|--|---|---|
| TBC | <b>wire/Tube Russia 2013</b><br><i>Moscow, Russia</i><br><b>Exhibition</b> | ➔ | <b>Messe Düsseldorf GmbH</b><br>Email: info@wire-russia.com<br>Website: www.wire-russia.com |
|-----|--|---|---|

#### SEPTEMBER

- |       |   |   |   |
|-------|---|---|---|
| 17-19 | <b>wire/Tube Southeast Asia 2013</b><br><i>Bangkok, Thailand</i><br><b>Exhibition</b> | ➔ | <b>Messe Düsseldorf GmbH</b><br>Email: wire@mda.com.sg<br>Website: www.wire-southeastasia.com |
|-------|---|---|---|

#### OCTOBER

- |      |  |   |  |
|------|--|---|--|
| 8-10 | <b>wire South America/Tubotech 2013</b><br><i>São Paulo, Brazil</i><br><b>Exhibition</b> | ➔ | <b>Messe Düsseldorf GmbH</b><br>Fax: + 49 211 4560 7740<br>Email: wynhoffu@messe-duesseldorf.de<br>Website: www.messe-duesseldorf.de |
|------|--|---|--|



## Plasma heat and surface treatment trial facility for welding wire applications industry



▲ Plasmait's new testing facility in Lebring, Austria

Plasmait GmbH, a supplier of plasma heat and surface treatment lines for wire, tube and strip production, has opened a dedicated test facility for continuous annealing and degreasing of welding wires. Welding manufacturers are welcome to test plasma heat and surface treatment on their materials at Plasmait's facility in Lebring, Austria.

The welding wire facility has been designed to perform heat treatment, degreasing and deoxidation on the wide range of ferrous and non-ferrous materials with diameters between 0.8mm and 3.5mm. The annealing and degreasing trials can be performed on copper, copper alloys, aluminium, various stainless steels and nickel alloys and other materials. Flux cored wires can also be tested.

According to Plasmait's R&D Director, Peter Ziger, the welding wire trial facility is now available to all welding wire manufacturers who require improving the quality of their welding wire products. Applications with demanding surface or challenging annealing requirements will benefit most from plasma treatment. Such applications are usually found in sectors such as medical, precision

mechanical, automotive, marine, aerospace and energy sectors.

Other welding wire manufacturers may want to consider plasma annealing to reduce energy use, purging gas consumption or replace chemical surface treatments with dry, chemical-free degreasing, surface cleaning or deoxidation.

Manufacturers of coated products may find plasma surface preparation prior to coating or metallic plating also an area of potential interest.

Since the introduction of plasma heat and surface treatment process in the wire industry in 2003, Plasmait has continuously improved the process and widened the application scope to include annealing and surface treatment of tubes and flat products.

**Plasmait GmbH – Austria**  
**Fax:** +43 318 252 4754  
**Email:** info@plasmait.com  
**Website:** www.plasmait.com



## Don't miss out



▲ A packed conference room for a non-ferrous session at CabWire on 7 November 2011

If you missed out on the CabWire World Conference 2011 in Düsseldorf on 7<sup>th</sup> November 2011 why not buy the conference CD or join the IWMA and receive a free copy?

The recent technical conference organised by the IWMA in Düsseldorf saw a large number of technical and market overview papers presented to a sell out audience.

Any industry colleague who could not attend but is interested in purchasing the conference CD of these papers can now do so from the IWMA Secretariat.

The price for non-IWMA members is US\$120 and there is a discount of 10% for members. Any organisation taking out membership of the IWMA before 30<sup>th</sup> March 2012 will receive a free copy of the CD.

For information on the papers presented at CabWire please visit the dedicated conference website:  
**www.cabwire-duesseldorf.com**

To secure a copy of the CD please contact the IWMA Secretariat.

## New developments from Zumbach



▲ A selection of modern, high precision diameter gauges

At wire 2012 in Düsseldorf Zumbach will again present many new developments and products. The following is a summary of the most important ones:

### **Sensors**

New 1, 2 and 3 axis diameter gauges for any cable and wire and any budget. Besides the complete line of ODAC® laser diameter gauges, new models with special beam geometry, fault detection function and high scan rate will be exhibited.

### **Gauges laser diameter gauges with incorporated fault detection**

The advanced ODEX® concentricity and diameter gauge for wire extrusion. Fully non-contact, based on magnetic and laser technology.

New ultrasonic wall thickness and eccentricity scanners of the UMAC® RZ series with quick and easy adaptation to cable diameters and space-saving integration.

- Unique Speel length and speed gauge down to zero speed measurement
- State-of-the-art spark tester systems Advanced KW fault detectors with new local BAE control and display unit.

### **Data acquisition, processing and display units (processors)**

New economic, modular high performance USYS IPC data acquisition, processing and display units.



▲ Latest, modular data acquisition, processing and display system

### **Complete Measuring and Control Systems**

Rayex® D series: Zumbach's X-Ray measuring and control system for CV lines, for wall thickness (3 layers), eccentricity and diameter/ovality for CV lines.

### **Wallmaster/UMAC® - DIACAL Systems**

Ultrasonic wall thickness and eccentricity systems for cable jackets and DIACAL option for fully automatic calibration and control.

### **Zumbach Electronic AG – Switzerland**

Fax: +41 323 560 430

Email: [info@zumbach.com](mailto:info@zumbach.com)

Website: [www.zumbach.com](http://www.zumbach.com)



## New issue

**Members:** Please send us editorials for free publication in the next WCN (or on the IWMA website at any time between editions of WCN).

One of the strictly members-only benefits of belonging to the IWMA is the facility to publish your company's editorials in WCN, both the hard copy and electronic versions, completely free of charge, and reach thousands of readers worldwide.

In addition to worldwide distribution WCN is freely distributed at all major industry trade fairs and IWMA technical events. The next important upcoming exhibitions are wire China 2012, 25<sup>th</sup>-28<sup>th</sup> September and Wire & Cable India 2012, 30<sup>th</sup> October-1<sup>st</sup> November and its supporting conference on 29<sup>th</sup> October.

Members should also bear in mind that the IWMA website can accept their editorials at any time during the year.

Providing editorials for WCN and the website can help members in many ways:

- Communicating important messages worldwide
- Attracting interest from the high number of national visitors to wire China and Wire & Cable India 2012
- Creating a high profile at both events
- Advising customers of personnel changes
- Announcing major new developments
- Celebrating winning of new contracts/orders
- Staying one step ahead of the competition

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

If marketing and public relations is not your area of responsibility please make sure that the relevant department/person is aware of this information. Thank you!

**Please submit editorials by  
29<sup>th</sup> May 2012**

## On show to the world. . .

Beta LaserMike, a global provider of precision measurement and control solutions, will debut its new LayScan measurement system and three-axis LN Detector (Lump & Neckdown) to the international wire and cable community at wire Düsseldorf 2012 in hall 11, stand A78.

Beta LaserMike's new LayScan measurement system (patent pending) accurately and consistently measures the lay length of twisted pairs used in telecommunication cables. The system uses optical, non-contact measurement technology to perform on-line, high-speed lay length measurements with accuracies to 0.0254mm (0.001").

LayScan provides high-data rate capabilities to precisely determine the variations in lay length within each lay. Systematic lay variations that are typically caused by twinning and cabling operations can be readily observed and measured. A data acquisition system effectively collects and processes the lay length data and reports the measurement results.

Beta LaserMike will also debut its new three-axis LN Detector. This advanced, compact system provides more precise detection of short-term faults (lump and neckdowns) in the wire diameter than two-axis systems.

The three-axis scanning system ensures 360-degree coverage around the product's circumference to instantly detect changes in the surface profile. The LN Detector can measure wires up to 15mm (0.59") in diameter at line speeds up to 3,000m/min (9,842ft/min). It can accept a range of inputs including length encoder, tachometer, line start/stop, and clear faults and can be connected to a host PC or PLC using Ethernet IP, Profibus, and Profinet. Data capture capabilities enable you to report critical process information such as height, length, number, and location of the flaw.



▲ The Lump and Neckdown detector and LayScan from Beta LaserMike

In addition, Beta LaserMike will exhibit the following non-contact measurement and control solutions:

- CenterScan 2010 eccentricity measurement system
- AccuScan diameter gauge
- LaserSpeed length and speed gauge
- LN Detector lump and neckdown detector
- High-Frequency Spark Tester and Pre-heater systems
- BenchMike table-top cut sample measurement system
- DataPro process controller and data management system
- SRL Pro on-line structural return loss (SRL) prediction and analysis system

**Beta LaserMike – USA**

**Fax:** +1 937 233 7284

**Email:** sales@betalasermike.com

**Website:** www.betalasermike.com



## IWMA new members

COMPANY	COUNTRY	WEBSITE
Garg Inox	India	www.gargwire.com
Syrma s.a.	Greece	
ZDB Group a.s.	Czech Rep	www.zdb.cz
Nano-Diamond America Inc	USA	www.nano-die.com
RK Umformtechnik GmbH & Co KG	Germany	www.rk-umformtechnik.de
Chains Power & Machinery Technology Co Ltd	China	www.chainspower.com
Cabelte Cabos Electricos & Telefonicon SA	Portugal	www.cabelte.pt
CMI UKV GmbH	Germany	www.cmigroupe.com
CMI Beugin	France	www.cmigroupe.com
GEO Reinigungstechnik GmbH	Germany	www.geo-reinigungstechnik.de
Pan Chemicals SpA	Italy	www.panchemical.com
Spring Expert	UK	www.springexpert.co.uk
APL s.c.	Poland	www.apl.net.pl



## Brand new look for the IWMA at wire Düsseldorf 2012

Even the problems caused by the Icelandic volcanic eruption during the 2010 event have failed to diminish the popularity of the wire Düsseldorf exhibition, which has continued to grow in size and importance, establishing itself as the world's pre-eminent trade fair for the wire and cable industry.

By the end of 2011 the provisional 2012 exhibit space was nearly 56,000m<sup>2</sup>, a healthy increase over 2010. The IWMA has been the long-standing industry partner for wire Düsseldorf, lending its full support for this vitally important trade fair. The concurrent Tube exhibition reported more than 47,000m<sup>2</sup> of space sold by the end of 2011.



▲ The brand new look IWMA stand at wire Düsseldorf 2012.

The IWMA stand 11D26 will be in its usual prime location in hall 11 with a brand new look for this year's exhibition and will be providing an extensive range of services for all its members, whether exhibiting or visiting the event. It will offer a comprehensive office service with Internet, phone, fax and photocopier as well as a free bookable meeting room.

On duty will be skilled multilingual staff to assist with interpreting and there will be a bar and kitchen service providing hospitality to all visitors. The IWMA Executive Board hopes that non-members will find time in their busy schedules to visit the stand and find out all about what membership can do for their businesses in the global market.

IWMA members attending the exhibition should note the time and date of the IWMA Industry Dinner and Reception at 18:15 hours on Tuesday, 27<sup>th</sup> March 2012 in Süd Room 2 on the first floor of the Congress Centre, near the south entrance to the Messe. Attendees can walk the short distance to the Congress Centre straight from the closing of the exhibition for the day. Every IWMA member organisation can order up to two free tickets for the dinner and purchase additional tickets (subject to availability).

Members can enjoy a free pre-dinner drinks reception and a great opportunity to meet and network with old friends and contacts. The dinner is scheduled to finish early enough for guests to enjoy the unique atmosphere of the Altstadt. Please note that bookings must be made in advance as "walk ins" cannot be accommodated.

## Shouting all about the good news

Leading wire and tube drawing lubricants specialist Metalube has lots of good news to shout about at wire 2012. The company is bucking worldwide trends with significant growth, having its largest ever presence at the Düsseldorf show.

From its stand, 11G25, Metalube will announce its new commercial office in Mumbai, India, and will also launch its updated corporate identity, including new barrels and packaging, along with a contemporary but customer focused website.

As part of its expansion, three new UK directors have recently joined the company and Amit Gupte will be heading the India office. They will join the established global Metalube team in greeting new and existing customers to the stand.

Managing director David Lee said: "I want to welcome our new highly experienced team members on board. I don't believe there are any other lubricant companies in our sector who offer the same calibre of specialists that Metalube does. We have big ambitions but our principal aims remain to provide

the best possible products and services."

Metalube specialises in wire and tube drawing lubricants as well as protective greases for overhead conductors and is headquartered in Manchester, UK, where the site incorporates offices with warehousing, laboratories and manufacturing facilities.

**Metalube Ltd – UK**  
**Fax:** +44 161 775 7511  
**Email:** post@metalube.co.uk  
**Website:** www.metalube.co.uk



## Open house at Daloo

Daloo welcomed more than 10 VIPs from the major cable producers all over the world at a recent open house in Changzhou, China. The day was attended by delegates from France, Egypt, USA, China, Philippines, Japan and Korea.

While Mr Guy Soulas, general manager of Daloo, introduced the

organisation and business partners for the day, the skilled test engineers team demonstrated a rigid stranding machine 54 wires and operated the side loading system with bobbins.

Some guests were more interested by the quality of the frame, others by the safety devices or the specific requirements of the line. The visitors

also appreciated the chance to check Daloo's facilities and strict tracking system applied to guarantee the quality of every material and component in the manufacturing process.

**Daloo Machinery – China**  
**Fax:** +86 519 854 835 57  
**Email:** sales@daloo-machines.com  
**Website:** www.daloo-machines.com



## PWM presents full range of cold welders at wire 2012

British manufacturer PWM will showcase its full range of manual and energy-efficient powered cold welders at wire 2012.

Top of the range are PWM's EP500 and P1000 rod welders, designed for economical welding of large non-ferrous rod sections up to 16mm



▲ Energy efficiency from PWM

(0.630") diameter copper and 20mm (0.790") diameter aluminium. Quiet, clean and easy to operate, PWM rod

welders produce reliable consistent welds stronger than the parent material.

PWM also manufactures two energy-efficient portable cold welders. The HP100 and HP200 are powered by air/hydraulic intensifiers and equipped with solid steel welding heads for extra strength. Mounted on trolleys, these reliable machines provide an effortless weld on wire 1.00mm to 6.50mm (0.039" to 0.256") diameter.

PWM cold welding equipment is made to high quality standards by skilled technicians in PWM's own UK workshops. Dies are individually hand-made in matched sets, in standard or custom sizes, to suit round or profile wire. PWM can also produce dies to weld two different sizes of wire together for specific applications.

PWM's range of manual cold welders includes hand-held machines, such as the M10, M25 and M30, which are ideal for repairing wire breaks quickly in confined spaces. Comfortable to hold and simple to use, they have capacities

from 0.10mm to 1.80mm (.0039" to 0.071") copper/aluminium.

The versatile BM10 and BM30 models, which can be used on a workbench or provided with a trolley, will produce strong, consistent welds on wire sizes 0.10mm to 1.80mm (0.0039" to 0.071") copper/aluminium. The larger M101, a robust, heavy-duty machine, for wire sizes 1.00mm to 3.60mm (0.040" to 0.141") copper and 5.00mm (0.197") EC aluminium, is extremely easy to maintain, due to the low number of component parts.

One of PWM's best-selling welders, the M101 can be bench-mounted or supplied with a trolley, so it can be wheeled quickly to the work area. A pneumatic version of the M101, the P101, is also available.

### Pressure Welding Machines – UK

**Fax:** +44 1233 820 591

**Email:** pwm@btinternet.com

**Website:** www.coldpressurewelding.com

## Triple twisting...ten years on

The triple twist process, a Gauder Group patented solution since 2001, allows 40 to 50 per cent higher production speed from lower investment while offering improved cable quality compared with conventional LAN pairing lines. It is the best industry standard for Cat 5/6/7 LAN cable production.

With some 200 triple twist twinning lines sold, Setic, a member of the Gauder Group, remains the leader in the LAN cable pairing field. Thousands of kilometres of cable have been manufactured on these machines in the major LAN cable manufacturers' plants worldwide.

Setic equipment offers all the benefits of backtwist technology, combined with the advantages of the world-famous "DVD 560" (twin vertical double backtwist pay-off): stabilised impedance and superior consistency, hydraulic loading platform and pneumatic pintles for easy reel handling, continuous adjustment of backtwist rate



▲ Still twisting after all these years

from the operator's control panel, integrated electrical cabinet, and stand alone equipment.

The range includes the vertical "all-in-one" triple twist pairing machine type "VTT 560" enabling

the production of Cat 5E pairs around 6300 TPM (instead of 4500 TPM on standard 560mm double twist twinner) and Cat 6 pairs at 6,000 TPM (instead of 4,000 TPM on standard 560mm double twist twinner).

The same production result can be achieved by using double position pay-off for triple twist process type "DVD TT 560 R" or "DHD TT 560" located before an existing standard double twist machine. It increases running speed of 1,500 up to 2,200 TPM and allows production from Cat 5 up to Cat 7.

Setic also placed the triple twist pairing process on a one-step machine creating the "G3T 560" model for twinning in one operation 4 (or "n" as an option) pairs Cat 5/5E/6E and 7/8 from insulated wires, on the same line, speeding up to 6,000 TPM.

### Setic sas – France

**Fax:** +33 477 711 085

**Email:** sales.setic@gaudergroup.com

**Website:** www.gaudergroup.com



## News from the IWMA Educational Trust



▲ Ben Turner of Wintwire Ltd, recipient of an IWMA Educational Trust grant for 2012/2013

IWMA Educational Trust John C Hogg Travel Awardees are coming to wire 2012 from far and wide.

For many years the IWMA, through its charity, the IWMA Educational Trust Fund, has helped to promote and support trainees and students pursuing or seeking to pursue a career in the wire and cable industry. This support can take two forms: two-year scholarships worth up to US\$24,000 or expenses-paid travel awards to attend the world's largest and most important wire and cable trade fair, wire Düsseldorf.

The 2012 travel awards have been issued to 11 persons from around the globe, seven men and four women. Apart from some UK-based awardees others hail from China, Taiwan, Malaysia and India, yet another illustration of the worldwide influence of the IWMA. The awardees receive return flights from their home bases, accommodation in a good quality hotel in the centre of Düsseldorf, a free entrance pass and

catalogue for the exhibition (courtesy of Messe Düsseldorf) and a VIP ticket to the IWMA's gala dinner during the exhibition week.

At a ceremony on the IWMA stand at 2.30pm hours on Wednesday, 28<sup>th</sup> March the travel awardees will receive commemorative certificates and catalogues from the IWMA chairman and Friedrich Kehrer, the project director for wire Düsseldorf.

### **New two-year scholarship award agreed by the trustees.**

Ben Turner of Wintwire Ltd in the UK has been awarded a two-year scholarship by the IWMA Educational Trust to study for an MBA.

In his own words Ben says what the award means to him: "I chose to do my BA (Hons) Business Management at The University of Huddersfield. After achieving a first class degree I traded my part-time sales post at Wintwire Ltd for a full-time position.

The company, which is located in Oxspring between Sheffield and Barnsley, makes a wide variety of wires for use in the textile, dental and engineering sectors amongst others. It has identified substantial export opportunities in the textile machinery markets which will add to the 40% of its turnover that already comes from overseas markets.

"Its UK market share has grown in recent times and I am quite often found up and down the country meeting new and existing customers. I have grown up in the wire industry and have spent many a summers' break learning the ropes from the manufacturing team. This has helped to give me a technical edge to my sales post.

"A scholarship from the International Wire & Machinery Association will allow me to progress onto a Masters of Business Administration. The MBA will bring all I have learnt in my Business Management degree and my working career together into one. I will greatly benefit from this opportunity alongside both the company and the readers of my wire industry based dissertation."

The IWMA Educational Trust will be publishing Ben Turner's MBA dissertation on the UK wire industry after the completion of his MBA qualification.

- Emmanuel De Moor presented interim research at CabWire World Conference 2011 in Düsseldorf.

In late 2010 the trustees of the IWMA Educational Trust Fund agreed to provide support funding for two years for a research project at the Advanced Steel Processing and Products Research Centre at the Colorado School of Mines in the USA. Heading the research project is Professor Dr Emmanuel De Moor, who presented an interim report at the CabWire technical conference last November: "Effect of boron alloying on microstructural evolution and mechanical properties of high carbon wire". This paper is published at the end of this newsletter.

## Sket's market position goes from strength to strength



▲ A closing cage type MKVS 8x2700 in Sket's works during final assembly

In recent months Sket Verseilmaschinenbau GmbH has further consolidated its position as a supplier of machinery and equipment for the manufacture of cable and wire rope.

Bridon International Ltd has entrusted the company with the manufacture and supply of stranding machinery for the production of "high performance ropes" having a total value in excess of €1m. This new equipment will be installed next year at Bridon's new site in Newcastle-upon-Tyne, UK.

There is already a long standing relationship between the two companies stretching back over a decade when Sket delivered a tubular stranding machine type SRW 1+45x660 to Bridon in Willington Quay in 2000.

An SRW 1+26x610 from the same machine range followed in 2004. Also in 2004, a 40 bobbin tubular stranding machine type SRW 40x22" was supplied to Bridon's factory in the USA.

In 2007, Bridon in Gelsenkirchen in Germany took delivery of what was at the time the largest take-up in the world, having a capacity of 370 tonnes, as well as two 200 tonne take-ups.

In addition to supplying Bridon with these new machines, Sket has further supplied various separate machine assemblies and has renovated and upgraded a number of existing machines.

Sket has also recently completed or is currently working on similar large orders for machinery for the manufacture of electric cable and wire rope.

Planning related to this new equipment involved close collaboration between the two contracting companies. All design details related to the most important machine assemblies were agreed in advance before they were put into production. In this way it was possible to take all of the customer's specific requirements into account along with all technical matters related to the future operation of the machines. As the manufacture of the order progresses, Bridon will carry out related audits on site in Magdeburg and on the premises of selected sub-contractors.

Bridon's order covers the supply of: A tubular stranding machine type SRW 680 having a bobbin diameter of 680mm for the manufacture of steel wire strand above 40mm and a tandem cage stranding machine type MKVS having an advanced configuration for the closing of steel wire ropes having a diameter of up to 250mm. The strand capacities of the pay-off bobbins are up to 38 tonnes each. The maximum weight of rope produced will be in excess of 600 tonnes.

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## Celebrating 20 years

Dating back to August 1991, Fred Krieger, along with his son Rick, founded Mount Joy Wire Corporation through the acquisition of an existing National Standard facility in Mount Joy, PA, USA. Mount Joy Wire is proud to celebrate 20 years of manufacturing high carbon steel speciality wire by expanding its global presence into the European and Asian markets.

The company has recently expedited growth in the global markets. Mount Joy Wire brings John D Stanaway on its team to serve as an acting agent overseas. John has been involved in the wire industry in a career now spanning nearly five decades and is a past winner of the UK's most prestigious customer service award – the Unisys/Management Today Service Excellence Award.

"We are more than pleased to welcome John Stanaway to serve as Europe and Asia's primary contact for all things Mount Joy Wire," said Ty Krieger, VP of operations. "We know that his contributions will be instrumental in developing new markets in our time of growth."

In support of John's new initiatives, Mount Joy Wire representatives will be participating at wire 2012 International in Düsseldorf, Germany March 26<sup>th</sup>-30<sup>th</sup> 2012 as well as Interbrush May 9<sup>th</sup>-11<sup>th</sup> 2012 in Freiburg, Germany.

To further celebrate 20 years of business, Mount Joy Wire has also launched a newly designed website. The new and innovative website features user-friendly search and navigation for an improved customer experience. Customers can access important information on core products including spring, brush and oil tempered wire. Visitors will have the convenience of requesting quotes directly from the site as well as the option of making purchases off their web overstock specials.

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## Review of IWMA exhibition activity autumn/winter 2011



▲ The IWMA section of joint IWMA/ITA stand at WICAB/Tubotech 2011

The IWMA participated at two exhibitions in the second half of 2011. Wire Southeast Asia 2011 was held in Bangkok in September and thankfully was completed before the terrible floods hit the capital. The IWMA was represented at the event by executive board members Stephen Wood and Peter Large (both former IWMA chairmen) and John Cunnington.

During the three-day event the IWMA secured a healthy total of enquiries, an outcome that compared favourably with other regional exhibitions. The next edition together with its sister exhibition Tube Southeast Asia will take place from 17<sup>th</sup>-19<sup>th</sup> September 2013.

WICAB in São Paulo, Brazil followed soon after the Bangkok exhibition. For the first time this trade fair was run concurrently with and as part of the well established Tubotech pipe and tube exhibition. Executive board member and vice chairperson elect Amanda Shehab represented the IWMA at WicAB.

The IWMA shared a joint stand with the ITA in the main hall. Soon after the end of WicAB/Tubotech 2011 Messe Düsseldorf announced that in 2013 wire South America will replace the WicAB name and receive enhanced international marketing support as a totally independent exhibition to ensure that its potential is maximised.

Brazil remains a difficult market for exporters but is becoming more attractive, especially so with the infrastructure development taking place for a World Cup and an Olympic Games. Wire South America therefore is potentially an important event for companies seeking a foothold in one of the world's most dynamic economies.

The IWMA attracted a satisfactory number of new enquiries including several from organisations interested in representing the association in South America. In 2013 wire South America and Tubotech will run concurrently from 8<sup>th</sup>-10<sup>th</sup> October.

The IWMA also obtained a number of useful leads and contacts from the Metal Expo 2011 exhibition in Moscow in mid November, the 17<sup>th</sup> edition of this annual exhibition, which attracts a significant number of Russian and Ukrainian metal forming and processing companies as exhibitors.

Although the IWMA was not officially participating in the exhibition the association's executive secretary, who is shared with the International Tube Association (ITA), did attend on behalf of the ITA. During the course of the week he was able to identify various companies involved in wire drawing and forming.

## New India office for Metalube



◀ Amit Gupte

Leading wire and tube drawing lubricants specialist, Metalube has opened an office in Mumbai, India.

This strategic move is part of the company's ongoing international expansion plan, exporting to over 70 countries worldwide, including an operating business in Shanghai, China.

India is viewed as a key market for the business and the new operation will

be led by Amit Gupte who joins from Savita Oil Technologies Ltd.

Amit has 14 years experience within the lubricants industry and will work closely alongside new distributors Wirex Dies & Steel India Pvt Ltd, responsible for India's northern and eastern regions, and Walson Industrial Supplies Pvt Ltd for the western and southern regions. Wirex and Walson are now fully responsible for all Metalube's Indian distribution.

Metalube has undergone significant changes in the last few months, with a recent management buy-in, introducing three new directors into the business. The new team has both commercial and technical experience within the lubricants

industry and company founder David Lee continues as managing director.

He said: "We have big ambitions for Metalube and the opening of Metalube India is just the beginning. The Indian operation currently offers marketing and technical services along with a product testing laboratory but we have plans to also manufacture lubricants from the Mumbai site.

"Our aim is to continue to provide the best possible products and services but to also expand our range and grow our client base worldwide."

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## Budget wire bending machine



▲ The CFM with PTS unloader from Whitelegg

Whitelegg Machines Ltd will be showing a new 'budget' computer-controlled automatic wire bending machine at the wire exhibition in March.

This machine is more compact and of simplified design resulting in a considerable price reduction. It is aimed at the smaller companies which require to make smaller batches to meet the current 'just-in-time' demand.

The CFM-440 CNC wire forming machine with a wire range of 2-4mm is ideal for many products and in particular, lampshade frames. The lamp and lampshade industries have

been decimated during the last 15 years by the importation of Chinese products.

In both the United Kingdom and France, the closure of all large lamp plants has brought the loss of over 3,000 jobs in each country. All other European countries have also been badly affected. The few remaining factories are very small.

The buyers for the department stores and do-it-yourself stores all went for the cheapest product and as imports come in container loads, the choice of design and colour is very limited.

In other industries the trend to 'just-in-time' has meant that orders are placed for smaller quantities which, in many cases, makes high productivity equipment unaffordable. The new model, which allows the setting of even complex shapes in a few minutes, with the infinite computer storage capacity, will help fill this gap.

The new WBW-10 butt welding machine is specifically designed for butt welding chain links from wire up to 10mm diameter. Equipped with a 32 Kva weld transformer with pulse weld controls, there are nine weld parameters for each programme. Due to the small radius of the links, high upset power is provided by powerful air cylinders to push the wire ends together.

The CFR-420-TWR automatic ring forming machine will also be exhibited. This machine is designed for the precision production of rings from 70 to 1,000mm diameter from wire 2.0-4.0mm although it is possible to make rings up to 2 metre diameter with some hand assistance to remove them. This type is widely used for products such as automotive clutch rings, filter rings, lampshades and displays.

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## Renewable energy sources and the wire and cable industry

The most recent issue of power & trends, the customer newspaper of the leading wire and cable machinery manufacturer Maschinenfabrik Niehoff, is now available.

It contains articles in English, Chinese and German with a Russian summary. Since the catastrophic events in a Japanese nuclear power plant in March 2011, the use of renewable energy sources like water energy, wind force and solar energy has gained more and more general interest.

The main article of this power & trends issue deals generally with this topic and the meaning for the wire and cable industry. The article comprehends central ideas of the editorial 'Renewable Energy & Grid Developments Provided by

CRU', published in the July 2011 ICF-Newsletter of the International Cablemakers Federation.

Further findings and data of the CRU survey are mentioned in articles about the generation of electrical current in wind power plants and solar power plants. It may be interesting for wire and cable manufacturers that still more than 1.4 billion people have to live without any electrical power supply as reported during the Solar World Congress 2011 in late Summer 2011.

As a consequence, the wire and cable industry and their suppliers like Niehoff and its partner companies HFSAB and Bühler Würz Kaltwalztechnik are confronted with promising tasks. HFSAB

builds horizontal lead extruders which apply protective sheaths on subsea cables, while Bühler Würz Kaltwalztechnik has developed a PV-Ribbon cold rolling line. In the issue Shandong Xinhui Copper Co Ltd, one of the largest copper fine wire manufacturers in northern China, is introduced.

Further information on Niehoff products is given in the article about the new inductive annealer type RI 420. News in brief concludes the information offer of this issue.

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## China-bound!



▲ Technology that has seen Rautomead land a significant Chinese order

Continuous casting technology specialist, Rautomead Limited, of Dundee, Scotland, has secured a significant order from Doowell, a major Taiwanese-owned OEM cable assembly manufacturer with a number of large manufacturing plants in China, including its main facility in Xiamen employing around 5,000 people.

Rautomead will supply an RS 3000/6 upwards-vertical continuous casting machine to produce oxygen-free copper redraw rod.

The Rautomead machine will be installed at the company's Changsu City factory, not far from China's economic powerhouse Shanghai, where Doowell

has a licence to carry out melting and casting.

With a need to draw the rod to superfine wire of 0.05mm diameter, Doowell sees its investment in a Rautomead oxygen-free copper machine as a way of improving the quality of redraw rod and improving reliability with increased productivity.

Technical service support during installation, commissioning and subsequent production and operation will be provided by Rautomead engineers from UK supported by the Rautomead office in Shanghai. The Rautomead engineering team provided free consultancy service during a visit to

Changsu shortly after the contract was finalised.

This service is available to all customers to advise them about preparing the factory site and services prior to delivery of the continuous casting equipment. Correct preparation minimises the time required for installation and start up during commissioning.

Rautomead has supplied several specialist RS model continuous casting machines to companies in China for the manufacture of CuMg wire rod used in the production of contact wire for the network of high-speed trains currently under construction on the mainland.

This machine for supply to Doowell is the first RS machine to be delivered and installed in China for the production of high quality CuOF wire rod.

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## Sikora at wire 2012

Sikora AG, manufacturer and worldwide vendor of measuring and control technology for the wire and cable industry, will display the latest technology at wire 2012 in Düsseldorf.

Sikora is showcasing sophisticated equipment for optical fibre measurement in the drawing tower. The Fibre Laser 6003 measures the diameter of optical fibers with an accuracy of  $\pm 0.05$  micrometers while providing information on the ovality, fibre position, spinning, vibration frequency and amplitude. In addition to diameter measurement the Fibre Lump 6003 offers the most reliable detection of smallest lumps and neck-downs down to a size of  $5\mu\text{m}$ .

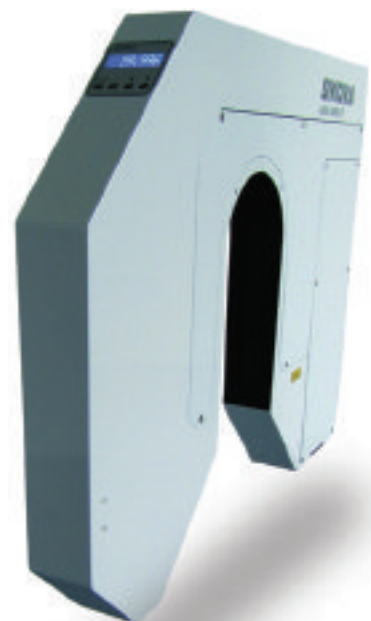
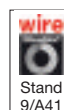
Another highlight on the Sikora booth is the interesting X-Ray 6000 series for the measurement of the diameter, wall thickness, eccentricity and ovality at insulating and jacketing lines. The X-Ray 6000 includes XLL-X-ray tubes (eXtra-Long-Life tubes) and provides a selectable measuring rate of 1 to 3Hz or optional 10, or 100Hz.

Sikora shows the innovative diameter gauges of the Laser Series 6000 including a number of technological highlights, one being a measuring rate of 2.5kHz for the highest accuracy. In addition, the gauge heads are equipped with an integrated LED display with control panel option, which allows the operator to read the diameter value directly from the device.

Other highlights on the Sikora booth are the Length 6000 for non-contact online measurement of produced cable lengths and the Preheater 6000, a conductor preheater that ensures optimum adhesion of the insulation on the wire.

There are additional new product solutions in the pipeline which will be present at the show.

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▲ The Laser Series 6000 with an integrated LED display

The largest corporate membership trade association in the wire and cable industry. Exhibitors at

Name	Country	Stand	Name	Country	Stand
Appiani Srl	Italy	11G32	Esteves Group	Spain	10C72
ACIMAF	Italy	11A58	Euroalpha Srl	Italy	11A43
AEI Compounds Ltd	UK	11D52	Eurobend SA	Greece	16F40
Aim Inc	USA	11A25	E-Xhead Technic GmbH	Switzerland	
Alecosa-Aleados del Cobre SA	Spain	9A13	FIB Belgium s.a.	Belgium	11B62
Alloy Wire International	UK	11E28	Fine International Corporation	USA	9F22
AlphaGary Corporation	USA	11G22	Fine Wires Ltd	UK	
Anbao (Qinhuangdao) Wire & Mesh Co, Ltd.	China	16K59	Fisk Alloy Conductors BVBA	Belgium	9F13-04
APL s.c.	Poland		FMS Force Measuring Systems AG	Switzerland	11G20
Arab Co for Cable Polymers Ltd	Saudi Arabia		Fort Wayne Wire Die Inc	USA	12A52
Asia Sim Co (Wire Asia)	Iran		Fox Wire Ltd	UK	15F29
ASMAG UK Ltd	UK	16B48	Foxtton Dies Ltd	UK	
Associated Engineers & Industrials Ltd	India	12D23	Frontier Composites & Castings	Canada	
Assomac Machines Ltd	India	11E18	T Fukase & Company Ltd	Japan	11D60
AstroPlast, Kunststofftechnik GmbH & Co KG	Germany	11J76	Fushi Copperweld	UK	9C55
ATL Technology Ltd	China		G & A Engineering Ltd	UK	
Atom Kablo Sanayi ve Ticaret AS	Turkey		G Church - Consultant	UK	
ATS S.A.	Poland	16H04	G S A (Import Export) Limited	UK	
Autoreel Limited	UK		Garg Inox Ltd	India	9A74
B & B Compounds Srl	Italy		Gauder & Co SA	Belgium	10E38
Balloffet SA	France	10A18	GCR Eurodraw SpA	Italy	11A66
Bar Products & Services Ltd	UK	11F05	Geca-Tapes bv	France	10D76
Barnfather Wire (Midlands) Ltd	UK		GEO Reinigungstechnik GmbH	Germany	11A34
Batoyle Freedom Group	UK		GER SA	Belgium	9F60
Carl Bechem GmbH	Germany	15G30	Goodwin Machinery Ltd	UK	9C34
Bedmutha Industries Ltd	India		Gupta Power Infrastructure Ltd	India	
Beijing Master Intl Trading Co Ltd	China	11G26	H & R ChemPharm (UK) Ltd	UK	17A23
Bekaert Limited	UK	10E62	H Folke Sandelin AB	UK	10C18
Bennett Mahler Ltd	UK	16A15	Häfner & Krullmann GmbH	Germany	9A25
Beta LaserMike Inc	UK	11A78	Hanil Machinery	South Korea	11D60
Bobbio Srl	Italy	16F16	Harrison Spinks Beds Ltd	UK	
Bogimac nv-sa	Belgium	9E02	Hasemann Maschinen	Germany	
Bongard Trading GmbH & Co KG	Germany	11A44	Havel Wire Equipment (Pty) Ltd	South Africa	
Bridon International Ltd	UK		HB Cables & Components Ltd	UK	
British Diamond Wire Die Co Ltd	UK		Hefei Smarter Import & Export Co Ltd	China	11D08
Buehler Wuerz Kaltwalztechnik GmbH	Germany	12A26	Hempel Wire Ltd	UK	11D18
BWE Limited	UK	11F26	August Hildebrandt GmbH - Kabeltrommeln	Germany	12E04
Cabelte-Cabos Electricos E Telefonicos, SA	Portugal		Hill International (Non Ferrous) Ltd	UK	
Cable Tapes UK Ltd	UK	11E05	Hind Engineering & Wire Products	India	
Caledonian Cables & Wire	UK		Hod Metal Products & Manufacturing Co Ltd	Israel	
Caledonian Cables Limited	Hong Kong		Holton Crest Ltd	UK	11H39
Can-Eng Furnaces Ltd	Canada		Huestis Industrial	USA	9F05-01
Ceeco Bartell - Bartell Machinery Systems	Canada	9F64	Huntstar Trading Ltd	UK	
CeramTec GmbH	Germany	10F21	IBA Industrial	Belgium	10E44
Chains Power & Machinery Technology Co Ltd	China	16H76	ICE Wire Line Equipment Inc	Canada	11J05
Chaplin Bros (Birmingham) Ltd	UK		IMI Scott Ltd	UK	
Chemetail Ltd	UK	10B26	Inductotherm HWT (Radyne)	UK	9E47
China Southern (Group) HK Ltd	Hong Kong		Innovites B.V.	Netherlands	11C22
Cimteq Ltd	UK	11D21	Institute of Spring Technology Ltd	UK	16A28
Clynder Cables Limited	UK		Integer Research Ltd	UK	
CMI Beugin	France		Interlink Import-Export Ltd	UK	
CMI UVK GmbH	Germany		Intras Limited	UK	11D28
Commission Brokers Inc	USA		Itaya Europe limited	UK	16A39
Condat Ltd	UK	10D56	Ito-Sin Deyang Wire & Cable Equip Co Ltd	China	11D22
Consultex Sp. z.o.o.	Poland		Jersey Strand & Cable Inc	USA	
Control and Power Engineering Ltd	UK		JG Tec Ltd	UK	
Costa Machinery GmbH	Germany	11A27	Jiangsu Dawn International Trading Co Ltd	China	
Crownhill Consultancy Services	UK		Jiangsu Gaohe Mechanical & Electro Equip. Co Ltd	China	
CRU Group	UK		Jyd Tech & Industry Co Ltd	China	
Daoo Machinery	China	10E38	Kieselstein GmbH	Germany	10E17
Danross Engineering	UK		Kiran Cables Pvt Ltd	India	
Data M Sheet Metal Solutions GmbH	Germany		Kiveton Park Steel Ltd	UK	11G21
Dongguan Zhangli Machine Fitting Co Ltd	China	16H44-04	Koner SpA	Italy	
Dosani & Co	India		Kuwait Petroleum International Lubricants	UK	11D25
Drahtwerk Waidhaus GmbH	Germany		Lamnea Bruk AB	Sweden	9A06
Draka Wire (Part of Draka UK Ltd)	UK		Leggett and Platt Wire Group	USA	9F13-02
DSE Test Solutions A/S	Denmark	9F31	Leoni Temco Ltd	UK	11A40
E Braude (London) Ltd	UK		Locton Ltd	UK	11F17
Eder Engineering GmbH	Austria	10A40-02	Machinery International Corporation	USA	
Er-Bakir Elektrolitik Bakir Mamulleri AS	Turkey	10C61	Madem SA Ind E Com de Madeiras	Brazil	12E70



# Rate Members Machinery Association

At wire Düsseldorf 2012 are shown in purple. (Correct at time of going to press, 23<sup>rd</sup> January 2012)

Name	Country	Stand	Name	Country	Stand
Mahajan Engineering Works	India		Shanghai Yuanjun Precision Tungsten Carbide Manufactory	China	
Maillefer SA	Switzerland	10D21	SICTRA Srl	Italy	
Manentimacchine Srl	Italy	16D03	Siddall & Hilton Products Ltd	UK	
Marldon Group Limited	UK	9E34	Siebe Engineering GmbH & Co KG	Germany	10D22
Maschinenf. Johann Leimbach GmbH	Germany	11B34	Sikora AG	Germany	9A41
Mathiasen Machinery Inc	USA	12A22	Simplex Rapid Srl	Italy	16D16
Medek & Schörner GmbH	Austria	10A56-01	SIMS Copper Sdn Bhd	Malaysia	
Meisenbach GmbH	Germany	9C01	Sinosteel Zhengzhou Research Institute	China	17E66-01
Meltech Engineering Ltd	UK	9C73	Sjogren Industries Inc	USA	11C34
Meltech-CRE	UK	9C73	SKET Verseilmaschinenbau GmbH	Germany	11G44
Menam Stainless Wire Public Co Ltd	Thailand	11F21	Smeets SA - Loypos	Belgium	10G72
Meshtec International Co Ltd	Thailand		SMS Meer GmbH	Germany	
Metalube Limited	UK	11G25	Sneham International	India	16B79
MGS Manufacturing Inc, C/O Northampton Machinery	UK	9D14-07	Solvay Padanaplast SpA	Italy	12B53
Microdia SA	Switzerland	11D27	SPL Developments Limited	UK	
Mikrotek Machines Ltd	India	11E06	Spring Expert	UK	
Mittal Steel Kent Wire Ltd	UK		Spring Tooling Ltd	UK	16D24
Mount Joy Wire Corporation	USA		Stanaway Wire Ltd	UK	
MPI Machines (P) Ltd	India	11J01	Steel-Wire Europe Ltd (Capegate)	UK	9A14
Nano-Diamond America Inc	USA	11C24	Stonepark Consultancy Ltd	UK	
National Cable & Wire Manufacturing Co	Jordan		August Strecker GmbH & Co KG	Germany	10A21
Neptco Incorporated	USA	9E41	Super Link Holding Ltd	China	
Nexans Deutschland Industries GmbH & Co KG	Germany	9B42	Supermac Industries India Ltd	India	11G05
Niehoff GmbH & Co KG	Germany	10C18	Syrma SA	Greece	
Nirman Maschinen Fabrik	India		T M Associates	UK	
NOTA	Poland		Techna International Ltd	UK	
OMA (UK) Ltd	UK	10A39	Techno Commerce Ltd	UK	
OMA Srl	Italy	10A39	Technokabel SA	Poland	10H69
Ormiston Wire Ltd	UK		Tecnocable SA	Spain	
Outokumpu Stainless Ltd, ASR Rod Mill	UK	11G17	The Multiple Winding Co Ltd	UK	
Ozel Elektrolitik Bakir Mam. San. ve Dis	Turkey	17A32	The Worshipful Co of Tin Plate Workers Alias Wire Workers	UK	
P F Consulting	UK		Thompson & Hudson Wire Machinery	UK	
Pakistan Cables Ltd	Pakistan		Threesixty Extrusion Technology Ltd	UK	9B68
Pan Chemicals SpA	Italy	9B05	Tianjin Jianke Mechanical Products Co Ltd	China	
Pan-China Fastening Systems Co Ltd	China		TRAXIT International GmbH	Germany	9F26
Pave Automation Design & Development	UK	12C67	Triangle Cables	Australia	
PJSC Donbasscable	Ukraine		Tri-Wire Ltd	UK	12A42
Plasmait GmbH	Austria	10A56-10	Troester GmbH & Co KG	Germany	10F62
Pneufom Machines Ltd	UK		Tulip 3p Media Private Ltd	India	
Premier Stainless Steel Wires Pvt Ltd	India		U Gear Automatic Machinery Ltd	Taiwan	
Pressure Welding Machines Ltd	UK	9B41	Joachim Uhing KG GmbH & Co	Germany	11B40
Proton Products International Ltd	UK	11D77	UK Dies Group Ltd	UK	
PS Costruzioni Meccaniche Srl	Italy	10B21	United Wire Inc	USA	
QED Wire Lines Inc	Canada	12A53	Upcast OY	Finland	9C06
Queins Machines GmbH	Germany	9B06	Warbrick International Ltd	UK	
Ratnamani Infra Power Pvt Ltd	India		WCISA c/o Wire Lab Company	USA	
Rautomead Limited	UK	10E56	Weber & Scher Mfg Co Inc	USA	10B71
Reber Systematic GmbH	Germany	10H62	Webster & Horsfall Limited	UK	11E21
Reelex Packaging Solutions Inc	USA	9F06	Well Gain Cable Systems (Shanghai) Ltd	China	12E71
Report KY KB	Finland		White & Street International Ltd	UK	
RG Attachments Ltd	UK	11C26	Whitelegg Machines Ltd	UK	11G28
RichardsApex Europe Limited	UK	9F21-02	Wiedenbach A H GmbH	UK	
Ridgway Machines Ltd	UK	10G46	Wintwire Ltd	UK	
RK Umformtechnik GmbH & Co KG	Germany	12A77	Wire & Cable Technology International	USA	9D14-04
Roblon Industrial Fiber	Denmark	9F41	Wire & Plastic Machinery Corp	USA	9F21-01
Rosendahl Maschinen GmbH	Austria	9A60	Wire Association International Inc	USA	11B25
Rowan Cable Products Ltd	UK		Wire Koerner GmbH	Germany	9C14
RR Kabel Ltd	India		Wire Lab Company	USA	10H40
S K Wiring Products Ltd	UK		Wire Machinery Consultancy Ltd	UK	
SAMP SpA. - Sampsistemi Division	Italy	9C74	Wuxi Jiexiang Machinery Factory	China	
SANT Engineering Industries	India		Wyrepak Industries	USA	
Sanxin Wire Die Inc	USA		Xiamen New Steel Metal Products Ltd Co	China	
Sarkuysan Elektrolitik Bakir San ve Tic	Turkey	10H75	XL Technologies UK Ltd	UK	
Scapa Cable Solutions	UK	10D75	Zarhak Steels Ltd	India	
Rolf Schlicht GmbH	Germany	12A35	ZDB Group a.s.	Czech Republic	9C59
Hans Schmidt & Co GmbH	Germany	9B22	Zenith Enterprises	India	
Shanghai Kechen Wire & Cable Machinery Co Ltd	China	11E31	Zephyr - One Ltd	UK	
Shanghai Lizhi Machinery Co Ltd	China		Zhangjiagang Donghang Machinery Co Ltd	China	
Shanghai Nanyang Equipment Co Ltd	China	11D32	Zumbach Electronic AG	Switzerland	11D43
Shanghai Yessjet Precise Machinery Co Ltd	China		Zyklomat Erich Fetzer GmbH & Co KG	Germany	

## Further growth confidently expected for wire China 2012

From 21<sup>st</sup> to 24<sup>th</sup> September, wire and Tube China 2010, considered to be the world's second largest joint wire and tube fairs and Asia's largest for the industries, successfully took place at the Shanghai New International Expo Center (SNIEC).

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<sup>2</sup>, compared with 57,500 from 2008. Of this 74,500m<sup>2</sup> wire China 2010 occupied 40,000 and Tube China 2010, 34,500. It attracted more than 1,300 exhibitors from around the world compared to 1,098 in 2008.

All the post event feedback from wire China 2010 was positive with many exhibitors saying that a good number of orders had been placed and many business opportunities had resulted from the exhibition.

In particular, some pavilions and exhibitors said that they would expand their stand space at the next trade fair in order to increase their business. There were pavilions from 10 major countries and regions: Austria, UK, France, Germany, Italy, Spain, North America, Taiwan, Japan, and South Korea.

A great number of visitors from Japan, Korea, Taiwan, Malaysia, India, Nepal, Thailand, Indonesia, Philippines and Vietnam, attended the exhibition. Trade visitors rated this exhibition highly and they expressed their

satisfaction with the services provided by the organisers. Many visitors confirmed that they would certainly attend the next wire China in 2012.

Wire China 2010 was jointly organised by Shanghai Electric Cable Research Institute (SECRI) and Messe Düsseldorf China Ltd and Tube China 2010, jointly organised by the Metallurgical Council of the China Council for the Promotion of International Trade (MCCCPIT) and Messe Düsseldorf (Shanghai) Co Ltd.

These sister exhibitions will take place again at the SNIEC from 25<sup>th</sup> September to 28<sup>th</sup> September 2012. Given the overwhelmingly positive feedback from 2010 and the clear intention of a number of exhibitors and exhibitor groups to book larger spaces for wire China 2012 there seems little doubt that this year's edition will demonstrate further growth, and IWMA members interested in participating are well advised to commit as early as possible.

The IWMA, a main international sponsor of wire China, will provide support facilities for members on its well located stand and will also offer Dragon exhibitor packages to members and non-members, subject to availability in good areas close by.

### DRAGON EXHIBITOR PACKAGE *wire China 2012 25<sup>th</sup>-28<sup>th</sup> September*

- Shanghai New International Expo Centre (SNIEC), China

- 12m<sup>2</sup> (130ft<sup>2</sup>) Fitted and Carpeted Stand €4,300
- 3 Leather Chairs; Lockable Counter; Square Table; Waste Basket; 3 Spotlights
- 1 x 220v Power Socket; Fascia with company name (max 20 English/12 Chinese letters)
- Daily Stand Cleaning; Prime location in IWMA area
- Meet & Greet Service Pudong Airport (4 persons max) to SNIEC area hotels
- Interpreter/Hostess (English/Mandarin); Overnight Security for items left on IWMA stand
- Free Internet, hospitality, beverages, additional interpreter service at IWMA stand
- Continuous assistance with preparation and advice via IWMA office
- Free visa invitation letters for anyone booking hotel rooms via Pacific World Shanghai (IWMA official travel agents)
- Optional Extras
- Very special room rates at the Eton Hotel (convenient for SNIEC) via Pacific World Shanghai
- Additional fittings; Extra interpreters; Meet & Greet Service to Shanghai city centre hotels
- Other Stand sizes: 15m<sup>2</sup> €5,250; 18m<sup>2</sup> €6,300; 24m<sup>2</sup> €8,150

The Dragon exhibitor package is offered at cost to members, subject to availability, without a management fee. Non-members' fee €195 (includes 1 year's free membership of IWMA)

Please Contact IWMA for more details about booking a Dragon exhibitor package. Website: [www.iwma.org](http://www.iwma.org)

## Sole agents for Brazil

Medek & Schörner has appointed Brastec Technologies Ltda as sales representative for Brazil.

For decades now, Medek & Schörner has been a leading cable marking machines and optical fibre coating lines manufacturer. The only company operating in this market segment, Medek & Schörner covers virtually the entire spectrum of machines for marking cables and coating optical fibres.

The manufacturing programme includes state-of-the art cable marking machines such as gravure printers, length marking machines, ring markers, laser printers and

custom-made marking machines.

Equipment from Medek & Schörner for colour coding and coating optical fibres is noted for its high output, flexible modular design and ease of operation.

The company's long experience in the marking and coating of optical fibers is reflected in an outstanding technological system that ensures gentle treatment of the sensitive optical fibres at all stages of processing. All components of the equipment are of modular design, and can easily be configured to form complete systems.

Brastec Technologies Ltda has been involved in equipment capable of completely supplying the production lines of wires and cables in automotive extrusion, energy and telecommunication cables, including fibre optics.

**Medek & Schörner – Austria**  
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**Website:** [www.medek.at](http://www.medek.at)



**Brastec Technologies Ltda – Brazil**  
**Fax:** +55 11 452 559 20  
**Email:** [marcello.giacaglia@brastec Ltda.com.br](mailto:marcello.giacaglia@brastec Ltda.com.br)

## Capacitance 2000 assures loss-free data transmission

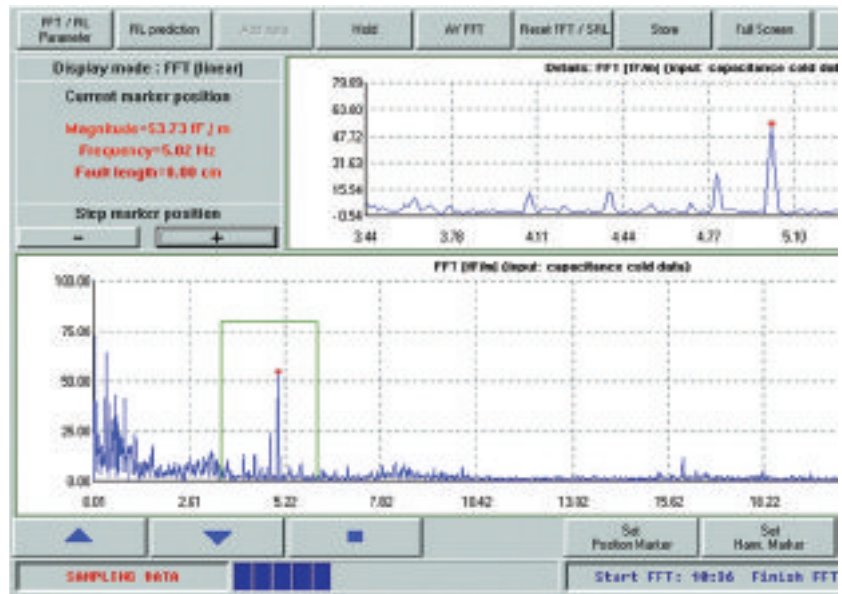
For all LAN, coaxial, telephone or RF cables the loss-free transmission of high frequency, analogue or digital signals is a major quality feature. In this context, the measurement of the capacitance plays an important role. The capacitance influences the impedance of the cable for the specified frequency range and thus the quality of the cable significantly.

Capacitance 2000 is a measuring device, which is installed in the cooling trough and measures the capacitance of the wire insulation precisely. At the same time, the system determines capacitance changes, provides an extremely fast measuring value update and detects bare wires.

This technology is realised by the combination of one short and two long measuring electrodes, which are integrated in a measuring tube. The short measuring electrode of 10mm length identifies periodical capacitance variations with high spatial resolution by means of Fast Fourier Transformation (FFT).

From the FFT data, the Structural Return Loss (SRL) is determined and gives information about the expected attenuation of the RF signal during data transmission. The long measuring zone measures with high precision the average value of the capacitance.

The avoidance of periodical changes of the cable is a precondition for an optimum attenuation characteristic, whereas the critical interval of the periods is the shorter the higher the



▲ Capacitance 2000 measures the capacitance and determines periodical capacitance variations by means of Fast Fourier Transformation (FFT)

targeted data transmission rate for the cable increases.

These periodical changes are determined by the multizone technology of the Capacitance 2000, as all parameters that influence quality (eg conductor diameter, foaming, outer diameter) are reflected in the capacitance. The accuracy is 0.1 pF per metre. At line speeds of up to 2,400m/min predictions of the Structural Return Loss of 3 GHz, respectively 8 GHz up to 1,300m/min are possible. In this way, the defined impedance of the cable can be reproduced accurately.

The detection of periodical capacitance variations and the prediction of the Structural Return Loss (FFT and SRL) are available as special features directly at the measuring tube via a diagnosis interface. For displaying the measuring values Sikora offers the processor systems Remote 2000 as well as the Ecocontrol 600/1000/2000. The presentation of FFT and SRL is possible via the Ecocontrol 1000 or 2000.

**Sikora AG – Germany**  
**Fax:** +49 421 489 0090  
**Email:** sales@sikora.net  
**Website:** www.sikora.net



## Comprehensive solution from Cable Tapes

Cable Tapes UK provides a comprehensive solution for the cable industry, supplying a complete range of cable materials.

Having grown rapidly over the last two years by providing top service and excellent value for money, the company is looking to expand outside the UK and is looking forward to its first exhibition in Düsseldorf.

Founded by Martin Van der Zwan and Paul Haines and with over 50 years

of combined experience in the cable industry, Cable Tapes has used its comprehensive knowledge of material requirements and supply chain needs within the industry.

Core products are mica tapes, foil and film tapes, woven and non-woven tapes, water-blocking tapes and yarns, fillers and polypropylene twine but there are many other products where the company has helped source new materials and supply solutions for customers.

It can deliver direct from partner factories or can slit and spool bespoke solutions from the Manchester warehouse stock for a really fast turnaround.

Cable Tapes UK now have the added ability to supply taped conductor and taping services.

**Cable Tapes UK Ltd – UK**  
**Fax:** +44 161 740 544  
**Email:** paul@cabletapesuk.com  
**Website:** www.cabletapesuk.com





## Pioneering PS



▲ The PS630/15 2B from PS Costruzioni

PS Costruzioni has recently pioneered its latest cable packaging line model, the new double automatic spooling line, PS630/15 2B, a result of the tangible reminder of PS's commitment to material-technology based innovation and product development.

This machine, which executes the manufacturing process fully automatically, has already been sold and installed by some of the most

demanding customers throughout the world, who are already taking advantage of its engineering excellence and high level of performance.

Another outstanding strength of this machine is that it is "ad-hoc" and built with the distinctive features of reliability and solidity. It is capable of working on three shifts, giving customers the chance to maximise their investment.

**This line has been conceived to work with the following technical features:**

- Spools diameter: from 400mm up to 630mm
- Flexible Cable diameter: from 6mm up to 15mm
- Rigid Cable diameter: from 6mm up to 10mm
- Flat Cable: width from 4mm up to 16mm
- Thickness from 4mm up to 7mm
- Full spool max weight: 150kg
- Spools wrap material: stretch film.

**Production:**

Linear speed ranging from 0 up to 400/500m per minute, depending on the cable type, length in metres to be wound and diameter of the reel barrel.

**The line consists of:**

- Driven pay off
  - Accumulator
  - Metre counter and one spark tester
  - Double automatic spooling head (400/630)
  - Labelling machine
  - Automatic pallet unit
  - Automatic pallet wrapper
- This machine is available in different models, depending on spool dimensions.

**PS Costruzioni Meccaniche Srl – Italy**

**Fax:** +39 0689 8769

**Email:** ps@pscostruzioni.com

**Website:** www.pescostruzioni.com

## Re-branding for cable products

H&R ChemPharm is proud to announce the re-branding of all cable products under the name of Dussek-Campbell.

The world renowned Dussek-Campbell brand will be used for all existing and new product developments for the cable industry.

H&R ChemPharm is the only manufacturer that can offer water-blocking technology for telecommunication, fibre-optic, medium and high voltage power cables, joints and accessories.

Based in the UK, the cable compound business benefits from additional production capability in Australia, South Africa and Thailand, as well as from investment in a new cable compound production facility in Ningbo, China.

Customers are supported worldwide by an experienced support team and an extensive network of agents and distributors.

The product range originates from the globally recognised Dussek Campbell and BP cable compound brands. These include Insojell, Dijell and Naptel petroleum jellies, Optifill and Rheogel thixotropic gels for filling and flooding, the T series of dielectric fluids for high voltage AC paper insulated cables, Napelec and ND impregnating compounds for MV DC cables, and T2015 for EHV DC paper insulated cables.

Innovative product development has yielded many new products in both the telecommunication and energy cable sectors, including the H2000 range of hydrogen-absorbing gels

for OPGW, OPPC and submarine fibre optic cables. Sahara product delivers particulate-free water-swelling coating technology enabling exciting new cable designs. Tracer technology solutions offer rapid leak location in low pressure oil-filled HV cable networks.

Latest developments include new strand blocking compounds for XLPE submarine cables, overhead conductor greases for corrosion protection and ETPR compounds designed for use in copper telephone cables.

**H & R ChemPharm – UK**

**Fax:** +44 121 522 0115

**Email:** uk.sales@hur.com

**Website:** www.hur.com



## Awards time

Applications have now opened for the 2012 Wire Forming Technology International Technical Achievement Awards.

The awards are given out annually to individuals in the spring making and wire forming industry who have been responsible for major technical developments related to equipment, materials or accessories for making springs, wire formed parts, wire mesh or rebar products.

### Winners of the 2011 awards are:

Thomas A Kunkler, of TAK Enterprises Inc.

Nominated for his contributions in innovation of wire processing equipment over the past 30 years, among the equipment that Thomas has helped develop are: The four-plane, roller-style wire straightener; a motorised fine-wire

payoff for delicate, small diameter wires; a bench-sized, automatic, straight, feed and cut-to-length machine for fine small diameter wire; a programmable rotary wire straightener that allows every element of the process to be independently set using a touchscreen interface controller.

Roman Krzanowski, of Dudek & Bock Spring Manufacturing Co.

Roman was nominated for his work over the past ten years in replicating the company's broad main plant product line at a new plant in Mexico – from spearheading the launch of the Mexico plant in 1999, he has been responsible for start-up, training and transfer of equipment/technology.

The awards honour individuals responsible for major practical innovations that have improved the

way springs, wire formed parts, wire mesh or rebar products are made or how they perform. Unlike other industry awards, there is no time limit on when the nominees technical development was made – be it the last year, several decades ago or somewhere in between.

Nominations, to be sent by email, should include: The name of the nominee together with background information on them, a description of the technical development made by the nominee, and a picture of the nominee.

**The deadline for applications is Friday, 12<sup>th</sup> October 2012**

**Wire Forming Technology International – USA**  
**Fax:** +1 330 864 5298  
**Email:** mcnulty@wireformingtech.com  
**Website:** www.wireformingtech.com



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## GEO-Reinigungstechnik

GEO-Reinigungstechnik will present at this year's wire fair in Düsseldorf cleaning systems and components for the improvement of surface quality of long products like wires, cables, strips and tubes.

Priority is given to wet chemical and mechanical cleaning procedures. Besides GEO's recognised highly efficient ultrasonic cleaning systems, yielding excellent surface quality even at high processing speeds, the flexible and reasonably priced wiping system "Primary Wire Wipe" will be of particular interest.

The patented Primary Wire Wipe is designed to remove visible dust and excessive lubricants from wire and strand or small strips. It is an economical, low-maintenance, environmentally friendly alternative to traditional wipers such as felt pads or pieces of rag.

In addition the PWW has been proven very successful in applying

different types of lubricants and finishes. The compact design enables space-saving installation either in-line or in front of production equipment for bolts, rivets, U-shaped staples etc.

The programme is completed by powerful air wipes and a wide variety of spiral brushes with metal and synthetic filaments in standard sizes and custom-made versions.

The GEO range of equipment consists of a complete range of ultrasonic, high pressure, spray and mechanical cleaning systems for the in-line or off-line cleaning of wire, strip, cable, tube, rod, bar and ultrasonic baths for component cleaning.

**GEO-Reinigungstechnik GmbH – Germany**  
**Fax:** +49 254 295 552 91  
**Email:** [info@geo-reinigungstechnik.de](mailto:info@geo-reinigungstechnik.de)  
**Website:** [www.geo-reinigungstechnik.de](http://www.geo-reinigungstechnik.de)



▲ The Primary Wire Wipe

## AIM open house success

More than 180 visitors from all over the world turned up at the joint open house staged by AIM, Inc.

The event was hosted at the AIM factory in Addison, IL, 20 miles west of downtown Chicago and took place in parallel with the Fabtech trade show. Three co-sponsors – RMG, Krueger Steel and Fanuc Robotics – also presented their equipment.

AIM, Inc and the co-sponsors rolled out their new innovations with 12 machines on display, covering the majority of wire bending and manufacturing requirements. The newly updated "Synchro" bender design was applauded by veterans in the business and characterised as the most innovative machine with the least production limitations currently available.



▲ AIM machines on display at the open house

Fanuc Robotics showcased its new low inertia robots where a robot was picking parts directly from a CNC bender. RMG showcased a high capacity drawing unit directly feeding a 12mm 3-dimensional AIM CNC Bender showing a complete from rod to finished part production solution. All the wire used for the open house was provided by Krueger Steel and many of the visitors recognised the high quality of the steel.

"Just a few days ago, we learned that in spite of the recession, AIM team set another record yet this year. We had another stellar year with a growth of 28% in sales and 34% in number of machines shipped," said Constantine Grapsas, the company's founder and managing director.

"The event turned out excellent," he continued.

"The idea was to showcase complete automated solutions and work cells along with educating about the new technologies available in a concentrated space with more than a dozen engineers constantly providing answers to the visitors. I know we achieved our goals."

**AIM Inc – USA**  
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**Website:** [www.aimmachines.com](http://www.aimmachines.com)





## Wire & Cable India 30th October-1st November 2012, Hall 1, Bombay Exhibition Centre

Full details of this year's exhibition are available on the IWMA website including: a fact sheet; post show report on Wire & Cable India 2010 and an application form for space for 2012. Any organisations wishing to be in a good location as part of the IWMA group with the Maharaja exhibitor package are invited to contact the IWMA as soon as possible.

### From the International Wire & Machinery Association:

- 12m<sup>2</sup> Fully Inclusive Packages
- IWMA members: €3,700
- Non members: €3,850\*
- Fully carpeted booth
- Fascia board with name in black (max. 20 letters. logos extra charge)

- Square table with 3 chairs
- 1 power socket 15A/220V and 1x 100W spotlight per 3m<sup>2</sup>
- Lockable counter
- Waste basket
- Booth assistant (English speaking)
- Daily booth cleaning
- Organiser's registration fee

### Full support services on IWMA booth:

- Internet, hospitality, interpreter service
- Help/local advice based on practical experience
- Wide range of additional furniture/ fittings available at extra cost
- Excellent locations
- 18m<sup>2</sup>: €5,200/€5,350\* members/non-members;

- 24m<sup>2</sup>: €6,700/€6,850\* members/non-members

For more details or to book a Maharaja package please contact the IWMA Secretariat.

The IWMA Executive Board hopes to be co-organising a supporting technical conference to take place on 29<sup>th</sup> October 2012, the eve of the exhibition, featuring a full day of technical papers from international and local experts plus a market overview, all of which are certain to be of great interest to industry professionals in the region. More information will be posted on the IWMA website.

\*(Includes free 1-year IWMA membership)

## Marking of cables and coating of optical fibres

Medek & Schörner will be presenting and demonstrating the following high-performance cable marking machines at wire 2012 Düsseldorf:

### Cable marking machines:

- High quality gravure printers (LAN cables, control cables, etc) for speeds up to 1,200 m/min
- Water misting unit for the application of fine water dust for pre-cooling of the hot wire immediately after the extruder
- Embossing metre markers/hot foil sequential metre markers for highest accuracy of length measurement (power cables, telecommunication cables, optical fibre cables, etc)
- High performance ring markers for marking telephone wires, switchboard wires, automotive cables, LAN cables.

Video system for monitoring the print quality of fast-running cable printing machines, eg allowing real-time inspection for bad quality and/or missing prints

- Laser marking system for cables

### Optical fibre coating systems:

- Top speed optical fibre processing systems
- Optical fibre colour coding up to 3,000 m/min



▲ A Medek CFU production head

- Ring marking of optical fibres
- Tight buffering up to 1,300 m/min
- Fibre ribbon production with excellent ribbon planarity and for speeds up to 1,000 m/min
- CFU production of compact fibre units

Thanks to the modularity and flexibility of its systems, Medek & Schörner have been able to implement other applications, including some outside the field of optical fibres:

- Copper wire insulation with UV varnishes (enamelled wire)
- Manufacture of dimension-sensitive precision micro flexible flat cables (FFC) using UV resins

**Medek & Schörner GmbH Austria**  
**Fax: +43 198 272 96**  
**Email: m+s@medek.at**



## Exhibiting at Düsseldorf

Leggett & Platt Wire Group (LPWG) will be in hall, booth 9/F13-02 at wire Düsseldorf, where senior executives of the group will be joined by European agent, John Stanaway.

LPWG is a wholly owned subsidiary of Leggett & Platt, Incorporated, a US-based, Fortune 500 listed diversified manufacturer that conceives, designs and produces a broad variety of engineered components and products for customers worldwide.

In addition to the many grades of wire produced "in-house", LPWG, in partnership with its worldwide procurement specialist colleagues, is able to source most other grades of wire from partner mills around the world.

As part of the service offered, the LPWG team handles all of the logistics, freeing its customers of the sometimes onerous burden this can entail.

**Leggett and Platt Wire Group - USA**  
**Email: info@leggett.com**  
**Website: www.leggett.com**



## Counting on experience

Eder Engineering Austria – with nearly 65 years' specialist experience – exports 98% of its output in the wire drawing die tool and drawing die processing technology sector (hardware and software) and supplies its products directly and via its network of international representatives.

Eder's portfolio is made up of 80% machines, 15% wire drawing die tools and 5% software (technical assistance).

At wire 2012 in Düsseldorf, Eder will display and offer the following exhibits / developments at its stand:

- Leading Die-Tool processing machines for the repair and/or production of these ultrahard precision tools (standard, semi-automatic and fully automatic conceptions)
- New EDDS-2 die-tool identification and read-out system (hard and software)
- Die workshop ancillary equipment (cleaning-/measuring devices, microscopes)
- Technical assistance (installation, training, die-reconditioning know-how, etc)
- Precision wire drawing die-tools made from tungsten carbide, natural diamond and synthetic. PCD-diamond materials.
- Die tool working materials (eg diamond powders, pastes, suspensions, grinding pins).

**Eder Engineering – Austria**  
**Fax:** +43 136 749 4949  
**Email:** office@eder-eng.com  
**Website:** www.eder-eng.com



▲ The USP 115 from Eder Engineering

## Pourtier's repeat order from ABB

With well over a century's experience of cable manufacturing and installation, ABB is one of the world's most experienced cable manufacturers.

To handle its biggest projects, ABB needs to rely on heavy duty equipment, especially for the production of high voltage cable with XLPE insulation and, for 20 years now has entrusted Pourtier, a member of the Gauder Group.

ABB has recently once again chosen Pourtier for the delivery of complete lines to manufacture its high voltage power cables including AC cable (Milliken type) as well as HVDC cable (trap wires).

The long collaboration between ABB and Pourtier allows them to become a reference for the future in their respective field.



▲ Pourtier's complete lines for high voltage power cables

**Pourtier sas – France**  
**Email:** sales.pourtier@gaudergroup.com  
**Website:** www.gaudergroup.com

## Ready to meet growing demand

Assomac's business operation is structured into a completely integrated manufacturing facility to meet the growing demands of the customer. Assomac group is engaged in the design and development of low cost and highly efficient wire and cable machinery to the wire industry.

These machines are serving the purpose in large small and medium wire drawing plants both for ferrous and non-ferrous wire manufacturing company.

The machines manufactured by the division are vertical drop coiler, BB type wire drawing machine, MIG (CO<sub>2</sub>) wire drawing plant, dead block coilers, wire galvanising lines (hot dip and electro), wire spoolers, tabular/cage stranding machines, spool take ups, die boring and lapping machine and tubular inverted coilers.

The group is engaged in the production of cold rolling mill (plain and ribbed wire), a new technology that has taken the world in its stride. These machines can produce both plain and ribbed wire by application of rollers and dies.

Assomac is a name synonymous with the wire industry. The company adopts and practices international quality standards to deliver high quality machines, and conducts a series of tests before accepting the raw material for production.

International quality machines, timely delivery and the latest technology lay the foundation for the growth and popularity of Assomac. These attributes have led to the successful export of Assomac machines across the globe.

With the changing economic condition of the world, India is being targeted as a high growth area of the world and a lot of foreign businesses are making India a base for their activity. There is a spurt in the growth of steel wire sector as well as the Indian cable sector, which has seen a 60 per cent growth thanks to a 200 per cent growth in the control cable segment.

On one hand there is a huge opportunity presented by the mandated "Electricity for all by 2012" in India and yet there is the challenge of meeting this inspiring goal within the stipulated period.

**Assomac Machines Ltd – India**  
**Fax:** +91 120 286 6508  
**Email:** info@assomacmachines.com  
**Website:** www.assomacmachines.com

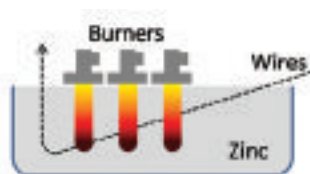


## FIB's new immersion heater tubes

Immersion heater tubes, that are actually immersed into the heart of the galvanising bath to warm-up, now have great efficiency. However, one point used to remain critical: the classically used immersion heater in ceramic tubes presented a poor lifetime.

In view of this statement, a new material was developed: the silicon carbide with nitrite linking.

The absence of free carbon and the good intrinsic resistance to oxidation of this carbide keeps the qualities of thermal conduction.



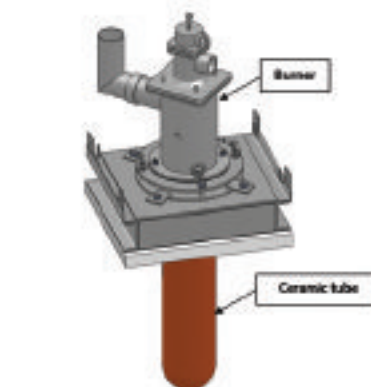
▲ Galva Bruleur Imm

Typically, these tubes are manufactured in silicon carbide (SiC) – oxide (SiO<sub>2</sub>) – carbon with a resin binding.

Also in an oxidised atmosphere and high temperature, inside the tube, the ceramic material "loses" its carbon by oxidation, which destroys its binding phase.

As a consequence of this the tube becomes less and less conductive.

In six months, the installation output drops with more than 6 per cent, bringing an over-consumption of gas and the necessity to replace the



▲ Burner and tube

Thanks to a better thermal conductivity, the new tube gives better results than the traditional tube (almost five per cent when started, ten per cent after six months) and keeps its thermal characteristics. The new tube now has a lifetime that is at least three times higher than the traditional.



▲ Fib old and new tube

The advantages are:

- More than double the lifetime compared to the classic ones
- Insensitivity to fumes oxidation
- Significant energy and maintenance time savings
- Return on investment of €35,000 year (based on a production of 3t/h wires)
- Resistance to zinc and zinc-aluminium

**FIB Belgium sa – Belgium**  
**Fax:** +32 237 637 11  
**Email:** info@fib.be  
**Website:** www.fib.be





# Effect of Boron alloying on microstructural evolution and mechanical properties of high carbon wire

Emmanuel De Moor, Advanced Steel Processing and Products Research Centre, and Walther Van Raemdonck, NV Bekaert SA.

## Abstract

Boron alloying is frequently applied in low carbon steel to tie up free nitrogen and prevent strain aging resulting in improved (torsional) ductility of wire products. The present contribution investigates boron alloying effects in high carbon (0.80 wt pct) steels. Laboratory heats were prepared with boron to nitrogen ratios of 1:1 and 2:1 in addition to a reference heat. The material was hot rolled, drawn, patented and further drawn to 1mm. Mechanical properties were assessed along with microstructural characterisation at each intermediate stage. Limited effects of boron alloying on mechanical properties are apparent.

## Introduction

Electric arc furnace steelmaking is increasingly employed, especially in North America, for steel making operations of long products. The substitution of rimming steel by continuous cast electric arc furnace (EAF) steel imposes challenges on meeting product quality requirements

in particular with respect to (torsional) ductility. This relates to the inherently higher nitrogen content of EAF steel. If the nitrogen is mobile, it can cause strain aging resulting in increased work hardening and reduced ductility of the wire product. Significant research has been conducted to reduce the free nitrogen content of low carbon wire rod grades by alloying with micro-additions of eg boron, vanadium or niobium. 1-Boron alloying of high carbon steel has received less attention and is the focus of present research.

## Experimental Procedure

Boron can combine with nitrogen to form boron nitride according to  $B + N = BN$

and stoichiometry corresponds to a B:N ratio of 11:14 or 0.79 given the atomic weights of boron and nitrogen. Three alloys, with a carbon content of 0.80 wt pct, were designed in current research to have a reference alloy, an alloy with boron and nitrogen in a stoichiometric ratio and one superstoichiometric alloy with a B:N

ratio of 2:1. The latter steel enables a study of the effect of the additional “free” boron on microstructural development and properties. The compositions of laboratory prepared ingots are shown in Table 1 and it should be noted that the ratios in the as-cast compositions were somewhat higher than designed, namely 1.44 and 2.39 respectively in the B and High B alloys. Free boron may hence also be present in the B alloy.

The ingots were hot rolled on a hand charged rolling mill with reheating done at 1,176°C and reduction carried out in three steps on two hot rolling mills. Initially the bars were reduced from 12.7 to 9.5cm round corner square (RCS) followed by air cooling to room temperature, reheating and rolling to 4.76cm. The material was then machined to remove oxides and cut into blocks. Final reduction was carried out on a second hot rolling mill to a final size of 7.1mm. The material was ambient air cooled after hot rolling. The material was then saw-cut to 3.7m lengths, prior to drawing. Twenty-four sections were obtained for each alloy. Although Thermo Calc®

	C	Mn	Si	Cr	B, ppm	N, ppm
Base	0.78	0.48	0.25	0.20	-	42
B	0.82	0.46	0.23	0.20	62	43
High B	0.76	0.47	0.23	0.20	98	41

▲ Table 1

calculations predicted a potential for hot shortness in the High B steel, no breakage or significant surface defects were observed. As significant decarburisation was observed, the material was centreless ground to 5.5mm diameter. The hot rolled rods were then assessed for carbon segregation and only those rods with a carbon content of  $0.78 \pm 0.01$  wt pct were retained for further wire drawing.

Wire drawing was carried out at the Bekaert Technology Centre and involved reduction to 2.5mm diameter in eight drawing steps. Patenting was then conducted in salt baths with reheating at 980°C followed by 520°C. The patented wire was then further drawn to 1mm.

Tensile testing was conducted on an electro-mechanical tensile machine at a constant strain rate of  $5.6 \cdot 10^{-4}$  /s, with a 5cm 50% extensometer. Two samples were tested for each condition. Uniform strains were determined as the engineering strain at the peak load used for UTS calculations, and total strains to failure were obtained from the extensometer output at final fracture. All samples were observed to fail within the specified extensometer gauge length unless otherwise stated. Microstructural characterisation was done by light optical microscopy on 4% Picral etched samples and by transmission electron microscopy (TEM) on a Philips CM120 instrument operating at 120kV. Thin foils were electropolished with a Fischione twin-jet polisher operating at 32V at room temperature, using a mixture of 95 pct acetic and 5 pct perchloric acid.

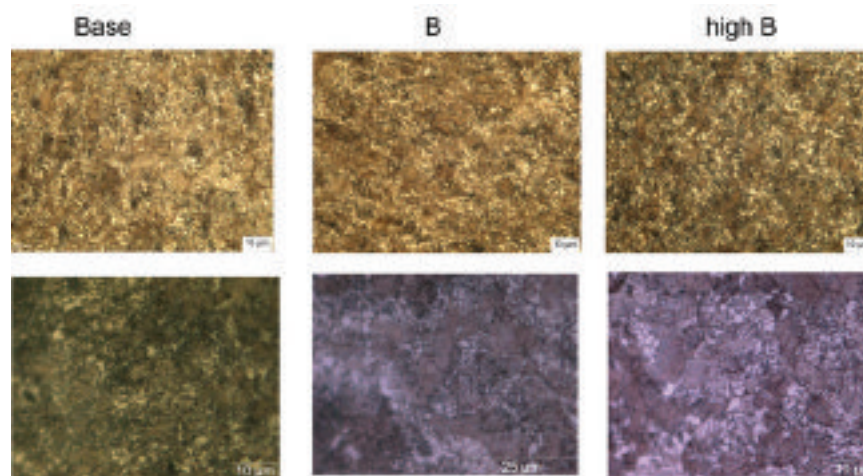
Dilatometry was carried out on a Gleeble® 1500 system. Samples were reheated to 950°C at a constant heating rate of 20°C/s and held isothermally for five minutes. The steel was then cooled in helium gas at programmed constant cooling rates of 50, 30, 25, 12.5, 10, 7.5, 5, 2.5 and 1°C/s, respectively. Consecutive tests were conducted on a single specimen per alloy. The dilation of the sample was monitored with temperature and time.

## Results and Discussion

Light optical micrographs taken in the middle of the cross section of the hot rolled rods are given in Figure

1. Pearlitic microstructures are evident. Pro-eutectoid constituent networks were not observed. TEM was conducted on the superstoichiometrically alloyed steel to evaluate the effect of free boron on microstructural evolution and a representative TEM micrograph is shown in Figure 2. Martensite was not detected, perhaps suggesting that the free boron did not increase hardenability. Boron is known to strongly increase hardenability in low carbon steels. This effect has, however, been reported to be less pronounced in high carbon steels. In order to assess the alloying effect on hardenability,

smooth, “round-house”) yielding. The occurrence of YPE might be somewhat unexpected as the alloy was designed to have nitrogen tied up to boron and the YPE should hence not result from “free” nitrogen strain aging. The behaviour hence presumably relates to carbon strain aging. It should be recognised that the rods were straightened at room temperature following hot rolling, and non uniform strain during straightening may have led to removal of YPE in some cases. Similar tensile strengths and elongations were obtained in the Base and B steel.

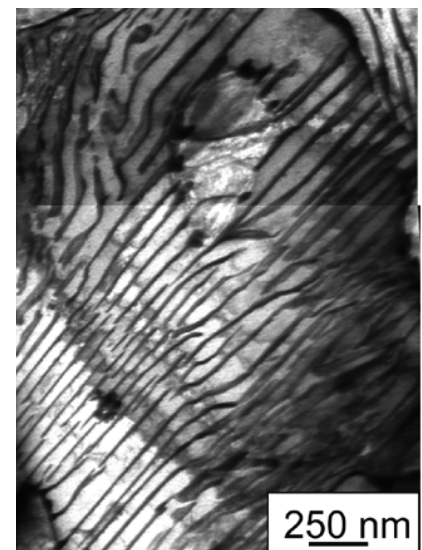


▲ Figure 1

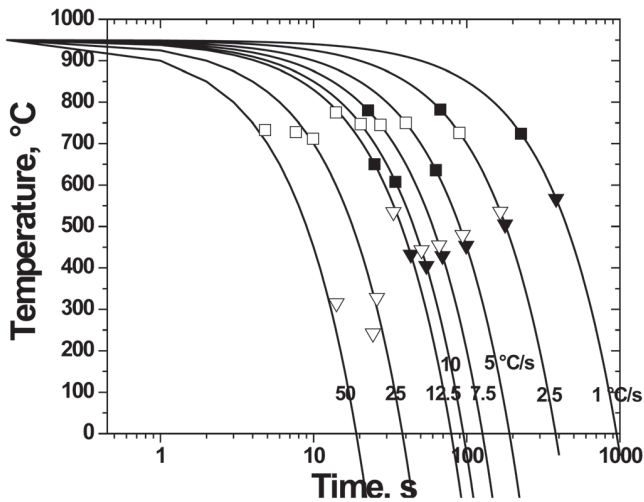
dilatometry was conducted on the base and B alloy as discussed in reference. It was shown that the boron alloying resulted in decreased hardenability as shown in Figure 3 where transformation start and finish temperatures are shown for the Base and B alloy on a temperature as a function of time plot. Various constant cooling rates were investigated as shown. At cooling rates of 25 and 50°C/s, martensite transformation was the only austenite decomposition mechanism detected in the Base alloy whereas pearlite transformation was observed in the B steel. In addition, the B steel exhibited a larger pearlite transformation region.

Stress-strain curves and tensile properties of the hot rolled rods are given in Figure 4 and Table 2. The Base and B steels exhibit very similar stress-strain behaviours albeit that the B steel exhibits a yield point elongation (YPE) whereas the Base steel exhibits continuous (ie

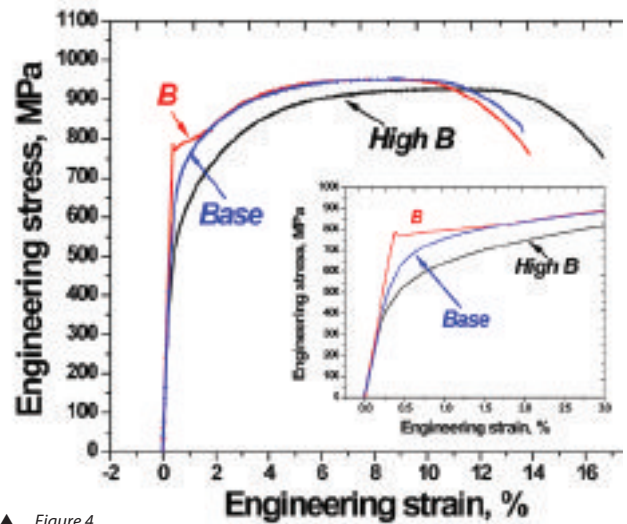
The High B steel exhibited lower strength values; smooth yielding is observed at lower strengths compared to the other steels and an ultimate tensile strength value lower



▲ Figure 2



▲ Figure 3

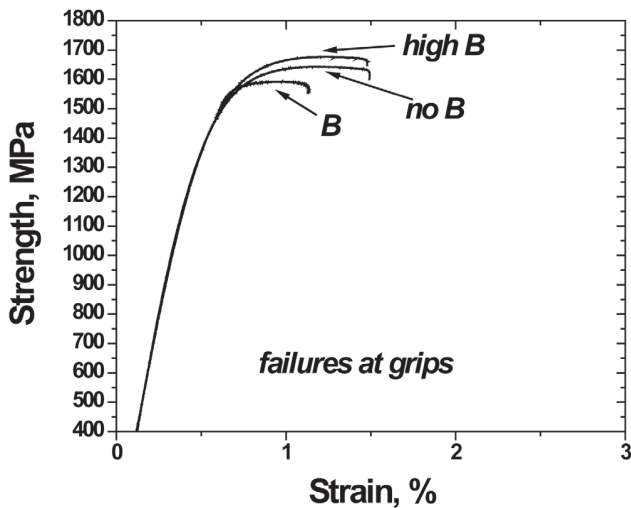


▲ Figure 4

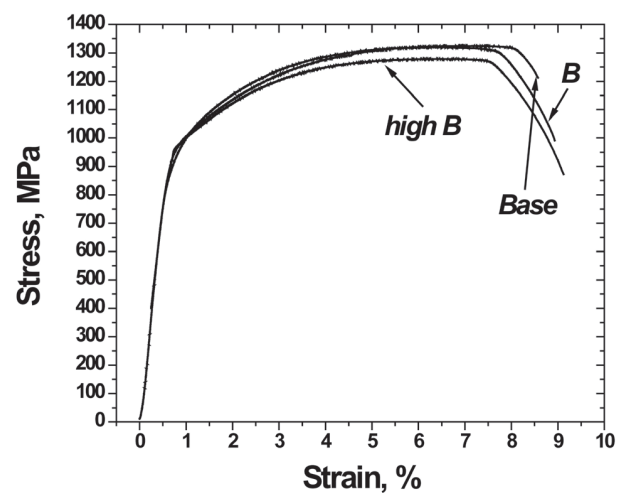
by about 25 MPa was obtained. This strength difference cannot be ascribed to carbon as samples with the same carbon content were selected for testing. A higher tensile elongation was exhibited by the High B steel. It is interesting to note that reduced tensile strength with boron alloying is in agreement with earlier work on low1 and high7 carbon steels and is also in agreement with increased hardenability observed in the dilatometry study. Increased

pearlite transformation kinetics may lead to increased lamellar spacing and/or coarser pearlite. One might also argue that the reduced strength level may be related to reduced solid solution strengthening. It should however be recognised that the B alloy does not exhibit strength reduction compared to the Base. It has been suggested previously that the strength reduction relates to an alloying effect on the austenite to ferrite1 or pearlite11 transformation.

Mechanical properties following wire drawing to 2.5mm diameter are given in Figure 5a and Table 3. In the drawn condition, the B steel exhibits the lowest tensile strength and elongation, the High B steel exhibits the highest tensile strength and higher elongation compared to the B steel. The Base steel exhibits similar uniform and total elongation compared to the High B steel albeit at a lower tensile strength. It should be recognised that failures



▲ Figure 5a



▲ Figure 5b

	UTS, MPa	UE, %	TE, %
Base	952	9.4	13.7
B	951	8.2	13.9
High B	926	11.2	16.6

▲ Table 2

		UTS, MPa	UE, %	TE, %
Drawn to 2.5 mm	Base	1644	1.2	1.5
	B	1592	1.0	1.1
	High B	1677	1.2	1.5
Patented at 2.5 mm	Base	1324	7.3	8.6
	B	1317	6.7	8.9
	High B	1277	6.7	9.1

▲ Table 3



	UTS, MPa	UE, %	TE, %	Nt	Nb
Base	2263	0.4	1.5	35	11
B	2283	0.4	1.5	36	10
High B	2257	0.4	1.5	36	8

▲ Table 4

occurred at the tensile grips which likely influenced the total elongation values.

Tensile properties obtained after patenting at 2.5mm diameter are given in Figure 5b and Table 3. Similar tensile strengths are obtained in the Base and B steel whereas the High B steel exhibits an ultimate tensile strength lower by about 50 MPa. This lower strength value may again be related to increased austenite decomposition kinetics. Slightly higher total elongation is obtained for both boron containing steels.

The patented wires were subsequently drawn to 1mm diameter in consecutive passes and resultant tensile properties in addition to number of twists to failure (Nt) and number of reverse bends (Nb) are given in Table 4. A decrease in tensile strength with boron alloying is again apparent along with a slight increase in uniform and total elongation. The number of twists to failure is however not altered by the alloying whereas a slight decrease in number of reverse bends is observed with increased boron levels. In order to assess aging response of the 1mm drawn wire, isothermal aging was conducted at 150°C for one hour and the results are given in Table 5. A tensile strength increase by about 170MPa is obtained whereas tensile elongations are reduced to 0.4% uniform and 1.5% total elongation. Similar elongations were obtained in all alloys. Similar twists to failure were again observed in all alloys albeit at lower levels as for the unaged material. The trend of reduced reverse bends with increased boron levels is again observed in the aged condition and about one bend less is obtained in the aged condition versus the unaged condition for all steels. This suggests that the boron alloying does not affect ductility significantly at the levels of nitrogen

investigated. It should be noted that the nitrogen levels of the present heats of approximately 40ppm are on the lower end of industrially produced material.

## Conclusion

The effect of boron alloying of 0.80C steels to tie up “free” interstitial nitrogen was investigated. Heats with B:N ratios of 1.4 and 2.4 in addition to a base alloy without boron were laboratory prepared, hot-rolled, drawn, patented and further drawn to a final diameter of 1mm. Microstructural characterisation was conducted and tensile properties were assessed. Limited effect of boron alloying was apparent at the investigated nitrogen levels on wire properties in particular torsional ductility. Reduced ultimate tensile strength was observed in the High B steel.

## Acknowledgements

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