

TUBE & PIPE

SEPTEMBER 2012

管道技術

Technology

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Straightening

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ANSHAN, CHINA 2007 - ERW/API 8"-24"Ø



JOHANNESBURG, SOUTH AFRICA 2008- ERW/API 8"-24"Ø



SOHAR, OMAN 2010 - ERW/API 8"-24"Ø



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148 Precise, energy-efficient induction systems for the tube and pipe industry

By Gerd Ommer, Co-author: Dirk M. Schibisch, SMS Elotherm GmbH



The September Issue

Welcome to the latest issue of Tube & Pipe Technology. This issue we have features on drilling, piercing and punching technology and measuring and marking as well as a comprehensive round-up of all the latest industry and technology news.

Trade show season really has taken off now and many of you will be heading for a successful Tube China. In this issue we look at EuroBLECH 2012 in Hanover, Germany, FABTECH 2012 in Las Vegas and, last but not least, a show I will be visiting for the first time this year – Tube India 2012 in Mumbai. The potential for growth in metal-related industries in India over the next few years alone is staggering and I am looking forward to visiting one of India's foremost industrial capitals at an exciting time in the country's history. It is said there will be billions of pounds of investment opportunities in the country over the next few years just in metal-related industry so it's a vital country to get involved with.

In the November issue we will be taking a look at another growing show in a very important part of the world for anyone working in the tube and pipe machinery industry – Tube Arabia 2013. I will also be visiting this show so I hope to see many of you there. We will also have a feature on the latest developments in tube and pipe mills as well as a look at blasting, coating, jacketing and galvanising technology.



Rory McBride – Editor



Front Cover Story

Randolph Tool Co, Inc offers the highest quality tube cut off blades and die jaws in the industry, manufactured to your specifications to best suit your production needs by true craftsmen with the best manufacturing procedures in the the industry as well as a reputation for exceeding expectations. Randolph Tool, which was established in 1968, deals direct to save you money. Fax a drawing of the blades, dies, jaws or repair parts for your tube mills that you require. You will receive a quote

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Thermatool and WEMPCO agree induction welders deal

THE International Tube & Pipe Fair in Düsseldorf marked a significant day for both Thermatool and Western Metal Products Company limited (WEMPCO) of Nigeria, in association with Salzgitter International, as an agreement was signed for the future supply of 22 Thermatool high frequency induction welders.

Mr Lewis Tung, managing director of WEMPCO, Mr Walt Albert, president of Inductotherm Heating & Welding (Thermatool's European headquarters) and Mr Theobald Albrecht, director of business Africa, Salzgitter – signed the deal at the Inductotherm Group stand at Düsseldorf.

Mr Tung, having already taken consideration from the operation and service of a Thermatool Alpha Shear System and Welder installed in 2011, expressed his future intention to use

Mr Lewis Tung, managing director of WEMPCO, Mr Walt Albert, president of Inductotherm Heating & Welding and Mr Theobald Albrecht, director of business Africa, Salzgitter.



European built Thermatool equipment in his tube, pipe and profile production.

This considerable investment will span a five-year plan for which Thermatool has committed to provide complete support, service, spares and on-going training of the WEMPCO personnel in

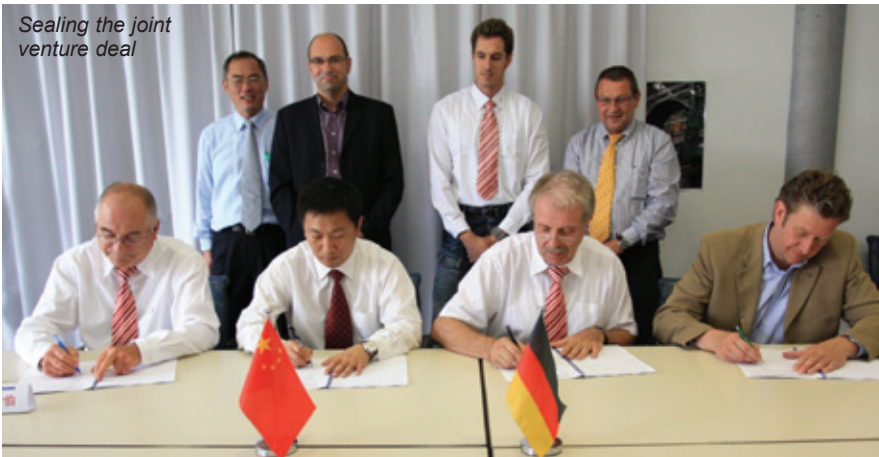
their Ikeja and Ibafo factories. The first of these welders is scheduled to be delivered later this year.

Thermatool – UK

Email: info@inductothermhw.co.uk
Website: www.inductothermhw.com

Graebener Group steps up activities in China

Sealing the joint venture deal



FOR the domestic machine building industry China is a huge market with great potential. The Graebener Group has long recognised this and is set to step up activities in the market after having operated its own office in Shanghai for several years.

Looking for a suitable and competent cooperation partner, the Graebener Group, with its core companies Gräbener Maschinenteknik, Reika

and Kleinknecht, has finally found the company Tangshan Kaiyuan Autowelding Systems. The contract for a joint venture between the two companies was signed last week.

“The aim of this joint venture is to increase our activities, especially the activities together with our partner, on the Chinese market”, explains Dr Theodor Gräbener, managing director of the Graebener Group. When choosing this

company, the decisive factor was that Kaiyuan is operating on a European level and supplies products which are of similar quality. “This company can provide excellent technological standards and meet all our requirements.”

In addition to this the company – with approximately 1,000 employees – has a very comprehensive and efficient sales and service network in all of the Chinese provinces. “And this is exactly what a European company needs in order to expand and strengthen its position on the Chinese market.” According to Dr Gräbener, this cannot be accomplished from Europe. Therefore, the joint venture is an “ideal complement”.

Reika GmbH & Co KG – Germany

Fax: +49 2331 96 90 36
Email: sabine.gerstkamp@reika.de
Website: www.reika.de

Gräbener Maschinenteknik GmbH

– Germany
Website: www.graebener-maschinenteknik.de

Mair supplies API finishing line

MAIR Research SpA has supplied an integrated API finishing line suitable for processing 340mm tubing to Tuper, Brazil.

The line has been recently commissioned and API certified. It is connected in line with the mill and composed of tube cut-off sampling, ID flushout and bead chopping, chamfering, hydrotesting (two machines in parallel: one triple head up to 8" and one for over 8" and up to 340mm), ultrasonic testing, WMS, coating, packaging and strapping.

A software system keeps track of information connected to the individual operations and is interfaced with the supplier's server.

Mair has also supplied a 20-ton cold draw bench suitable for drawing three tubes at a time to the same customer, and an off-line chamfering machine and triple tube hydrotester for 5" tubes.

Mair Research SpA – Italy

Fax: +39 0445 634 409

Email: salesdept@mair-research.com

Website: www.mair-research.com



Diary of Tube Events

2012

25-28
SEPTEMBER

Tube China 2012

Shanghai, China

Email: tube@mdc.com.cn

Website: www.mdc.com.cn

23-27
OCTOBER

EuroBLECH

Hanover, Germany

Email: info@euroblech.com

Website: www.euroblech.com

30 OCTOBER –
1 NOVEMBER

Tube India

Mumbai, India

Email: dughl@md-india.com

Website: www.tube.india.com

12-14
NOVEMBER

Fabtech / AWS Welding Show

Las Vegas, USA

Email: information@fmafabtech.com

Website: www.fabtechexpo.com

27-29
NOVEMBER

Valve World Expo

Düsseldorf, Germany

Email: infoservice@messe-duesseldorf.de

Website: www.messe-duesseldorf.de

2013

7-10
JANUARY

Tube Arabia

Dubai, UAE

Email: infoservice@messe-duesseldorf.de

Website: www.messe-duesseldorf.de

20-23
FEBRUARY

Indometal

Jakarta, Indonesia

Email: infoservice@messe-duesseldorf.de

Website: www.messe-duesseldorf.de

28-30
MARCH

BORU 2013 (Ihlas Fuar)

Istanbul, Turkey

Website: www.borufuari.com

3-5
APRIL

Made In Steel

Milan, Italy

Website: www.madeinsteel.it

25-28
JUNE

Tube Russia

Moscow, Russia

Website: www.messe-duesseldorf.de

16-21
SEPTEMBER

EMO Hannover

Hanover, Germany

17-19
SEPTEMBER

Tube SE Asia 2013

Bangkok, Thailand

Website: www.messe-duesseldorf.de

8-10
OCTOBER

TubeTech

São Paulo, Brazil

Website: www.messe-duesseldorf.de

16-23
OCTOBER

TOLexpo 2013

Düsseldorf, Germany

Website: www.messe-duesseldorf.de

SMS opens another workshop in China

WELCOMING more than 300 guests, Burkhard Dahmen, president and CEO of SMS Siemag AG, inaugurated the new €20mn SMS Siemag workshop in Zhangjiagang near Shanghai, China recently.

At the workshop 350 employees will work in assembly, service, repairs and functional testing. The facility, together with the SMS Meer workshop opened two years ago plus other engineering and service branches in China, means that almost 1,000 of the SMS group's 11,000 employees worldwide are now located in China.

Mr Dahmen said during the inauguration ceremony, "All this goes to show that we continue to expand our presence in China, a country that has been one of our most significant sales markets for decades. There we operate as a system supplier and technology partner for the country's

steel and aluminium industry. To our Chinese customers, SMS stands for top technology and cost-effectiveness, quality and reliability. These are strengths we have also used to build up our leading role on global markets."

To be able to offer customers around the world technologically and economically outstanding plant and machinery solutions, the SMS group pursues a twin strategy. Firstly, it is investing in expanding and modernising the German production locations in Hilchenbach and Mönchengladbach. This is where the group develops and manufactures the sophisticated and quality-determining core components of its plants and machinery.

Secondly, SMS is systematically expanding its presence in major markets such as China by hiring qualified personnel and building manufacturing and service workshops,

to guarantee local supply and service shares demanded by customers in these markets.

As far back as 1904, SMS delivered the first rolling mill to Hanyang, a district of the capital city of Wuhan Province. It consisted of mechanical equipment for a complete duo-reversing block rolling mill including reversing roller tables, block delivery device, block shears and the necessary auxiliary plants.

Since the beginning of the 1970s, business relations have expanded to all the country's main metallurgical producers. The company attracted its first major orders in 1974 and 1979 – for continuous casters and rolling mills for the metallurgy works in Wuhan and Baoshan near Shanghai. In 1978 it booked an order from Baoshan for the world's largest tube rolling mill of its day.

China produces 46 per cent of the world's steel and some 40 per cent of its aluminium products, making it the largest and most significant market for plant manufacturers.

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Maximilian Bövingloh, Global Service Manager
at SIKORA AG



X-RAY 6000 BASIC



ECOCONTROL 6000 displays
production data of the X-RAY 6000 PRO

New: SIKORA offers two X-ray measuring systems for the online measurement of eccentricity, wall thickness, diameter and ovality.

X-RAY 6000 PRO

- for multi-layer products
- 22", vertical, wide-screen touch monitor (ECOCONTROL 6000)

X-RAY 6000 BASIC

- for single-layer products
- integrated 7" touchscreen monitor

SIKORA

Technology To Perfection

CMI to supply tube furnace

CMI Industry has gained an order from Veridiam, Inc, USA, for a roller hearth furnace for the bright annealing of stainless steel tubes dedicated to nuclear and medical applications. CMI Industry Americas will manufacture the furnace in its workshop in Salem, Ohio, USA. Full commissioning of the furnace is scheduled to be completed by November.

The contract will be managed by CMI Industry Americas. Dave Boyce, CEO, commented, "With this order, CMI Industry demonstrates its added value in the market of bright annealed tubing, and in the tubing heat treat market in general."

Veridiam, one of the leaders in the stainless steel tubing industry for both nuclear and medical applications, chose the best technologies to reach its specific metallurgical and surface quality requirements.

Components included in the furnace are natural gas fired combustion system utilising ceramic (SiSiC) radiant tubes throughout; self-recuperative burners with efficiency of approximately 70 per cent; high purity furnace insulation to allow constant 100 per cent hydrogen atmosphere operation; atmosphere jet



cooling system with variable frequency control for rapid jet cooling; main gas safety and atmosphere safety systems; and PLC control system with touch screen interface.

CMI Industry designs, supplies and modernises mechanical, heat and chemical treatment equipment and industrial efficiency solutions. In particular, the company supplies cold complexes to steel-makers, with unparalleled references in rolling

mills, coating lines, furnaces, chemical treatment installations and special equipment.

CMI designs solutions for reducing the environmental footprint of all types of industrial installations, and its solutions are adapted to the specific needs of each customer.

CMI Industry – Belgium
Email: welcome@cmigroupe.com
Website: www.cmigroupe.com

Roll-Kraft promotes careers in the tube and pipe industry

ROLL-KRAFT recently hosted its latest student-focused educational event to promote manufacturing careers within the local community.

The company opened its doors and offered high school students the opportunity to tour the Roll-Kraft facility and learn first-hand about the manufacturing environment. Nearly sixty students were involved in tours over a two-day period. The students were escorted through the offices and factory by Roll-Kraft personnel, who described and demonstrated the various steps involved in manufacturing, from computer design, to full production, and finally to seeing a completed product come off the machine. For most of the students, this was their first exposure to the modern manufacturing process, and they found their visit to

Roll-Kraft to be a very beneficial learning experience.

Roll-Kraft is a member of AWT (Alliance for Working Together) and worked with the group to coordinate this event. AWT promotes careers in manufacturing to students, and the group is very active in Northeast Ohio in educating students and correcting any old, outdated misconceptions related to jobs in manufacturing. AWT promotes the fact that today's manufacturing process is high-tech, and factories are clean and much better environments than in previous generations. These jobs provide high pay for skilled work and are clearly a viable path to success for the next generation.

The company plans to continue its relationships with several local schools and college groups to engage the youth



in events that will encourage them to be excited about becoming involved in manufacturing as a future career choice.

Visit Roll-Kraft's website to learn more about these efforts to promote careers in manufacturing, as well as to learn about current opportunities at Roll-Kraft.

Roll-Kraft – USA
Website: www.roll-kraft.com



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- DISC CUTTER

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T&H Lemont completes shipment of a coiled tubing mill

T&H LEMONT has recently shipped a Model WU45-12 high frequency welded coiled tubing mill for a customer in the USA. Its customer is a leading producer of coiled tubing for shipment worldwide. The end product is used for increasing

productivity in existing oil and natural gas mills.

The tube size range of the WU45 mill is from 1.75" to 4.5" OD round tubing. The customer had selected a 4.5" maximum OD to be prepared for

any future expansion of coiled tubing specifications. With five breakdown stands the mill is designed for high strength materials with maximum yields of 120,000ksi. While the mill is designed to produce tubing at speeds of up to 200ft per minute, actual production rates are limited by the auxiliary equipment.

This is the second mill of this type purchased by T&H Lemont by this customer. Its purchasing decision was based on the success and efficiency of the original mill.

In addition to complete production systems, T&H Lemont provides a variety of components and services to the tube and pipe industries. Services include tube and pipe roll design, mill alignment and operational consulting. Components offered by T&H Lemont include, but are not limited to, welders, cut-offs, entry equipment, accumulators, seam orientation stands, weld boxes, edge conditioner, bead scarfing systems, straightening systems, single point adjustment systems, dedimplers, rolls, blades, jaws and shafts.

T&H Lemont – USA
Email: sales@thlemont.com
Website: www.thlemont.com

Kent awarded orders

KENT Corporation has received two orders for horizontal roller style accumulators. These accumulators are being shipped to US customers making API grade pipe and hollow structural sections (HSS) tubing.

Both accumulators can run tube diameters up to 407mm and wall thicknesses up to 15.9mm, and yield strengths up to 827 MPa.

Kent Corporation – USA
Fax: +1 440 582 9654
Email: sales@kenttesgo.com
Website: www.kenttesgo.com



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Material: Q235,Q345,S355,X42–X80;
Standard: API 5L, 5CT

SSAW

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Material: Q235,Q345,S355,X42–X80;
Standard: API 5L;GB9711.1;GB9711.2

Hydrostatic Tester

O.D.: ϕ 89mm– ϕ 2540mm; W.T.: 3mm–25.4mm;
Material: Q235,Q345,S355,X42–X80; Standard: API

End Beveling Machine

O.D.: ϕ 60mm– ϕ 3100mm; W.T.: 4mm–25.4mm;
Material: Q235,Q345,S355,X42–X80;
Standard: API

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E-mail:haokun@chinaerw.cn; leweihua@126.com

ThyssenKrupp modernises site

THYSSENKRUPP Steel Europe has comprehensively modernised the facilities at its Bochum site with numerous measures to increase equipment efficiency and further improve the quality of its steel products. Some of the investment went into optimising the rolling process.

The improvements will enable the company to meet customers' exacting requirements for flat products. The cooling section has been upgraded to a laminar-flow system.

The aim is to expand production capacities for high-strength and ultra high-strength steels. In the cold rolling mill the continuous pickling line has been upgraded to improve product surface quality.

The latest investments are part of an extensive modernisation programme begun in 2007.

Since then, a new walking-beam furnace and new edger have been installed, and the roll cooling system in the finishing mill as well as the zinc



ThyssenKrupp has carried out a substantial modernisation programme

kettle and laser welding machine in the hot-dip galvanising line have been replaced. In addition, work is being carried out constantly to improve the stock management system and automate the hot-dip coating line.

In total, more than €140mn has been

invested to strengthen ThyssenKrupp Steel Europe's Bochum mill.

ThyssenKrupp Steel Europe AG – Germany

Website:

www.thyssenkrupp-steel-europe.com

CNC PIPE BENDER

ISO9001:2008 CE

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At Tube India 2012 Rosendahl Metal Tubes & Hoses will present new advancements and technology highlights, including the latest developments for the

application fields of corrugated metal hoses, heating tubes, hygienic and process tubes, automotive industries and turnkey solutions.

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DPW extends production

WORKING closely with the customer from the very first meetings and also liaising with the local mill builder, Thermatool has been able to provide the right specification welder for DPW's new production range to fulfil production requirements. The whole commissioning was completed with acceptance within three days of arriving on site.

Fully trained and certified Russian/Ukrainian speaking Thermatool

commissioning engineers were dispatched locally by Inductotherm Group Russia (Moscow). Local service and spare parts will be provided from Moscow as required. During the start-up of the HF welder the technicians provided full operator and maintenance training to customer personnel.

As a result the tubular variety of DPW's production capacity has been extended to ERW steel tube and sections within

the size range of OD15 – OD70mm for rounds and 10x10 to 50x50mm in square and rectangular tube.

The Thermatool Moscow office has recently increased the number of staff, and has a local representative and continues to focus on this vital region.

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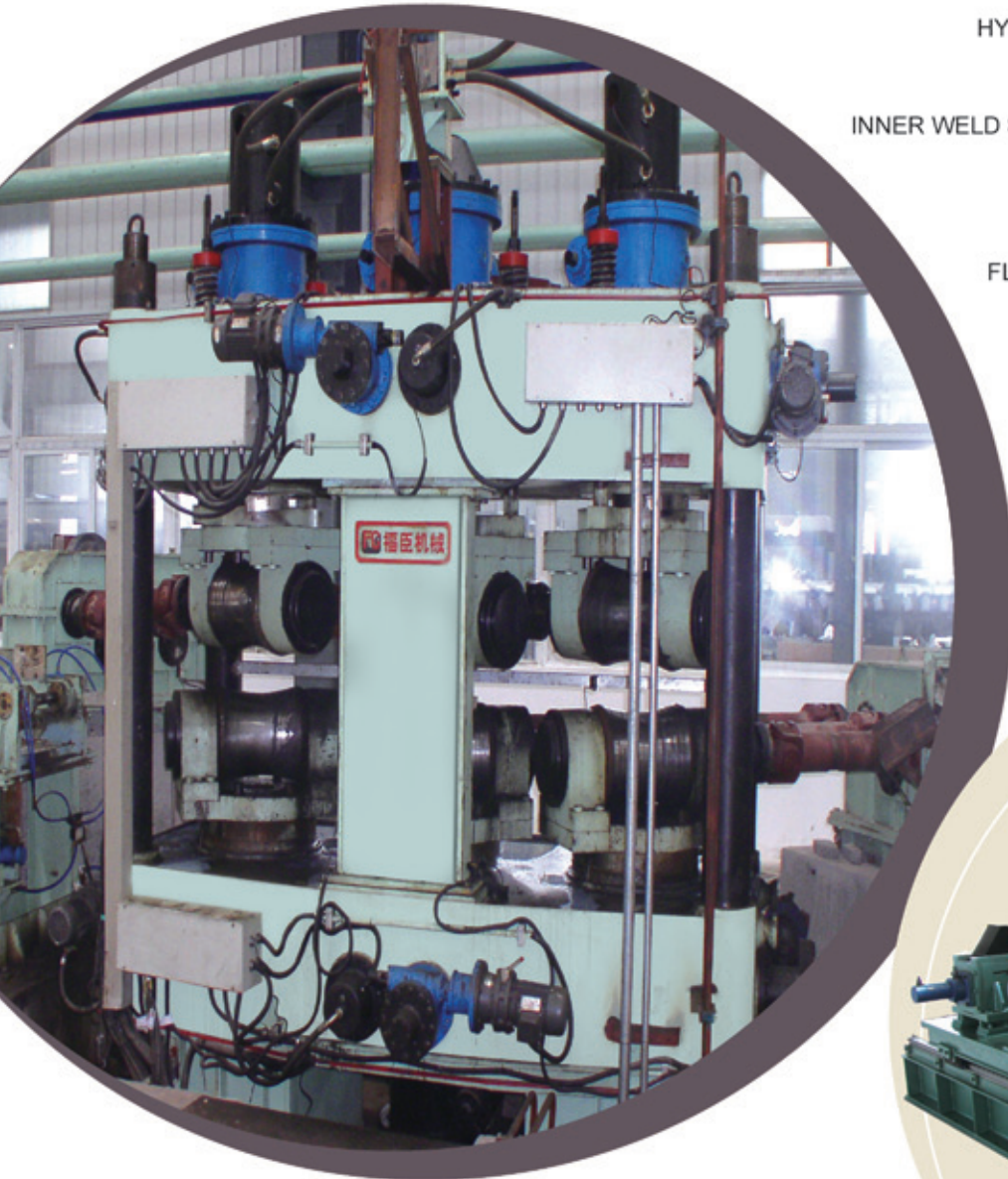
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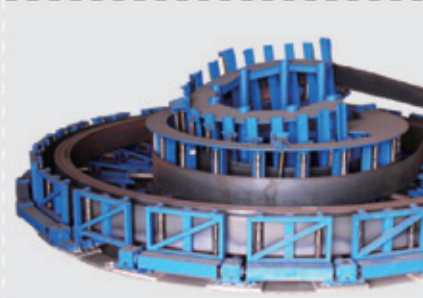
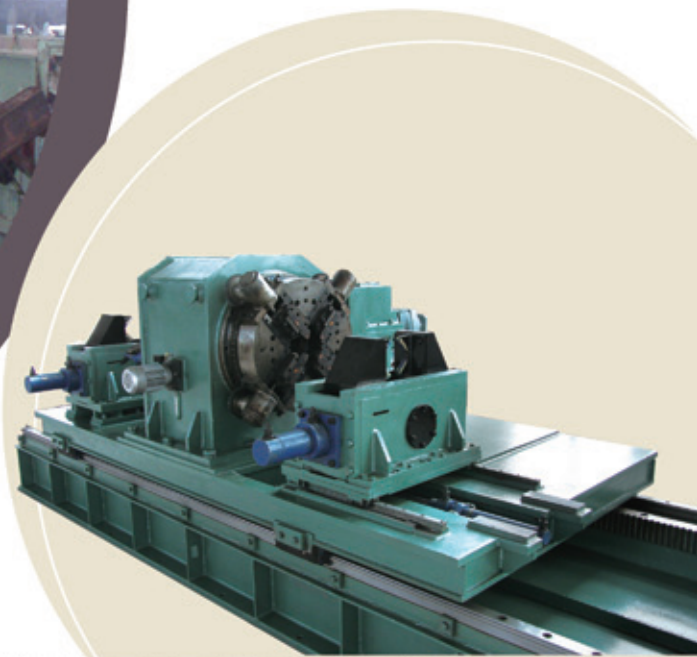
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New Axxair subsidiary in Texas

AXXAIR, a leading company in tube cutting and bevelling equipment for the tube and piping industry, has established a new facility in Alvin, Texas, close to Houston, as part of the company's strategy to become closer to its customers through subsidiaries in regions with high potential.

The facility will have a warehouse with machines, repair capabilities and training capacity, in a 300m² building. Ray Brown will be subsidiary manager for the USA.

The company states that the US market is demanding closer attention and also more technical input locally. Axxair's goal is to set up a network of distributors that will be trained in its product lines and fully capable of giving technical advice, and also to give demonstrations of the equipment.

Axxair's machines have been promoted to markets such as semiconductor, pharmaceutical, food and beverage, and chemical and petro chemical. The company sells its products in 40 countries.

Axxair USA will participate in the Fabtech show in Las Vegas in November.

Axxair – France

Fax: +33 4 7557 5080

Email: commerce@axxair.com

Website: www.axxair.com

Axxair USA

Website: www.axxairusa.com

Rafter ships RF-1500S-3 mill

RAFTER Equipment Corporation has shipped an RF-1500S-3 pullout/sizing mill to a major North American custom roll forming company.

The mill has been designed to mate up with the customer's existing Tishken roll forming machine. It will provide the necessary base space for the customer's laser welding operation, as well as provide pullout and sizing capability for the welded profile. Integration of the customer's motor and a new part quench trough were also included.

Rafter Equipment Corporation manufactures tube and pipe mills, roll forming machines, cutoff machines, auxiliary and other related tube and pipe mill machinery. Additional services include rebuilding and upgrading mill equipment. Originally started in 1917, the Rafter name is known for reliable, high-quality tube mill and roll forming equipment.

Rafter – USA

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Heinrich Weiss turns 70

DR Heinrich Weiss, chairman and CEO of the SMS Group, was 70 years old this summer. Dr Weiss, who grew up in the Siegerland region of Germany, belongs to the founding family of the company he has been running in the fourth generation for 41 years. Following graduation as an engineer (1967), several years of practical work, and a period as CEO of a subsidiary, Dr Weiss in 1971 succeeded his father Bernhard as chairman of Siemag Siegener Maschinenbau GmbH, Hilchenbach, Germany. Even then, the company ranked among Germany's "big five" rolling mill manufacturers, with annual sales totalling some €70mn.

Managed by Heinrich Weiss, the company expanded through a number of mergers and takeovers in Germany and abroad, developing into today's SMS group, a global leader in plant and machinery construction for the manufacture and processing of steel and nonferrous metals. There is a workforce of some 11,000 employees that generates sales of more than €3bn.

Heinrich Weiss is a member of the Administrative Board of Bombardier Inc, Montreal, Canada, and also sits on the Supervisory Boards of Deutsche Bahn AG, Berlin and Voith AG, Heidenheim, both in Germany.

Currently he is chairman of the External Economic Relations Advisory Board for the Federal Minister of Economics, Berlin, a member of the Asia-Pacific Committee of German Business, and a member of the committee on Eastern European Economic Relations, Berlin.

From 2008 to 2012, he acted as president of the German-Russian Chamber of Commerce, and from 1982 to 1997 he was chairman of the China Working Group of the Asia-Pacific Committee of German Business. Dr Weiss is considered one of the pioneers of Chinese-German business relations after the opening of the country in the late 1970s. From 1983 to 1988, he served as chairman of the economic committee of the CDU party, from 1983



Dr Heinrich Weiss

to 1989 vice-president of the VDMA-German Engineering Federation, and from 1991 to 1992 he was president of the BDI-Federation of German Industry.

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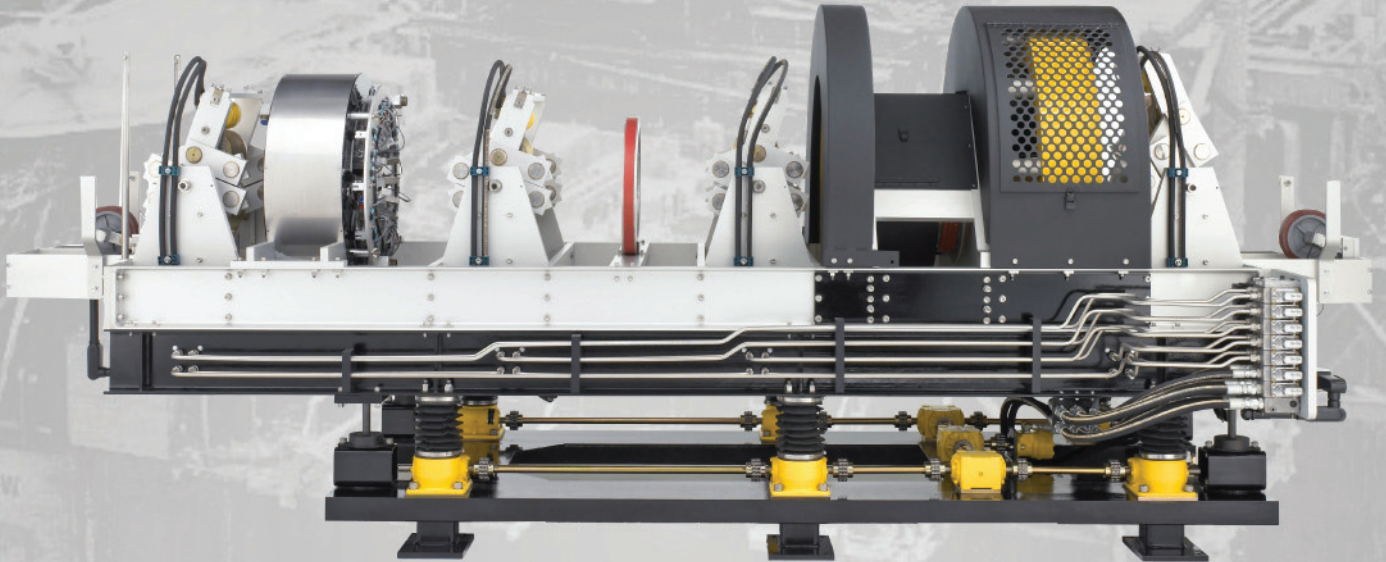
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Customer purchases larger rolls

A MANUFACTURER of heavy boilers in the Middle East, which has already owned some Davi machines (plate roll and angle roll) for many years, has purchased a further two-plate roll and a giant angle roll.

The two-plate roll has a capacity of 4,000 x 75mm (13ft x 3") and 3,000 x 26mm (10ft x 1"), while the angle roll has the capacity to bend an HEA beam

of 450mm (18"), one of the largest in the area.

Davi stated that while it may be normal that large companies purchase large-sized machines, it is not so common for the same customer to purchase constantly from the same manufacturer six different machines over 15 years.

The customer confirmed his trust in Davi mainly for the service received

along the years, prompt deliveries of required consumable or spare parts, and Davi personnel when needed, for training, setup or service.

Davi customers are offered the innovative possibility of communicating instantly on video from the machine to the Davi service centre. The operator of the machine has all the required information inside the control, such as user manuals, schematics, exploded view and spare parts list.

Davi – Promau Group – Italy

Fax: +39 0547 317850

Email: davi-sales@davi.com

Website: www.davi.com

Buigstaal approval

BUIGSTAAL Tube Bending Nederland has been approved as a supplier of subcontracted service for U-bending, including heat treatment of bend area, for Sandvik Materials Technology, according to ASME B&PV Code Section III, 10CFR50 Appendix B and 10CFR Part 21, Rules for Construction of Nuclear Facility Components.

Sandvik Materials Technology is a developer and producer of advanced stainless steels, special alloys, titanium and many other high-performance materials.

Buigstaal Tube Bending is a leading specialist in tube bending and assembly of tubular components in ferrous and non-ferrous materials with a diameter from 3 to 168.3mm. In the course of more than 75 years, Buigstaal Tube Bending Nederland has achieved a top position in both domestic and foreign markets.

Markets supplied are the automotive industry, industrial compressor manufacturers, food processing industry, shipbuilders, nuclear, and oil and gas industry.

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Oil platform protected by Metallisation

METALLISATION customer, Gardwell Coatings Limited, based in East Anglia, has applied Thermal Sprayed Aluminium (TSA) to an offshore oil platform to protect the structure from corrosion, using Metallisation MK73 flame spray equipment.

The offshore oil platform has been designed and constructed by SLP Engineering. SLP commissioned Gardwell Coatings to metal spray the structure, which will be erected in the North Sea oilfields later this year. Gardwell Coatings is one of the largest blasting companies in the UK and was established to service the oil and gas industry.

The offshore platform is a three-leg tubular steel jacket weighing around 436 tons, with the topsides weighing around 345 tons. The centre core of the jacket is 27.1m long with three 1m diameter main tubular columns. The insides of the columns were TSA'd with 250 – 400 microns of aluminium, sealed with an epoxy sealer. Around two thirds of the external surface of the columns, which will be in the splash zone and exposed to the harsh North Sea, were TSA'd to the same thickness, sealed with epoxy sealer and top coated with a PU topcoat. In addition, a number of stainless steel parts and riser pipes have also been TSA'd and sealed. In total, around 450m² of the centre core has been TSA'd.

The top section and the platform's support braces were also TSA'd, sealed and top coated with PU, totalling another 500m². Once the centre core and top section were welded together, the weld joints were also TSA'd, sealed and top coated to complete the task and ensure all sections have been protected.

Gardwell Coatings completed the metal spraying process on site at the SLP Engineering site in Lowestoft using the Metallisation MK73 system. Gardwell Coatings recently purchased an additional three MK73 systems with long supplies packs. With the longer supplies pack, up to 50m from the gas bottles to the pistol, the operators have the flexibility to freely move around the large jacket structure without moving the gas supplies, greatly increasing productivity. The team used five pistols on the job at any one time and sprayed around 100m² of TSA a day. Given the complexity of the job, which included the internal coating of the 1m diameter tubular sections, this production rate is quite an achievement.

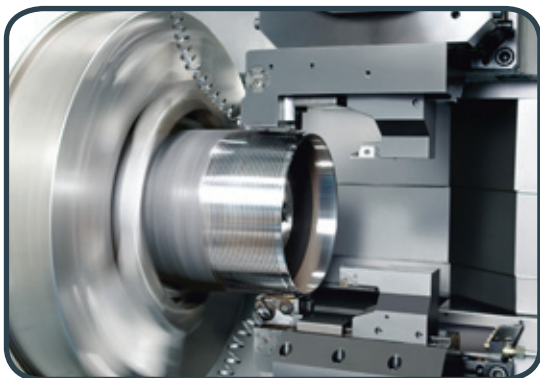
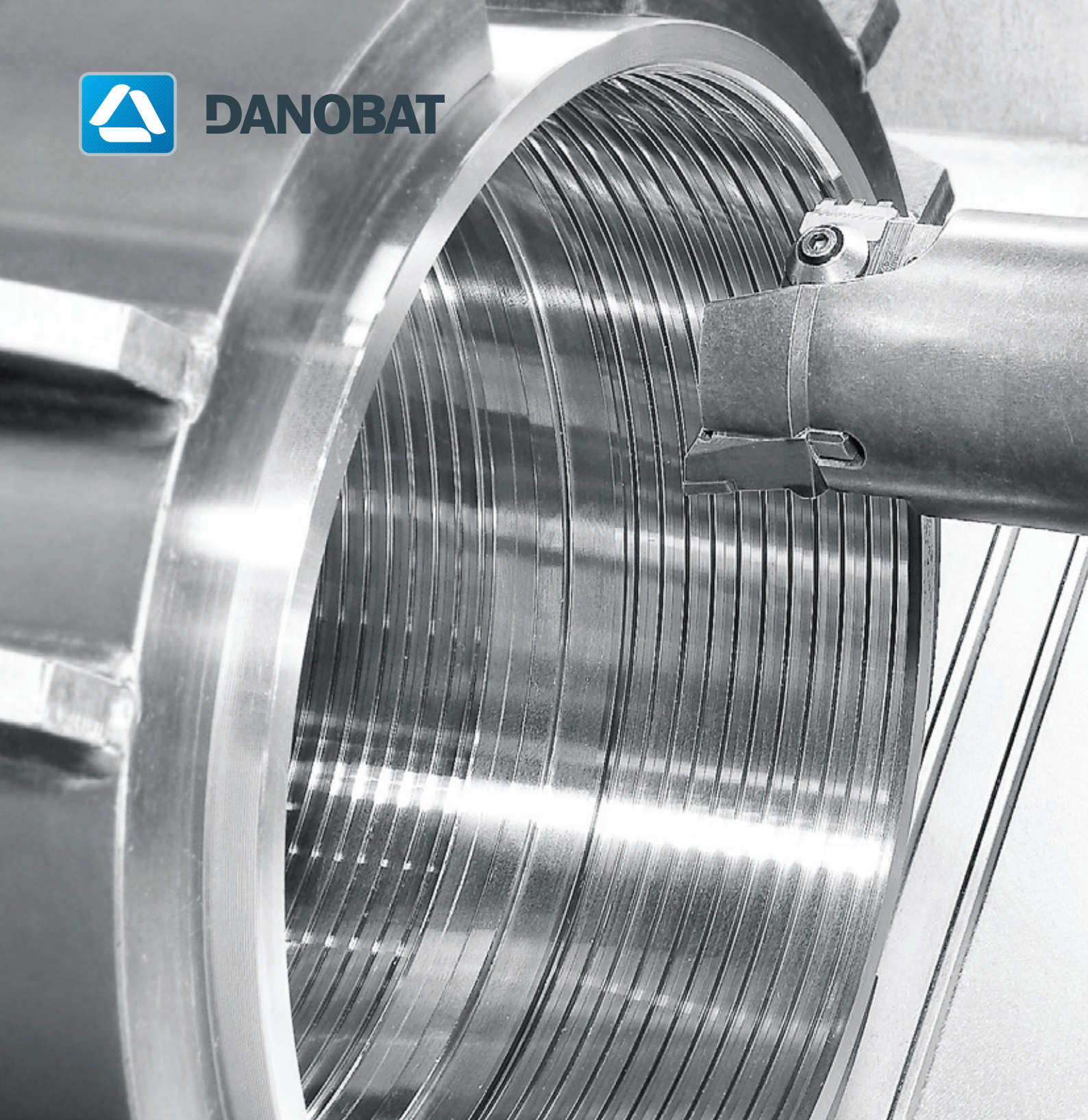
Prior to metal spraying the platform surfaces, each section was grit blasted overnight ready to be sprayed during the day. The spraying chamber was maintained at a controlled temperature with up to 2.2 million BTU of heating available to ensure optimum quality of the coating. By applying Thermal Spray Aluminium the platform has a predicted life to first maintenance in excess of 20 years, even in the harsh environment that is the North Sea oilfields.

Metallisation – UK

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Alabama branch hit by tornado

MARMON/KEYSTONE's Birmingham, USA location has continued to provide its usual high standard of customer service despite the severe damage sustained when an E3 tornado devastated the service centre earlier in the year.

Marmon/Keystone is rebuilding the 120,000ft² service centre from the ground up, and expects the new, improved facility to reopen within the next year. Plans include a steel-reinforced concrete storm shelter. While the new building is under construction, a temporary work site has been established at just 1.5 miles from Marmon/Keystone's property.

The tornado ripped the roof off the office and warehouse building, collapsed the exterior walls and tore down two overhead cranes from the warehouse ceiling. "Thank goodness it occurred in the early morning hours before anyone arrived at work, so there were no injuries," Marmon/Keystone president JT "Tim" Spatafore said.

The day following the tornado, some Birmingham employees headed to Marmon/Keystone's Atlanta office to resume work, while others stayed behind to help with the recovery process. Marmon/Keystone also began to ship materials to Birmingham's customers from other warehouses in

the region, so no major delays occurred. All employees have now returned to Birmingham, and 60 per cent of the branch's inventory has been salvaged and relocated to the temporary site on Pinson Valley Parkway, where warehousing and office functions are taking place. Product is being cut and shipped out of the Goodrich Drive pipe yard, which was untouched by the tornado.

"It is amazing how dedicated our employees have been in pulling together so we can continue servicing our customers despite the circumstances," says Birmingham branch manager Greg Paugh. "We are so grateful to everyone in the metals industry for their support, especially the customers, competitors, and suppliers who were quick to offer their assistance."

Marmon/Keystone is a leading wholesale distributor of tubular products for over 100 years and inventories more than 15,000 sizes and grades of carbon, alloy, stainless and aluminium tubular and bar products. Service centers and sales offices are located throughout North America, with corporate headquarters in Butler, Pennsylvania.

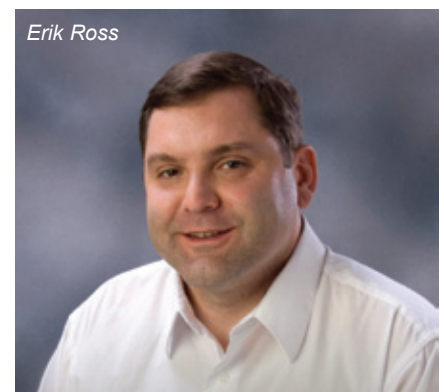
Marmon/Keystone – USA
Website: www.marmonkeystone.com

Northeastern regional sales manager

WALLOVER Oil Company, a leading manufacturer of metalworking fluids and industrial lubricants, has named Erik Ross northeastern regional sales manager.

A graduate of Glenville State College in West Virginia, Mr Ross brings 13 years of experience in industrial sales where he focused on lubricants and mechanical fabrication and repair.

"We're really excited to bring Erik into the fold," said Bill Percy, Wallover vice-president of sales and marketing. "With his background and his years of experience, we think he will be a valuable addition to our sales team."



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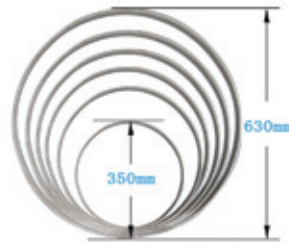
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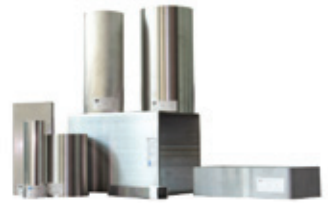
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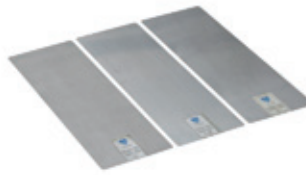
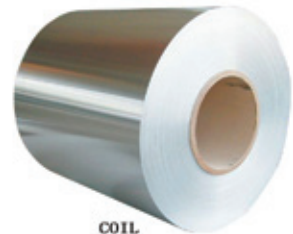


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Low force servo weld head

MIYACHI Europe, a supplier of resistance welding, laser welding, hot-bar and laser marking products, has unveiled its new low force MFP-25 servo weld head with linear drive, for use in the AWS3 active welding system.

The MFP-25 is the latest addition to the modular weld head series, which was designed to give customers a wide range of options and variations, while emphasising quality, efficiency and serviceability.

It is suited to such applications as automotive sensors and airbags, lighting, and medical.

The MFP-25 features a compact and robust design for optimal system integration and a low force range with high precision and high speed. The weld head is servo-motor driven for very short cycle times and uses a closed loop force control. The MFP-25's linear drive system features fast and dynamic response.

Programmable electrode speed, force and position make the head flexible

and easy to use. The MFP offers full AWS3 functionality for high-end process control.

The AWS3 is an integrated solution providing process control, monitoring and quality analysis all in one.

It is suitable for high volume resistance welding in the automotive, electronics, battery and aerospace industries in particular.

Hardware updates have improved process control and adaptive duty cycle, adaptive electrode closing time, adaptive squeeze time and adaptive weld force.

New developments include a user-friendly touchscreen with a larger panel, more interfaces than before, new data storage options and twice the screen resolution to allow operators an improved view of the details.

Along with the low force MFP-25 servo head with linear drive, the AWS3 also incorporates the latest range of weld head and weld pincers.

Miyachi Europe Corporation – Germany

Fax: +49 89 839403 10

Email: contact@mec.miyachi.com

Website: www.miyachieurope.com



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Casting resins business acquired

ELANTAS Electrical Insulation, a division of the chemicals group Altana AG, has acquired the casting resins business for electrical and electronic applications of the Italian Marbo Group.

The casting resins business of Marbo includes products for the encapsulation or coating of electronic components with insulation materials (compounds). Elantas mainly takes over Marbo's

customers and know-how. Production will be incorporated into Elantas Italia's facilities in Collecchio, Italy.

"With the acquisition of Marbo's casting resins business we expand our electronics and engineering materials business line," commented Dr Wolfgang Schütt, president division Elantas Electrical Insulation. "Following similar acquisitions, the present acquisition

consistently enhances this business area and strengthens the locations of Elantas in Italy. We will offer our new customers a smooth transition of the casting resins products as well as further innovative solutions in the area of electrical insulation."

Elantas Italia Srl – Italy
Fax: +39 0736 402746

SmartFit wins Pipeline Award

PIPE measurement specialist Optical Metrology Services (OMS) Ltd has been recognised by the Pipeline Industries Guild for its innovative pipe measurement and fit-up system, SmartFit™.

At the Pipeline Industries Guild's 55th Annual Dinner, held in London in March, OMS received the Award for Significant Contribution to Land-Based Pipeline Technology 2012, for its SmartFit system.

First introduced in 1996, the objective of the Land-Based Pipeline Award is to promote the development of new ideas in the general field of land-based pipeline technology. Its scope includes any aspect of pipeline engineering, including design, construction, operation and maintenance. The award is typically for an achievement developed in the last five years, which has been successfully implemented or completed within the last 12 months, resulting in a significant contribution to land-based pipeline projects.

The Pipeline Industries Guild supports eight annual awards and competitions



Les Dawson OBE, president of the Pipeline Industries Guild, Jim Buxton of OMS, and Richard Price, national chairman of the Pipeline Industries Guild

throughout the year. This includes three technology awards for 'subsea', 'land-based' and 'utility' pipelines. Entries are submitted annually and judged by an award panel.

SmartFit is a suite of hardware and software tools, which together provide a powerful system for pipeline contractors, ensuring that pipe fit-up, welding and pipe-laying processes run as smoothly as possible with minimal interruptions. Elements of SmartFit are deployed in

different ways to suit the practicalities of different production processes, both onshore and offshore.

After pipe end measurements are complete, SmartFit also provides software that uses this measurement data to optimise the sequencing and fit up of pipes.

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Website: www.omsmeasure.com

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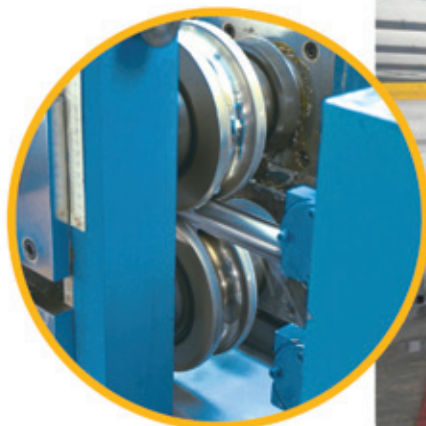
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Arc Energy Resources expanded its client support team

ARC Energy Resources, a supplier of weld overlay cladding and high quality fabrications, has expanded its client support team with the appointment of Mark Farrell as a project manager.

Mr Farrell, who has a degree in mechanical engineering, brings ten years' project management experience in the offshore oil and gas industry, having worked for a manufacturer of pipeline components for subsea installations; and dealt with many of

the major oil companies. He says he is looking forward to working with the Arc Energy project team and, as he lives 30 minutes from Arc Energy's Gloucestershire factory, he is particularly pleased that his experience is now helping to support a local business.

He adds that he was impressed with the emphasis Arc Energy places on company and staff development to ensure that its highly specialised welding techniques meet the

requirements demanded by clients who manufacture a wide range of specialist oilfield equipment.

Welcoming Mr Farrell, managing director Alan Robinson said his experience is an excellent fit with Arc Energy's business, and being able to fill a key position locally is a bonus.

Arc Energy Resources – UK
Email: sales@arcenergy.co.uk
Website: www.arcenergy.co.uk

New website for Plasmait

PLASMAIT GmbH, a supplier of plasma heat and surface treatment lines for tube and strip production, has updated its website. Alongside the company overview and contact details, visitors to

www.plasmait.com will be able to review short outlines of Plasmait's products and applications.

Also updated is the overview of PlasmaANNEALER, which has been



Plasmait's PlasmaANNEALER

subject to successful installations in copper and copper alloy annealing as well as increasingly in stainless steel wire and tube production.

Visitors who have an interest in testing plasma heat and surface treatment on their specific materials are able to book their trial online. Plasmait runs client trials on three different test lines. Plasma heat and surface treatment tests are performed to various requirements and for many different materials.

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In Chelyabinsk in the southern Urals, SMS Meer set up a large-diameter pipe mill that offers product quality down to the last detail. As the complete plant was engineered and built by SMS Meer, all the components and interfaces function perfectly together. A particular characteristic is the extremely high degree of automation, with no less than 47 machining stations in the production process. Furthermore, the plant is one of the cleanest of its type. The customer, ChTPZ Group, speaks of “white metallurgy” – and chose the colour of the workers’ clothing to match.

Quality unites – a fact that our customers and we discover time and again with every new project. Together we develop solutions that give our partners the competitive edge in their business. Thanks to this good cooperation, SMS Meer is a leading international company in heavy machinery and plant engineering.

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HF welding workshops held at Tube Products of India

SUPERIOR Technologies Europe has recently held technical workshops on the high frequency welding process at Tube Products of India's Chennai and Pune plants. The workshops, devised and presented by Peter Bond, covered the critical set-up criteria and theory behind the HF process as well as 'hands on' assessment of all production lines within the two facilities.

The workshops focused on improving operator awareness and the importance of paying attention to weld area set-up and component selection with the prime objective to reduce costs and downtime. Officials of TPI commented: "It is vital that our mill operators understand the impact they can have on productivity, quality and ultimately profit of the business." This workshop was an effective way to reinforce the important basic rules of the HF welding process."

All tube mills at Chennai and Pune were inspected and in the workshops technical and production personnel from all plants were present for classroom sessions. At the conclusion of the visit a fully written assessment was

presented to TPI with findings and recommendations.

ST-Europe offers dedicated HF welding solutions and products to major global tube and pipe producers. Tube Products of India, a division of Tube Investments of India Ltd, is part of the

Murgappa Group and is a market leader in precision tube in the Indian market.

Superior Technologies Europe – UK
Email: sales@st-europe.co.uk
Website: www.st-europe.co.uk

Metalube at Tube India 2012

METALUBE will be exhibiting at this year's Tube India 2012. The company recently opened an office in Mumbai led by Amit Gupte.

The Metalube stand will reflect the many changes the company has made over the past year with a whole new look encompassing new barrels, brochures and a new website. Metalube specialises in wire and tube drawing lubricants, working with wire, cabling and tubing manufacturers across the world. The headquarters are in Manchester, UK, where the site incorporates offices with warehousing and laboratories.

Metalube – UK
Website: www.metalube.co.uk



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Two-stand compact cold mill

ABUL Khair Strip Processing Ltd, based in Bangladesh, has awarded SMS Siemag an order to supply a two-stand Compact Cold Mill (CCM®). The CCM will be designed for the production of ultra-thin strips and an annual production capacity of 185,000t.

With this mill project, Abul Khair is expanding its cold strip production in Chittagong and setting new quality benchmarks for cold strip in Bangladesh. Being an extremely flexible type of mill, the CCM is able to meet most diverse

market requirements. The CCM is a reversing mill made up of two six-high rolling stands arranged in tandem and featuring CVC® plus technology.

The new mill will be used to process pickled hot strip in widths of up to 1,250mm and starting thicknesses of up to 4mm. The strip will be rolled down to a minimum final thickness smaller than 0.1mm.

Attainment of the required high strip quality is ensured by the proven CVC plus technology in combination with work and intermediate-roll bending, multi-zone

cooling on the entry and exit side and the Dry Strip system. In addition to these technological features, the CCM will be equipped with one pay-off reel and two tension reels, an emulsion system with a capacity of 8,000 l/min and a magnetic separator to clean the rolling emulsion.

The quality-critical plant components will be manufactured by SMS Siemag.

SMS Siemag AG – Germany
Fax: +49 211 881 4902
Website: www.sms-siemag.com

Press roll for industry in India

A GLOBAL Indian company that offers innovative solutions to bio-ethanol, alcohol, brewery plants, process equipment, water and wastewater treatment and power plants, has purchased a press roll from Davi.

The Davi press rolls have been the best solution for the fabricating needs

of the company, offering high quality and the required flexibility for the huge variety of components to be rolled on the machine.

The 3,000 x 172mm (10ft x 6¾") press roll has recently been installed and tested by Davi engineers. After installation and start-up, the Davi expert

engineer provided most advanced and skilled training sessions for all the machine operators.

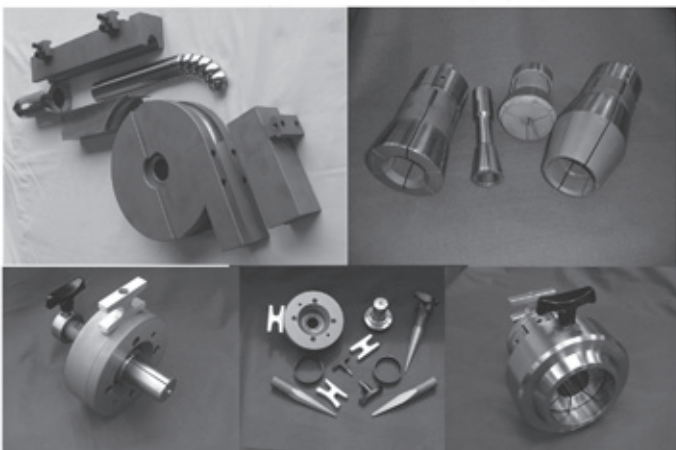
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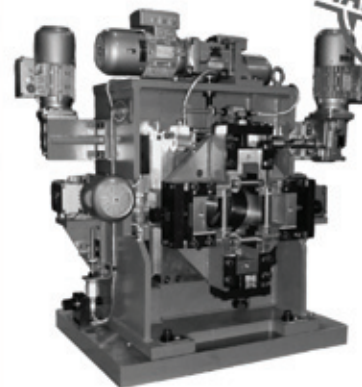
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World's largest steam generated tubing mill opens

AFTER the culmination of a significant investment programme in future tube production, Sandvik has officially opened the world's largest dedicated mill for the advanced manufacture of stainless steel and high nickel alloy tubes for use in nuclear power plant steam generators at its facility in Sandviken, Sweden.

The new mill utilises the latest state-of-the-art technology, including innovative advances in equipment design from tube manufacture, annealing, final finishing, inspection and despatch, all contained within one dedicated production facility.

Officially inaugurating the new mill, Jonas Gustavsson, president of Sandvik Materials Technology, said: "The energy sector is a key segment for Sandvik and we see a lot of interesting opportunities for nuclear and steam generator tubing."

The investment not only strengthens Sandvik's position as leading global supplier of seamless nuclear steam

generator tubing, it also provides the company with the flexibility and manufacturing capability to satisfy the requirements of the rapidly growing nuclear power industry.

Work on the site commenced in 2010 and has involved over 150 people and 330 specialist suppliers up to its completion.

At over 340m long and covering an area of approximately 12,000m², the new mill is the equivalent size of two soccer pitches. It incorporates a fully automated flowline, in which the layout facilitates greater flexibility with short set-up and lead times.

A fully integrated computer control system ensures optimum utilisation of the automated production process from start to finish.

Prior to its opening Sandvik has invested in excess of 120,000 hours of dedicated operator training to ensure



Sandvik's new dedicated mill

that the advanced manufacturing is handled precisely and the plant is operated at optimum efficiency.

Sandvik – Sweden
Website: www.smt.sandvik.com

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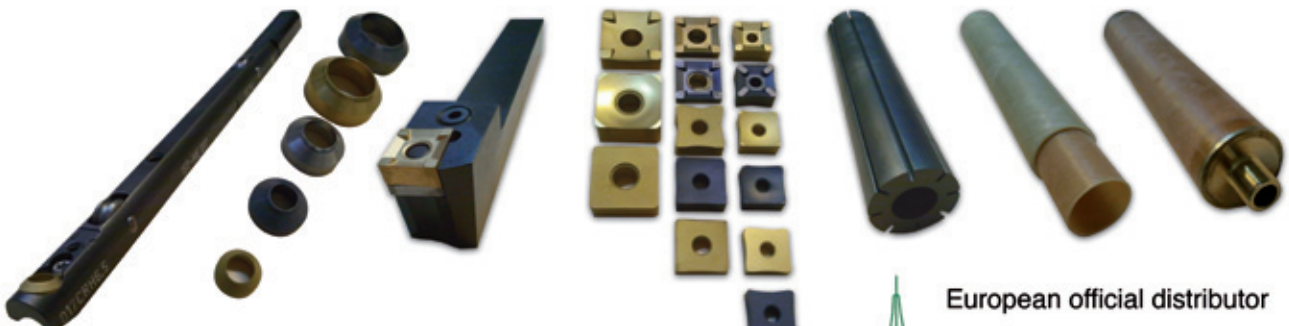
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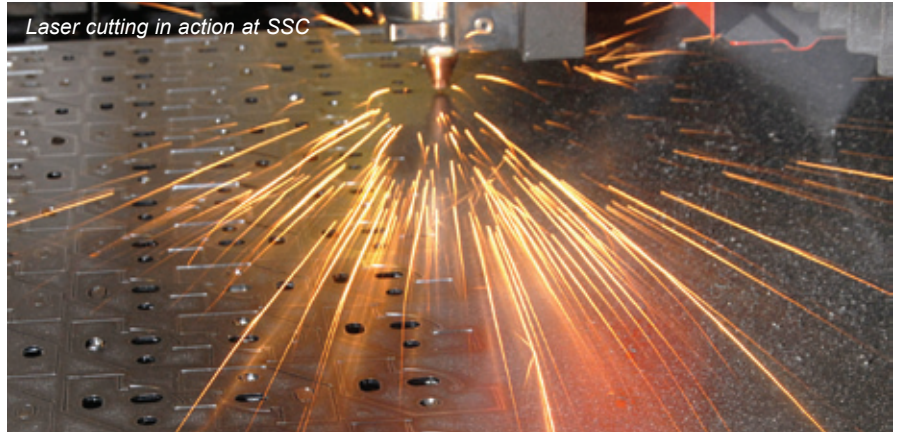
Ambitious laser firm expands again into Scottish market

THE UK's top sub contract laser profiling specialist is to expand its operations into Scotland.

The move to Motherwell represents their first foray north of the border and is the third new operation opened by the company in the past six months.

SSC Laser commenced trading in May from the Maxim Business Park on the outskirts of Motherwell. The company announced record turnover of over £5m as it conducts a programme of aggressive expansion throughout the UK, with plans to establish operations in every major city in the UK.

Sales manager for Scotland David France from nearby Holytown is looking forward to heading up operations at the site. He said: "There's a real gap in the market for a dedicated laser job shop here and we're excited at the prospect of forming partnerships with the diverse business base in Scotland."



SSC Laser specialises in rapid deliveries of precision laser engineered components, in both flat and tube profiles. The firm, which also offers press-braking, laser scanning and an in-house CAD service, recently installed a state-of-the-art Bystronic Byspeed Pro 3015 Flat Bed Laser. SSC

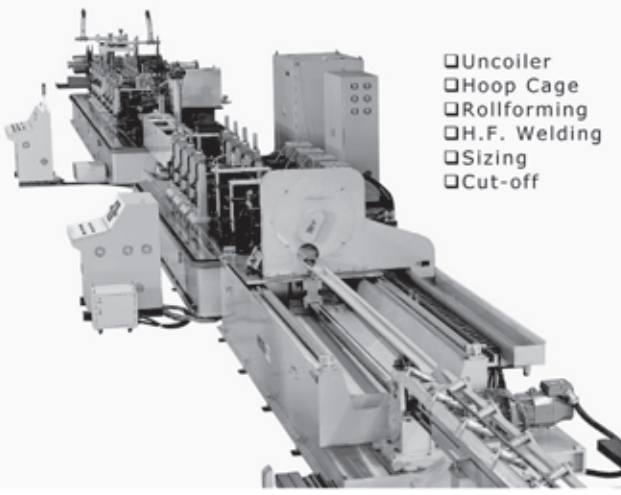
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Features

January 2013

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- Titanium tubes
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March

- Construction, building and structural tubes
- Large diameter pipe
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- BORU 2013 show issue
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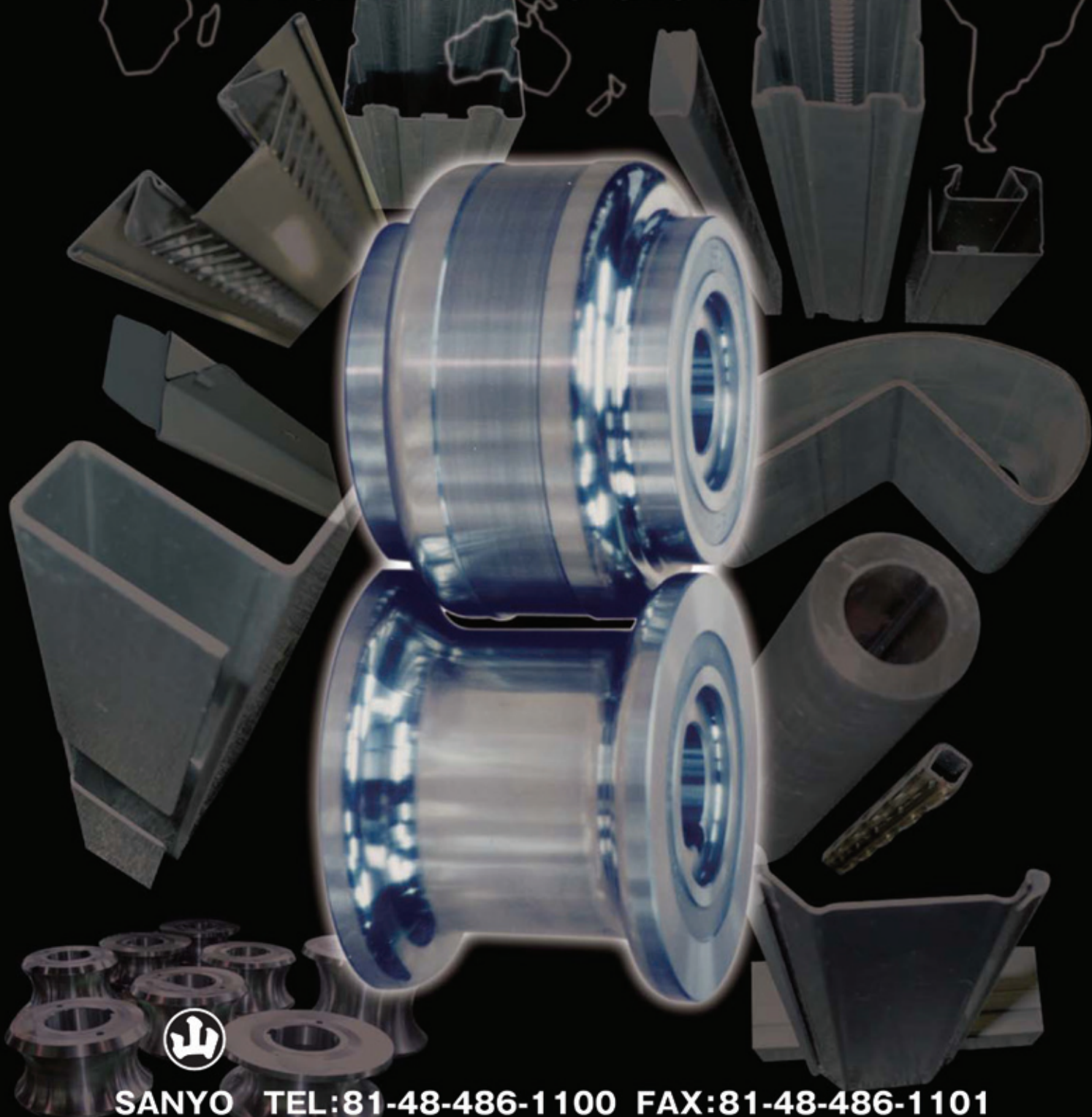
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Dhatec celebrates anniversary

DHATEC Line Pipe Logistic Solutions has celebrated its 20th anniversary. The company provides the pipeline industry with a broad range of products and services for improving all logistic operations in the line pipe supply chain. The Dutch enterprise specialises in enhancing pipe quality, efficiency, and safety of processes such as line pipe production, handling, coating, storage, transport and installation.

In 2012, Dhatec can look back on 20 successful years in the line pipe industry. Founded in Bergeijk, in the South of the Netherlands, on 1 May 1992, the company originally focused on manufacturing high quality steel bevel protectors for pipe-end protection of all diameters, up to 120". The product portfolio soon expanded to new solutions for pipe closure and automatic fixation machines for the bevel protectors. With its motto 'Perfection in Pipe-end Protection', Dhatec focused on delivering the best end-protection for pipes.



The Dhatec team visiting the pipeline

For pipe coating companies, Dhatec created a brand-new product line that features systems for safeguarding the pipe's quality and for improving the efficiency during blasting and coating processes.

With continuous innovation and cutting edge solutions such as the Pipe Guard, the company developed itself as a preferred engineering partner for customers worldwide

that are involved in manufacturing, coating, transporting, storing, handling, preserving and installing line pipes. After 20 years Dhatec celebrates these past achievements and is also committed to take on the future with new ideas to contribute to the line pipe industry.

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Visitors go behind the scenes

MEMBERS of the public were given a rare glimpse behind the scenes of one of the world's largest steel production and engineering plants, and were able to see one of the impressive 90 tonne electric arc furnaces melt a ladle full of steel at more than 1,600°.

Sheffield Forgemasters International (SFIL) held a special open day to allow guests to see what lies behind the gates of the Brightside Lane site.

One former worker, Tony Williams, aged 66, said he jumped at the chance of having another look round: "I started working here in 1961 as an apprentice electrician when it was British Steel – I was just 15 years old and straight out of school. I started in the east machine shop, which is now the scrap yard. I wanted to come back and see how things have altered; it's brought back a lot of memories. In my day there were no hard hats, no safety glasses or ear plugs and we had to buy our own steel-toe capped shoes, so it's very different today."

Visitors were taken on a 2½-hour tour of the site and were able to look inside the different areas of production, like the forge, foundry, melt shop, the quarter-mile-long south machine shop, and the latest addition to the site – the north machine shop.

Tim Hall and his 19-year-old son, Bruce, also attended the tour and said it was an 'incredible day'. Mr Hall said, "The scale of the site is unbelievable. I run a small engineering business in Chesterfield and so we work with a lot of the same equipment but on a much smaller scale." Bruce added, "My friend is an apprentice here and he knows about our business so we wanted to learn more about his place of work. It's good to see there is still some British industry leading the way."

Also in attendance were The Bentley Drivers Club; a father and son who travelled from Wiltshire; and BT apprentices. Mark Tomlinson, technical director of the melt shop, said, "We started running the annual open day five years ago and it has increased in popularity. We get so many requests from people wanting to look around the site and see what we do that we decided to hold a day-long event that gave people that chance. It's also a really good opportunity for employees' friends and families to understand more

about what happens when their loved one heads off to work."

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Visitors take their hats off to the open day



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Celebrating 140 years in steel

THE Wuppermann Group is celebrating its 140th anniversary this year. What began for founder Heinrich Theodor Wuppermann in 1872 in a suburb of Düsseldorf, Germany with a single puddling oven and ironworks forge has become an important steel company with locations all over Europe in the course of the last 140 years.

The comprehensive product portfolio of the Wuppermann Group includes surface-coated flat products, tubes, tube components and sheet metal parts made of steel, stainless steel and aluminium, all of which are distinguished by the high quality that comes from the long years of experience, skill and innovative product development that the company relies on.

The family enterprise with head office in Leverkusen has grown continuously over the last 140 years and had a particularly successful year in 2011. With new locations and plant expansions in France, Poland, the Czech Republic, Sweden, the Netherlands, Switzerland and Germany, Wuppermann fortified its presence in the international market.

“For 140 years now, our history has been marked by a passion for steel. It is the driving force behind our work and our efforts towards constant further development, and it is contained in every product that leaves our factories,” explained Dr Carl Ludwig Theodor Wuppermann who heads the company in the 5th family generation, is responsible for finances on the board of management and acts as the spokesman of Wuppermann AG. “We want to continue down the road to success with sustainable growth, constant innovation and the development of new markets.”



Dr C L Theodor is member of the Board of management of Wuppermann AG



Heinrich Theodor Wuppermann founded the company Wuppermann in 1872

Heinrich Theodor Wuppermann laid the cornerstone of the business in 1872 with the purchase of a puddling oven for 6,588 thalers. Seven years later he sold the plant in Düsseldorf and moved the business to what is now Leverkusen, where it remains to this day. The company succeeded in developing further despite the turmoil of two world wars. The founder's grandson, August Theodor Wuppermann, managed the steel company for 40 years all the way through to the 1960s, always faithful to his maxim: “To solve a problem, you must have many heads and many hands working together.”

There was a break in the company's history in 1983 as a result of the

steel crisis in Europe. Because of its continued losses Wuppermann had to sell its rolling mill in Leverkusen. Wuppermann sold the rolling mill on the condition that there would be no job losses at the plant. This meant that it was sold to the one who saw the prospect of continued employment and not just to the highest bidder. After two years, however, the new owners had to close the plant. Ever since this severe crisis was overcome, Wuppermann has experienced continuous growth.

Wuppermann AG – Germany
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New key accounts manager for Scotland and Northern Ireland

WELDING Equipment manufacturers, Kemppi (UK) Ltd, based in Bedford, UK has appointed James McLernon as key accounts manager covering Scotland, Northern Ireland and Cumbria.

Mr McLernon is a qualified welder fabricator, having served his apprenticeship with his father's company, Glasgow-based Ironcraft Steel Fabrications, manufacturer of automatic gates, barriers, fencing and steel, structures and gained his academic qualifications at Anniesland College. In 2006 he moved from the shop floor to gain experience in sales and marketing of industrial equipment, before joining Kemppi earlier this year.

Asked what he likes about his role within Kemppi, Mr McLernon said: "Every day is different, one day I can be in meetings with Kemppi's dealers or Managers and the next day, I can be in a workshop with overalls on carrying out equipment demonstrations for employees on the shop floor. It is definitely a great job to go out and meet new people."

Mr McLernon lives in Glasgow, which is very central to meeting his customers. He is married with two children and

his outside interests are going to the gym and playing tennis. Until the end of last year when he retired, he played semi professional football for Petershill, Maryhill and finished his career winning the Scottish Central League 1st Division

with Yoker Athletic. Now he watches his favourite football team – Celtic, whenever the opportunity arises.

Kemppi Oy – UK
Website: www.kemppi.com



James McLernon of Kemppi Oy

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Kersten Europe invests in two state-of-the-art bending machines

THERE is an increasing demand for larger, heavier and thicker bent plates and profiles and Kersten Europe aims to respond as effectively as possible to demands from the market. For this reason it recently invested in two brand new bending machines.

Lately, the machine park of Kersten Europe's Dutch production plant in Wanssum has expanded with the 2400T Power Press and the R15S. Two powerful bending machines to bend the largest and thickest plates and profiles.

The 2400T Power Press is for the bending of cylinders and cones up to 150mm thick and 3,300mm wide.

Particularly from the offshore and renewable energy sectors, demand has grown for more capacity for bending thick-walled steel plate. The purchase of the 2400T Power Press allows Kersten Europe to bend cylinders and cones with a thickness of 150mm, a



The 2400T Power Press

width of 3,300mm and a precision of 1/100mm.

The 2400T Power Press is an imposing machine with enormous power, without losing precision and speed. With a force of 2,400 tons, the stamp of the machine presses on the steel plate. With a certain smoothness and ease, a large, thick steel plate is

bent into a thick-walled cone or cylinder.

Various parts of this machine were developed especially for Kersten Europe. This applies to the hydraulic unit, the components, the cylinders and the required bending and hoisting tools.

Kersten Europe – The Netherlands
Website: www.kersteneurope.com



SHANGHAI YUEYUECHAO STEEL TUBE

Established in 1994, Shanghai Yueyuechao Steel Pipe Group mainly deal with seamless steel pipe, seamless square/rectangle steel pipe, large OD LSAW manufacture. The specification for LSAW of Shanghai Yueyuechao Manufacture Tube Co.,Ltd is $\Phi 356\sim 1422 \times 8\sim 60\text{mm}$. The specification of cold drawn seamless steel tube for Jiangyin Yueyuechao Manufacture Tube Co., Ltd, ranges from $\Phi 6\sim 426 \times 1\sim 20\text{mm}$, hot expanded tube specification ranges from $\Phi 168\sim 630 \times 4\sim 50\text{mm}$. Quality standards are API/ASTM/GB/ISO/DNV/JIS.



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Cryoquip orders M205 tube welder from Arc Machines

UK-BASED Cryoquip has become one of the first companies in the UK to order a new state-of-the-art orbital welding machine and weld heads from Arc Machines UK.

The order comprising Arc Machines' new model M205 together with a 1500 weld head was delivered and installed in the UK, earlier this year.

Cryoquip Ltd looked at a number of suppliers before choosing Arc Machines, thanks to its superior technology and competitive pricing.

A key factor in ordering the M205 was its fusion flexibility, enabling it to join thin-wall pipes, and fittings ranging in diameters starting at 2.3mm to 190mm and up to 4mm in wall thickness. This agility, when allied with the M205's ability to be used with all of AMI Arc Machine's fusion weld heads, makes it ideal for Cryoquip Ltd because of the multitude of varied projects the company supports.

Typical Cryoquip Ltd welding projects include the fusing of pipes used in aluminium finned natural ambient and fan forced vaporisers, shell and tube and hot water bath vaporisers, heat exchangers and vacuum insulated piping.

Cryoquip Ltd's workshop manager is pleased with the M205 and also the after sales service Arc Machines has provided. He said: "Although the business is no stranger to Arc Machines having received equipment from our parent company in the USA, we needed to be sure that it would do the job and could weld stainless steel tubing.

"This proved not to be a problem and the equipment is very easy to use with limited training. Currently the M205 is being operated by a younger member of the engineering team."

Over at Arc Machines, technical sales

manager John Morris is delighted with the order. "Although Cryoquip Inc is no stranger to our equipment in the USA, this is the first order in the UK and the equipment was evaluated against stiff competition.

"Obviously I am delighted that the company has purchased the new M205 and we look forward to working with them as required."

The M205 is believed to be the most advanced, easy-to-use orbital power supply in the industry and is packed with features, making it suitable for a wide range of industries. These include biopharmaceutical, semiconductor, food, liquids, aerospace, power generation, ship building and numerous OEM type applications.

Arc Machines – UK

Email: john@arcmachines.co.uk

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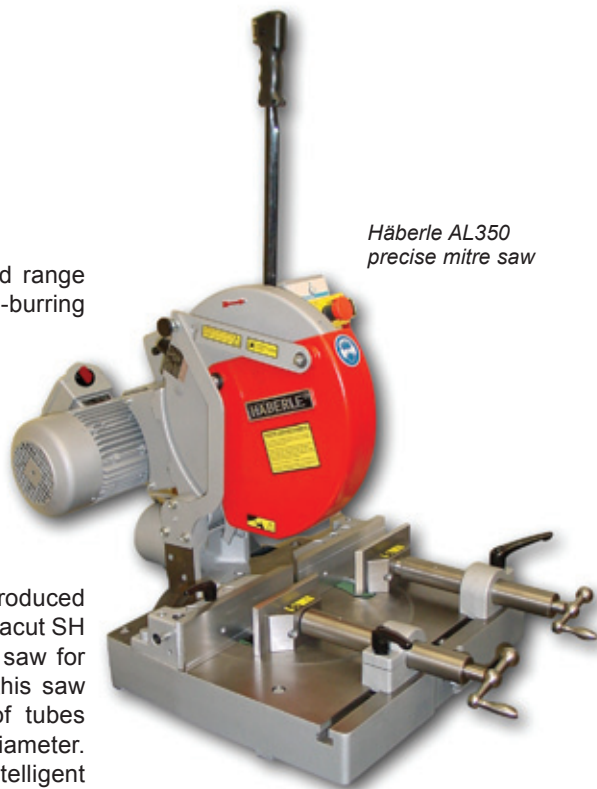
Expanded saw and de-burring range

RSA cutting systems GmbH has extended its product range, and since April 2012 the manufacturer of de-burring systems, industrial brushes, high-performance circular saws and saw blades has been the new owner of the Häberle® brand.

Customers can now also find manually operated mitre saws and de-burring systems for tubes and solid bars. They are particularly suitable for use in workshops, making them a perfect supplement of the RSA product portfolio. The company, which also developed de-burring systems for complex aluminium extrusions, offers these flexible machines as stand-alone or interlinked solutions. For the de-burring of tubes, sections and sheet

metal, RSA offers also a broad range of cost-effective and reliable de-burring machines. In combination with high performance brushes, available in many standard configurations or as customised solutions, customers will find precise tools adjusted to their workpiece characteristics.

At this year's Tube 2012 trade fair in Düsseldorf, RSA introduced two new product lines. The Rasacut SH is a high-performance circular saw for major jobs. For the first time this saw provides high-speed cutting of tubes and solid bars up to 300mm diameter. It can be expanded with intelligent peripherals to ensure the smooth flow



Häberle AL350
precise mitre saw



Rasacut SH 300 high-performance saw



Rasacut CC 90/2
double-cut saw with
gripper feed

of materials and reduced cutting time.

With the Rasacut CC a new single- and double-cut circular saw has been introduced for diameters up to 90mm (single cut) and 40mm (double cut). A broad range of modular saw peripherals – de-burring, chamfering, measuring, cleaning and stacking – is available to ensure seamless integration into production lines.

Since April 2012, RSA cutting systems GmbH has been located at its newly built headquarters in Schwerte, Germany.

RSA cutting systems GmbH – Germany

Fax: +49 2304 9111 100

Email: rsa.d@rsa.de

Website: www.rsa.de

Removal of external weld bead on stainless steel tubes

WITH more than 500 machines sold all around the world, Bossi Srl – Macchine Finitura Metalli sees itself as a leader in the manufacture of belt grinding machines for removing the tube external weld bead, to be installed on every kind of stainless steel tube-mills with TIG and laser welding systems. These high-performance machines are the result of

years of experience and innovation. The tube weld grinding machines can work a diameter range from 6 to 410mm; their characteristics of ruggedness and reduced maintenance, together with other features such as adjustable working tension, number of oscillations and their amplitude adjusted by inverter, automatic centralised greasing and

abrasive belt speed adjustable by inverter, make the STP machines a good choice for the main tube manufacturers around the world.

Bossi Srl – Macchine Finitura Metalli – Italy

Email: info@bossi-srl.com

Website: www.bossi-srl.com

Flying shear cutoff

MILL Masters, a tube mill manufacturer, has announced that a new flying shear cutoff has been made available to its customers.

The cutoff has the capacity to cut 6mm to 25mm diameter steel tubing with a wall thickness of 0.25mm to 1mm. Speeds of up to 15m/minute or 60 cuts/minute can be obtained by using a single die. Cut lengths are variable within a range of 450mm to 6m. Lengths can be changed on the fly, quantities can be cut in batch, and recipes can be stored for future applications.

A double cut (dimple free) system is also available – one blade passes

across the side of the tube creating a notch for the shear blade to pass cleanly through.

The cutoff utilises electric cylinders to propel the knife blade and the carriage. Several benefits from using the electric cylinders include much quieter operation, reduced maintenance costs and the ability to control the speed of the blade as it passes through the tube. This is crucial when cutting through stainless steel tubing.

The speed of the cutting blade should match the tube's material properties to minimise the cut from overheating. When the blade cuts too quickly through

Flying shear cutoff



the stainless steel it has a tendency to push material instead of shearing it.

Mill Masters – USA
Website: www.millmasters.com

High resolution video monitoring

THE automation of welding is becoming more widespread with a view to increasing productivity and guaranteeing repeatability and consistency of results using more and more specific welding procedures.

On this basis, operators play an essential role in the supervision of welding operations. According to the complexity of the parts and the importance of the task in question, tracking during welding can be automatic or carried out manually, which of course implies continuous visual monitoring.

In terms of the extent of assistance required by operators, today, one out of three installations is equipped with a video monitoring system. The main objective is often the quest for comfortable working conditions so as to avoid fatigue and maintain the operator's concentration. Therefore the video monitoring system often remains the only solution enabling us to face difficulties related to difficult accessibility or the environment close to that of the welded joints.

Some of the most recurrent situations concern for example the presence of preheating, access restrictions encountered in the case of narrow gap grooves, internal weld configurations as well as the proximity of high energy welding arcs or radiation exposure encountered by the human body in the nuclear industry.

Polysoude has set up an R&D programme in response to these

various applications destined to create a panoply of industrial solutions.

The common point to all of these variants is the control panel itself, grouping together the useful commands in order to optimise image adjustment. This control panel is ergonomic and perfectly adapted for welding operations. It is each individual camera that enables the multitude of possibilities for adaptation to the environment in question.

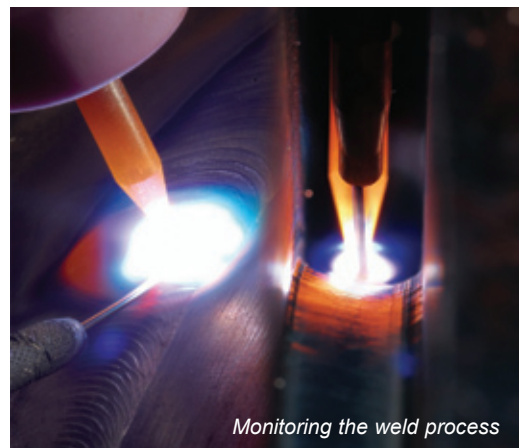
As a general rule Polysoude recommends the use of two external cameras (one for a front view and a second camera for a rear view). These modules are equipped with a motor-driven focus and an adjustable liquid crystal filter. This functionality results from a specifically developed technology, enabling the operator to intervene during the welding process and adjust the image according to specific requirements. Each module of the external camera contains an integrated cooling system, which protects it from arc radiation.

In the case of reduced radial clearance, Polysoude proposes a panel of welding torches equipped with one or two micro cameras (a classical narrow gap torch, a narrow gap torch with an oscillating electrode and internal welding lances). All of the functions are perfectly integrated and protected to be compatible with the welding environment. They are cooled in order to be able to resist external temperatures as high as 350°C.

Optical fibre lighting and retractable filters allow for verification of the positioning before welding or the result after a downslope of the arc. The positioning of the filters is synchronised with the start of the welding sequence.

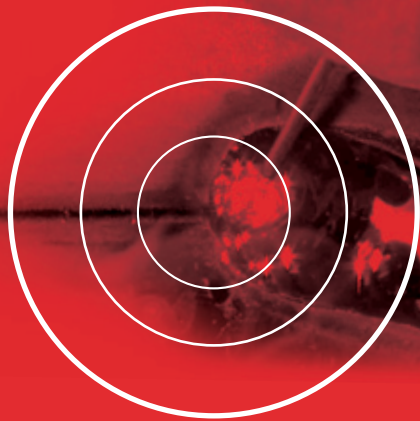
Manually adjustable mechanisms for the focal length are integrated into the body of the torch and are accessible from the exterior in order to facilitate adjustment. These solutions represent the best compromise in order not to interfere with the gas flow, and moreover, to have a better viewing angle for monitoring of the impact point of the wire, the electrode integrity and sidewall fusion. The creation of made-to-measure optics enable optimisation of the magnification and the vision field.

Polysoude SAS – France
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Orbital tube and pipe cutting and bevelling machines

PROTEM tube cutting and bevelling machines are portable machines that are light, reliable, easy to use and they allow the user to get a perfect preparation with no thermally affected zones. They are composed of two rings: one fixed and one rotating.

The tube cutting machines of the TT-NGseries are accurate in cutting and/or bevelling tubes and pipes of all schedules individually or in one simultaneous operation. These machines are especially designed to machine heavy wall tubes and pipes. They can have a pneumatic or hydraulic motorisation, with electrical drives on request.

The machines are very robust and can be installed in various positions. Their split frame configuration allows their opening in two half-shells. For the manual clamping four independent adjustable jaws are used. The machines have a rear centring feature and completely enclosed drive gears for the operators' safety.

The TT-NG can be equipped with ovality copying slides enabling to correct the defects of ovality of tubes and pipes. They can also be remotely controlled for operations in areas under ionizing radiations.

The machines of the Protem TT-NG series can machine pipes with diameters ranging from 60.3mm (2") up to 2,082.8mm (82") OD and over on request. Several configurations of tool holders are available including wheel holders enabling for example for the replacement of steam generators to cut on a 90mm wall thickness with severing tools and to cut the remaining 10mm with wheels in order to reduce the production of chips and thus contamination.

Protem GmbH – Germany
Website: www.protem-gmbh.de

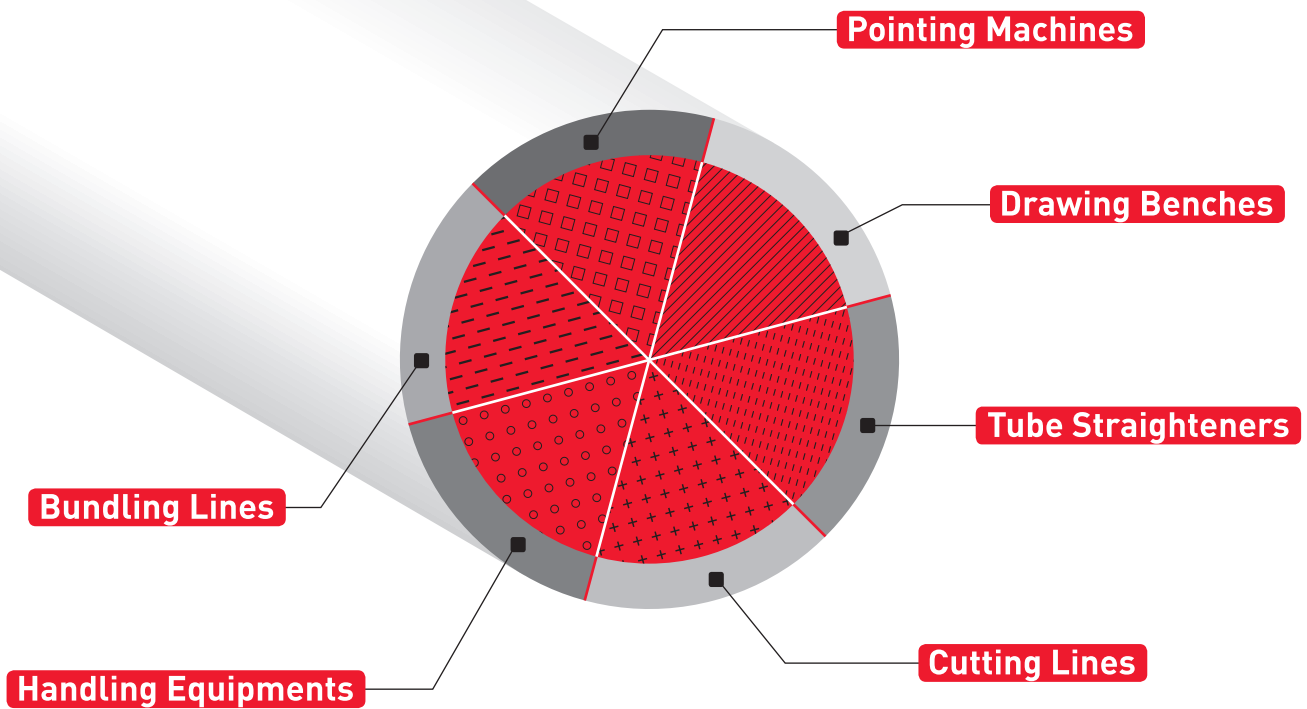
Fast cutting

SAWING bar or tube is a machining process that all too often leaves the operator to decide the speed of the blade and the downfeed rate, which means it is the operator who dictates the cutting efficiency and, therefore, the actual cost. However it is possible to take the guesswork out of the process and to achieve significantly improved production rates as well as longer blade life.

Danobat's range of heavy-duty automatic horizontal bandsaws offers a maximum round cutting capacity of 420mm for the smallest model up to 1,100mm for the largest model.

Danobatgroup – Spain
Website: www.danobatgroup.com

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Gräbener Maschinenteknik offers the entire value chain

TRADITIONAL hydroforming is currently experiencing a renaissance. More and more companies rely on hydroforming technology, yet there are only a few machine builders left in this sector. In contrast to the other machine builders, Gräbener Maschinenteknik GmbH & Co KG (GMT) offers the entire value chain of hydroforming: from the customer's general idea, the simulation, the resulting engineering and prototyping respectively small series production up to the customised press.

From the very start, GMT has been designing the hydroforming presses based on and customised for the individual component of the customer. For example in 2002, the RoboClamp®, the world's most powerful hydroforming press with a closing force of 13,000 tons, was perfectly and completely

tailored to the component to be manufactured – a vehicle side rail. This engineering approach has always been and still is the philosophy of Gräbener Maschinenteknik.

The patented Powerboxx® with a closing force of 6,500 tons is yet another in-house development of GMT for the production of separator plates for fuel cells. With the Powerboxx®, the closing force can be concentrated on a small surface of 300 x 200mm.

In addition to this, GMT conducts feasibility studies and forming simulations. For the design and engineering of hydroforming presses and the corresponding tools, GMT applies most modern software such as CATIA V5, Inventor, mechanical desktop. The program FEM Tool Ansys is used for the FEA analysis which is an integral part of the engineering.

When purchasing the former Schuler premises in Wilnsdorf ("Schuler Hydroforming"), the Graebener Group also took over three hydroforming presses. With a total of five presses available today, GMT can test innovations and in-house developments for the sector of 'Prototyping/Small Series Production' at short notice using its own machinery. Presses with closing forces of 400, 2,500 and 10,000 tons have been added to the already existing presses with

closing forces of 1,500 and 6,500 tons. Thus, Gräbener should be in possession of the world's largest number of prototyping presses.

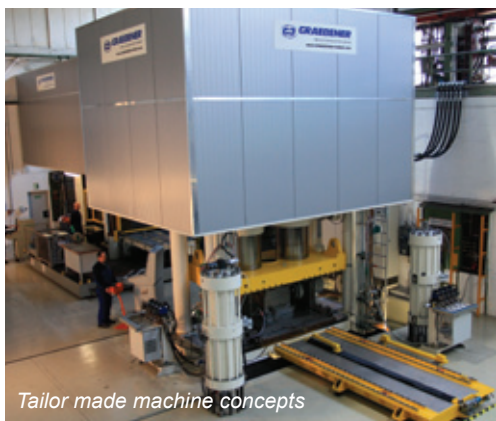
The 1,500 and 6,500 ton presses are already booked solid. The 1,500 ton press is used continuously by customers for the prototyping and the production of parts in small and medium lot sizes. The 6,500 ton press is used throughout the entire year in order to meet the ever increasing demand for metallic separator plates for fuel cell production.

The 2,500 ton hydroforming press is also used for further enhancing the open and thus highly flexible control program PressPro® developed by Gräbener.

The 10,000 ton press, which is also the hydroforming press with the world's largest table surface (6,000 x 2,200mm), is currently being overhauled in order to be ready for prototyping purposes with multiple tools.

These exceptional machine capacities enable Gräbener Maschinenteknik to offer tailor-made machine concepts to its customers: From four-column presses, frame presses, C-frame presses such as the RoboClamp® to the PowerBoxx® or the PowerTower® for the production of hydroformed plates.

Gräbener Maschinenteknik GmbH
– Germany
Website:
www.graebener-maschinenteknik.de



Tailor made machine concepts

Transforming tubes technology

SINCE GFU was founded in 1989, the owner-managed company has evolved into a worldwide specialist for plant technologies in transforming tubes. Engineering and manufacturing of upsetting presses, swaging presses, high speed end forming units, neck down machines, expanding and reducing machines and also forging machines belong to the current scope of delivery.

OCTG industries took attention of the upsetting and swaging technologies made by GFU to manufacture tubing casings and drill pipes. Automobile industries use the GFU upsetting

technologies to produce tube camshafts, sway bars, drive shafts and others.

High speed end forming is also used for automobile applications. High-pressure airbag vessels and shock absorbers made on GFU end forming machines can be found in millions of cars worldwide. This technology also finds a place in manufacturing flanged shafts, conveyor rollers, pressure accumulators, extinguishers and gas tanks.

Applications like shock absorber tubes or high-pressure airbag vessels are manufactured with combined processes. GFU engineers find solutions

to bring these combined processes in-line. Production plants engineered by GFU are built in modular configuration to enable customers to complete parts right up to ready machined, cleaned and measured parts. Solutions with combined GFU processes like upsetting and end forming can be found in one production line. Pyrometers and measurement units are mostly involved to create safe and stable processes.

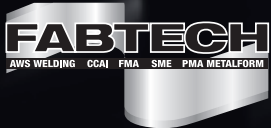
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The Quaker logo features a stylized blue 'Q' with a yellow center, followed by the word 'Quaker' in a blue, sans-serif font. The logo is set against a light gray background with a subtle circular pattern.

Straightening machine with ten rolls

CARTACCI Ltd has recently acquired important contracts in major markets including the USA, Brazil and India without neglecting the Italian market.

For the USA market it has built one well tested straightening machine model RDT10V3UP with ten rolls and completely automatic setting. Placed in a moulding tube line it will process API tubes of different diameters range from 2" to 7". With this type of product Cartacci has acquired considerable experience during the last few years. The system for rapid and automatic setting (machine set system), based on a perfect synchronisation between the mechanics and electronics, guarantees a high optimisation of production changes, essential for mills with high productivity such as this line.

For the Brazilian market, Cartacci is building a big line for drawn tubes production, which is characterised by the wide range of processed tubes with

diameters from 2" to 9". The equipment is composed by one drawing bench of 150 tons, one automatic straightening machine with 10 rolls mod. RDT10V3/4 directly connected with multiple cutting line. The whole line ranks among the most advanced lines that are currently used in the production of drawn tubes in Brazil.

Cartacci is also present on the Indian market with the installation of No. 3 drawing benches and No. 2 straightening machines (all from the Cartacci brand) that, after not being used by one Italian customer following the renewal of all machinery, have found a new use on the plant of an important Indian tube producing company, reflecting the reliability of Cartacci machinery even more than 30 years after their initial installation.

Remaining on the Italian market, Cartacci has recently started a new complete line for drawn tubes with

diameters ranging from 1.5" to 5": the line is composed by one straightening machine mod. RDT10V2 with ten rolls and completely automatic setting, one cutting line with multiple cut by five heads (for the maximum versatility of cuts setting) and by one packaging machine mod. IMPC130 with completely automatic setting: inserting the characteristics of wanted bundle's form, within a few seconds the machine reaches the set-up needed, without requiring the operator to set the long manual operations. Once more, evidence of technical development and constantly improving of the quality, Cartacci is placed on a high technological quality level even in design of packaging machinery.

Cartacci Srl – Italy
Fax: +39 035 290514
Email: info@cartacci.com
Website: www.cartacci.com

Tubes, profiles and metal forming

STAR Tecnologia is a Brazilian company with a focus on tubes and profiles, and service centres specialising in the processing of carbon steel coils, stainless steel and non-ferrous, in its technical and operational needs to manufacture products with quality suited to their applications.

The company has a modern plant equipped with all the engineering resources applied to full technical management of design and manufacture.

Star Tecnologia manufactures cutting and rolls used in metal forming, with customers in Brazil and Latin America. The company provides complete

systems for removal of weld bead inner tubes. Removal tools work with adjustable air pressure assisted by a booster of compressed air.

Star Tecnologia Ltda – Brazil
Email: star@startecnologia.com.br
Website: www.startecnologia.com.br

Normalising pipe weld seams

EFD Induction has unveiled an innovative control system for normalising weld seams to API standards. According to Per Ødesnelvedt of EFD Induction's research and development centre in Norway, the new system provides three valuable functions. "The first is ultra-accurate power control and optimised power inputs – essential when working with narrow tolerances. The system also supervises a power injection function for quick power ramp-up, which boosts productivity by minimising scrap."

The second main function is automatic coil positioning and control, which

ensures that the coils track the seam. "With orbital tracking of the seam," said Mr Ødesnelvedt, "the system can move coils to plus or minus 15°."

The system also handles unwanted movements of the pipe: "Not only can the seam deviate, but the pipe itself changes position. That's why our system has a centre-line offset compensation function, to ensure the coils are always in the right position."

The third function covers safety, quality and communication features. The system also collects quality control data for each batch of pipe normalised.



Quality control is enhanced by defect detection and quick coil release features.

EFD Induction – Norway
Website: www.efd-induction.com

High gloss tube polishing and finishing

RC200 is a new centreless tube polishing and abrasive belt grinding machine that combines finishing, satining, buffing and mirror polishing in straight tubes in a single piece of equipment.

The quick change of contact roller for polishing wheel and the flexibility of design of RC200 in order to work under wet and dry conditions makes it easy to perform wet belt grinding and tube gloss polishing in dry operation.



Tube mirror polishing with buffs

The centreless system enables the finishing and polishing of short components from approximately 100mm up to long tubes. Adjustable in feed and out feed roller tables can be supplied in order to support and store tubes with high lengths or heavy pipes. Its modular construction makes it possible to join several tables and meet the total length required by each production range.

The wet cooling system, used for tube abrasive belt grinding, where the water is flowing and cooling down the tubes, runs on a closed circuit. Dusty water is decanted and, once cleaned, is pumped back to the finishing point, allowing an efficient consumption of liquid. In addition, a water level shows the operator the exact quantity of water available.

A 3m long abrasive belt with 100mm contact area, combined with a flood of coolant and the strength of the regulating roller, permits heavy material removal in pipe grinding and quality belt finishing in tubes. The abrasive belt easy tensioning system, proved and tested in all NS FG machines, makes abrasive belt replacement a quick and practical operation made within a few seconds without the need of any tools.

RC200 features a strong construction of the regulating head with adjustable pressure and bi-directional feeding direction. Having these two feeding directions feature decreases handling costs, especially when tube mirror polishing is required, enabling multiple passes on the polishing buffs without having to remove the tube from the work rest and feeding roller tables. Different work rest supports equip the machine, enabling grinding and polishing of tubes from 10 to 206mm OD.

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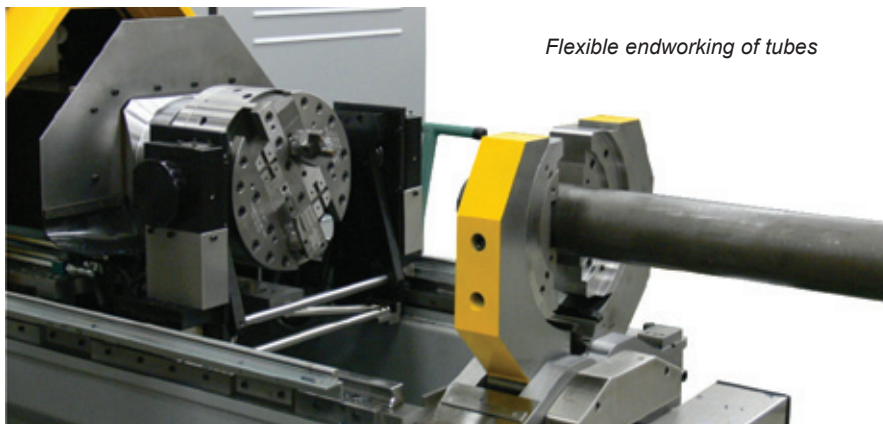


CNC endworking machine

THE flexible endworking of tubes and pipes is crucial for production process in the automotive, petrochemical, ship and offshore industry. ARLA Maschinenteknik GmbH builds CNC controlled endworking machines that are available for single sided and double sided machining.

The machine concept is based on a solid frame with one or two precise machining units including a unique concentric workholding technology, with all components perfectly aligned. The machine is a 'twin machine' or a 'double head machine', as it works like two separate CNC lathes operating independently for every side. The principal difference is that this endworking concept comprises a fixed workpiece and revolving tools.

All machining units are directly driven by servomotors and are strong, stiff, powerful and designed for high torques and high performance. In order to realise several machining steps, the units are built with integrated water-cooled



Flexible endworking of tubes

motor spindles, optionally available with automatic tool changing systems (ATC) and integrated high-performance facing head technology.

Typical applications are OD and ID turning, facing, tapping, bevelling, threading, grooving, chamfering, and boring – in particular for the welding end preparation of pipes and tubes (OD 22-360mm; pipe size: ½"-14"). As most of the machines are built within

the standard container size, they can be easily moved and therefore used as stationary machining systems and also as high-quality mobile and portable units for on-site applications.

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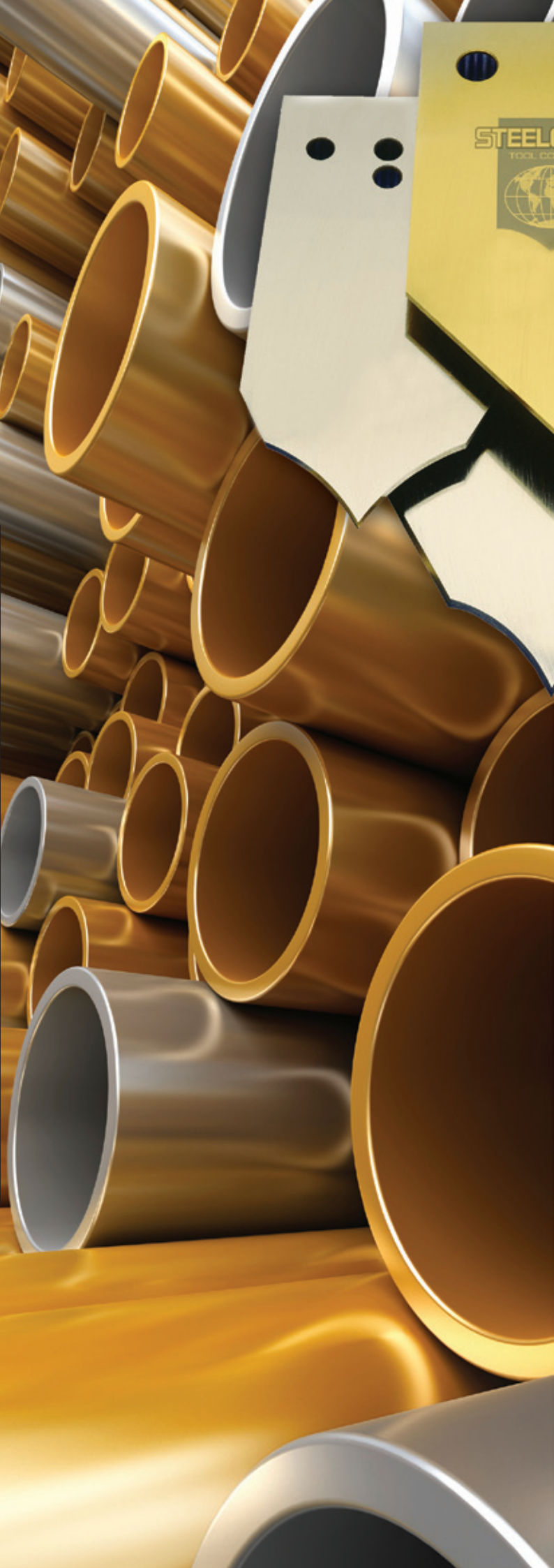
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Ultrasonic rotating heads RotoUTscan system for accurate defects detection

CONTRÔLE Mesure Systèmes designs, develops and manufactures a complete NDT range of products in eddy current and ultrasonic testing methods, which comprise high performance instruments and systems, probes and transducers, accessories, and complete turnkey machines with its mechanics associated.

Through its products and its remote assistance, Contrôle Mesure Systèmes provides, all over the world, quality and productivity solutions for industrial applications.

For high quality tubes from diameter 6 to 250mm, welded or not, in stainless steel, titanium, zirconium, but also in carbon steel, CMS proposes a full range of ultrasonic rotating heads named RotoUTscan. Several UT

transducers (up to 12) with different angles in accordance with the NDT normatives, are in motion around the tube with high speed (up to 6,000 RPM), for: longitudinal defect detection; transversal defect detection; thickness measurement as well as OD – ID and ovalisation.

RotoUTscan are driven by a fast electronic UTR which is a high accuracy ultrasonic inspection system, for in line high-speed flaw detection and dimensional measurements of ID/OD/ thickness. Employing PCI architecture, instrument operation is made fast and easy via Windows-based inspection screens and intuitive dialogue boxes for ultrasonic set up.

RotoUTscan can be combined with other CMS equipment like EC rotating

heads (RotoETscan) or magnetising units with coil installed together in a strong control bench including centring devices.

Supervision software named Probus (used to collect information provided by NDT equipment), allows customers to display combined signals (UT/ET) and create inspection reports that can be used as control evidence for quality services and customers. Data stored can be recalled for analysis and quality treatment.

Visit the company stand at Tube India Mumbai (30 October – 1 November) on its local agent booth, NDTs.

Contrôle Mesure Systèmes – France
Email: contactcms@cmseddyscan.com
Website: www.cmseddyscan.com

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Filtration systems for welded tube production

AGR Filtri produces filtration systems for emulsion used in metal processing machinery such as HF welded tube production lines and profile mills for both the Italian market and abroad.

Filtration systems study, design and manufacturing are carried out within the 2,000m² wide manufacturing facility. The experience obtained after 35 years in the business allows the company to offer not only a range of standard products but also as a series of special, individual and centralised systems, built according to the customer's specific technical requirements.

To meet the market needs in the field of filtration, AGR Filtri provides quality systems with lasting reliability and completely safe thus reducing maintenance costs to almost nil.

The continuous search to improve its products, technical assistance and spare parts service is an essential part of the company's activity all aimed

towards customer service and customer satisfaction.

Emulsion used by HF welded tube and profile mills for cooling and lubricating needs gets dirty quickly because of the high quantity of metal contaminant particles released during the production cycle.

The continuous sludge releasing and accumulation into the emulsion

Filtration system for welded tube production



involves the following negative effects: fast emulsion lubrication and cooling properties loss; rust formation on tubes and profiles; fast wear on forming and sizing rolls; emulsion temperature increasing with consequent production of waste products; fast emulsion putrefaction with nasty odour emission and bacteria formation; frequent interventions for coolant replacement; frequent interventions for cleaning operations on basements, channels, underground, collection and settling tanks; high maintenance and operating costs; nozzles blockages; sludge deposit into heat exchangers, cooling towers and chillers; and bad welding tube and bad profiles quality caused by the possible lines formation on their surface.

In order to solve all these problems it is necessary to adopt a filtration system able to remove continuously and automatically the sludge contained into the emulsion allowing a considerable yearly money saving on maintenance costs.

AGR Filtri – Italy
Website: www.agrfiltri.it

Tube mills, slitting lines, shearing and edging machines

QINGDAO Haokun Heavy Machinery Technology's products include ERW mill, SSAW mill, hydrostatic testing machine, end beveling machine and other auxiliary equipment, such as slitting line, longitudinal shear production line and edge milling machine.

ERW MILL: ERW production lines specifications: ERW16", ERW20", ERW24". A complete set of ERW25" production lines with horizontal accumulator, high-speed edge milling machine with sawmill, cutting machine and finishing area has already been put in to operation. Another complete set of ERW25" production line to be exported to WBHO in South Africa is already under testing. In addition, the company has mastered all techniques for ERW 630mmx19.1mm with iron grade X80 and has developed JCOE 1420mmx30mm with iron grade X80 welded pipe production line.

SSAW mill: from a forming process's perspective, the products can be divided into external control forming and internal control forming. From a mill production process's perspective, they can be divided into: accumulator pit stored welding material or backward swing machine unit and forward swing short machine unit in welding tractor style with continuous production capability. Diameter range of final pipe line



The Qingdao Haokun machines in action (and below)

products could cover anything between Ø219mm and Ø3,500mm.

Hydrostatic testing machine (Ø89mm-Ø2,540mm) is one of Qingdao's main products for steel pipe pressure test and eliminating the internal the stress on the pipe.

End beveling machine with a working range that covers diameters:Ø60mm-Ø3100mm. The models covering diameters Ø60mm to Ø339.7mm

are step feeding type high speed end beveling machines suitable for petroleum jacket pipe and ERW welding pipe manufacturers.

Slitting Line: the company supplies the client with three types: 1,500x10mm, 1,750x14mm and 2,200x16mm. The 2,200x16mm type is able to perform two methods of production – longitudinal cutting and strip splitting and flat plate cross cutting. The above products were already put into operation on the production line in Wuhan Steel Group.

1,750x16mm and 2,000x25.4mm type edge milling machines are new equipment recently designed and developed by Qingdao Haokun. They were designed based on a successful improvement of the cutter head transmission, chip removal and lubrication on previously imported equipment.

Qingdao HaoKun is willing to provide various services of settling the scientific and technological problems, installation and testing, manufacturing, transfer of skills, technical consultation in metallurgy, steel rolling, mining and environment protection equipment to clients.



Qingdao Haokun Heavy Machinery Technology Co – China
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QUENCH AND TEMPER — TUBE, BAR, PLATE
BRIGHT ANNEALING — CARBON ALLOY, STAINLESS



Online monitoring of tube welds

CAVITAR Ltd has released CAVILUX® Welding monitoring product family for the online monitoring of welding processes. CAVILUX Welding monitoring solutions provide high quality real-time video from the welding process and enable the online visualisation of the melt pool

(boundary, shape, size, stability), filler wire (position, length) and weld position with respect to the gap position (visual seam tracking).

Best possible video quality is enabled by the optimal combination of camera, laser illumination (visible or near



Sensors monitor the root side of welding seam inside the tube

infrared), optics and filtering. Everything is packaged into highly compact and robust sensors that are designed for challenging industrial environments and are easy to integrate into production lines and in some configurations even into hand welding equipment. As an example, it is possible to monitor welding behind a corner, in severely limited space (eg inside a tube) or in dangerous environments not accessible for people (eg nuclear plants).

CAVILUX Welding monitoring technology is equally applicable for arc, laser or hybrid welding processes and can be utilised in production, research and development or training. The main benefits in production result from the fact that defects can be detected and corrected without delay, thus increasing yield as well as improving quality and reliability.

In addition, the operator can monitor the process easily and safely. Benefits in research and development include faster process optimisation and better understanding of the process. The equipment is also valuable for training purposes because the welder can immediately see the quality of the weld and adjust accordingly.

Several models of CAVILUX Welding monitoring solutions (Standard, Mini and HiRes) are available for different needs. Depending on the configuration (laser wavelength, laser power, laser pulse duration, repetition rate and optics) the laser class is typically 2M, 3R or 3B. Therefore eye-safe solutions are often possible. Also customised solutions and high-speed systems are possible.

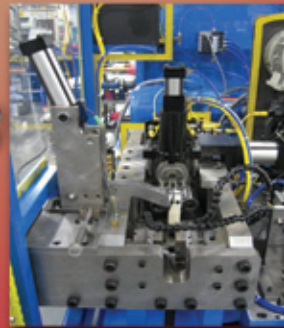
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CNN camera for 100 per cent surface inspection at high speed

QUALITY control in high-speed production processes poses a challenge in many industrial areas such as electronics, medical or automotive. Tubes, wires or rods produced for medical, telecommunications or aerospace applications, for instance, have to comply with high quality standards. Here, immaculate surfaces are required for functional or aesthetic reasons and have to be achieved at very high production rates. Fraunhofer IPM has developed an inline measurement system that guarantees 100 per cent quality control of surfaces at high production speeds.

Signal processing and camera speed are the bottlenecks of a 100 per cent quality control in such processes. Even today, many manufacturers of high-tech materials and components rely on visual inspection at the end of the production chain. Defects, which result from used-

up or damaged tools, for instance, may concern every single work piece of a whole production batch – which boosts the reject rate. In this case, an effective inline-control of production processes is necessary to identify errors immediately after they occur in order to be able to fix the problem in due course. Random defects such as scratches or disposals may be reason enough for the customer to reject the complete delivery. A 100 per cent surface inspection makes it possible for manufacturers of wires, tubes or steel sheet to identify and document errors and thus reduce the error rate in further production steps.

The German Fraunhofer IPM, an institute for applied research with a focus on optical measurement techniques, has developed an inline measurement system, which guarantees 100 per cent quality control of surfaces at high production speeds. FlexFormCNN is

the first image based system capable of completely surveying surfaces at production speeds in the order of 10m per second. The inline inspection system uses pixel-parallel image processing based on cellular neural networks (CNN), which allow image evaluation up to 10kHz.

A recent implementation of the technology is an inspection system for wire production, which has just been put into operation. Typical surface defects in wire production processes are cross dents, drawing marks and so-called chatter marks. Wires with diameters from 0.4 to 2mm typically show such defects ranging from a few millimetres to 50m. Ordinary image processing systems miss these defects when inspecting the fast-moving wire surface. In FlexFormCNN, Fraunhofer IPM has developed an inline image processing system which is able to recognise a 50m scratch on a wire whizzing by at speeds of 10m/s and evaluate it at the same time. This is possible thanks to camera-internal pixel-parallel image processing and a specially adapted lighting system.

The image processing system relies on a CNN camera in which each pixel has its own processor. The camera processes up to 10,000 images per second at a 176x144 pixel resolution. To inspect moving surfaces, an image processing system's lens must fulfil many criteria: first, the defects must be shown at such high contrast and so brightly that the exposure time is short enough to prevent blurring. Secondly, both the depth of field and the optical resolution must be sufficient for the smallest relevant defects to be shown sharply over the whole measurement area. Thirdly, especially on uneven metallic surfaces, disturbing reflections must be prevented so that the light intensity is uniformly distributed on the object surface. Thus, the right lighting is crucial for processing images of moving objects. To guarantee sufficient light intensity on a defined focal area, special optics using dark field illumination and high-power LEDs with a pulse length of 10 µsec are employed.

Fraunhofer IPM – Germany
Website: www.ipm.fraunhofer.de



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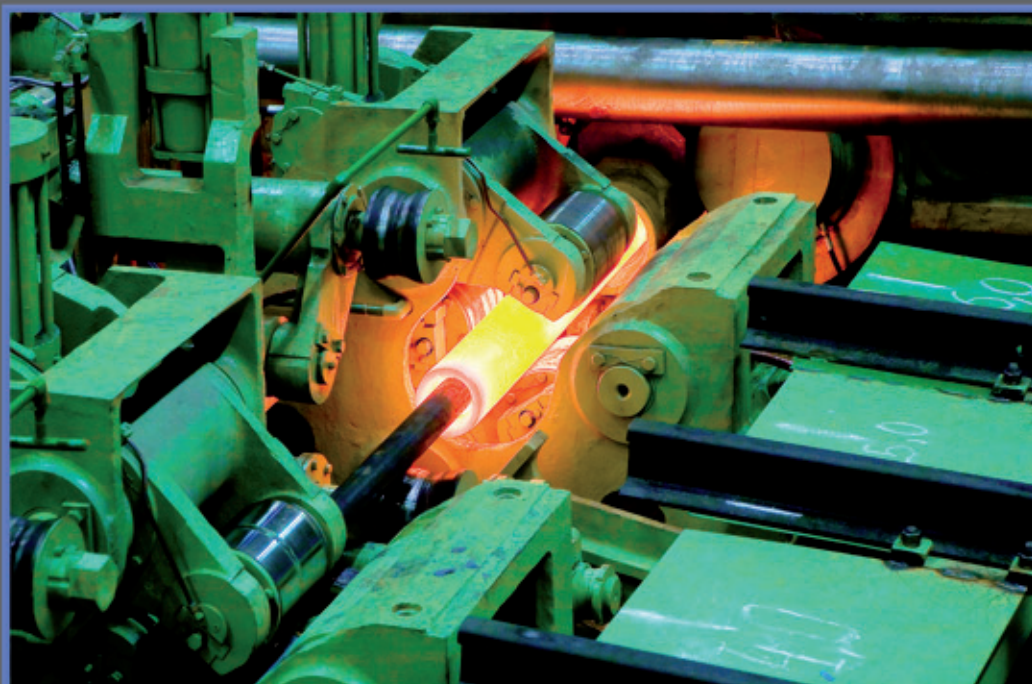
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Post weld purging

WHILE most welders recognise the need for inert gas purging when making quality joints it is not obvious why purging should be continued after the weld has been completed. The answer is obvious really; hot metal oxidises in the presence of air so the weld and any metal surrounding it will discolour until it has cooled. Welders know to keep the inert gas flowing from the torch to prevent oxidation around the surface. Why do they overlook the underside?

While nominal oxidation, ie a light straw shade, is quite acceptable in some cases and in any event can perhaps be cleaned at a later stage, some applications require absence from contamination of this type. With a little care it can be avoided. Simply continue the flow of inert purge gas over the hot metal until it has cooled – typically to below 150°C (300°F).

Effective gas seals need to be provided on either side of the joint and these need to be far enough away to be unaffected by the temperature rise during welding. Gas can be admitted through the seal or

between the seal and the pipe or tube wall. Gas exit should be available so that the lighter air is fully expelled by the denser argon. Note that if helium is being used it is lighter than air and the air exit should be at the bottom.

Having recognised the need to use gas purging, many welders think that just passing inert gas through a pipe or tube is adequate. This is poor practice. Even with small diameter tubes, the cost of continuously passing gas through is often greater than the cost of effective seals. Increasing flow rate simply leads to turbulence, trapping air around the joint.

It is a fallacy that using crumpled paper or discs of cardboard or wood gives a good seal. Even if these apparent solutions appear to be a good fit, the chances of leaks are high. There is also the possibility of burning if the weld line is too close. Bear in mind also that all three materials probably contain contamination and some residual moisture – it is all bad for the

welding procedure. Proprietary sheet plastics have been developed which are contaminant free and can even be used when making joints for use for example in nuclear and pharmaceutical engineering. These are water soluble and can be removed effectively and easily after welding but care is needed during application. See Huntingdon Fusion Techniques' Technical Note TN 14 'Purge Film'.

Huntingdon Fusion Techniques manufactures a unique re-usable range of purging equipment to meet every tube and pipe diameter from 25 to 1,800mm (1 to 72").

They have all been designed specifically to meet exacting sealing demands, use the minimum quantity of inert gas, are easy to install and remove and greatly speed up the overall welding procedure.

Huntingdon Fusion Techniques – UK
Email: hft@huntingdonfusion.com
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Model 2CPVE



Model 3CPVE

Operations: Squaring, Deburring, Flaring, Beading, Flanging, Expanding

Materials: Annealed Ferrous and Stainless Steel, Nonferrous.

Tube Diameter, mm: 2CPVE: 3 to 50; 3CPVE: 3 to 75

Standards: SAE: AS4330 (MS33584), AS33583 (MS33583), AS5131

Features: Pneumatic clamping, Variable Speed

Tooling: Per Customer's Specification

Industries Served: Aerospace, Automotive, Defense, Manufacturing, Consumer Products

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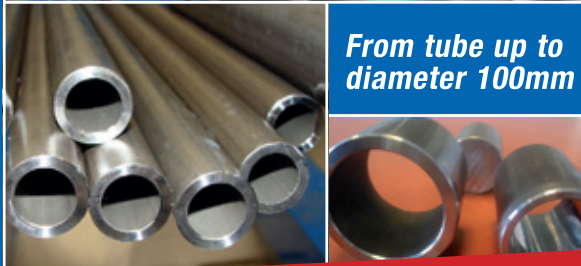
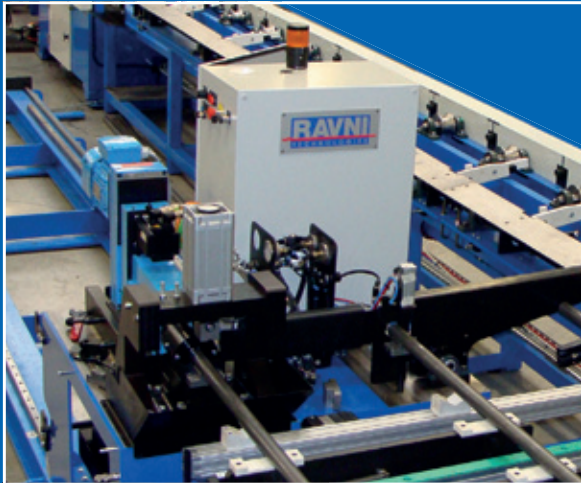
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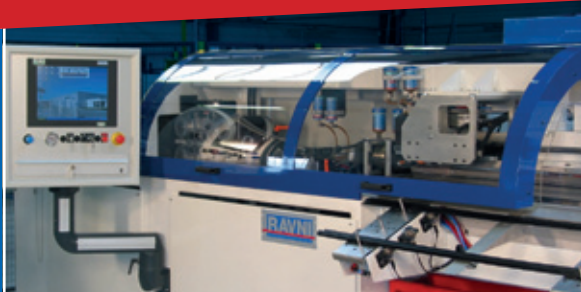




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Expanded phased array range

BUILDING on the success of its veo phased array product range, Sonatest has launched the new veo 16:128 phased array ultrasonic flaw detector. This new model addresses 128 probe elements for inspection and enables operators to connect larger single probes or multiple probes to the instrument.

This increase in power and capability is important for weld inspection applications, where a linear scan from both sides of the weld is needed. The new veo 16:128 can address a pair of 64-element probes, allowing this to be carried out in a single pass, improving both the speed of inspection and positional accuracy, since the two probes are linked together.



Sonatest's veo 16:128 phased array ultrasonic flaw detector

Efficient and effective scanning can also be achieved when the new veo is partnered with Sonatest's large Wheel probe, which is capable of scanning a strip of up to 100mm in a single pass. The system is suitable for large area scanning applications and corrosion inspection.

Aerospace composite inspection applications are enhanced using the 128-element capability; several inspection techniques for advanced materials such as GLARE have now been developed, which require high resolution probes with 96 or 128 elements. Further benefits to the new 16:128 veo include the capability of pitch-catch inspection techniques, merged c-scan inspections, top views and the included UT Studio viewing and analysis software.

Alongside this new instrument, Sonatest has also released a new range of phased array transducers called the X-Series. Within this range there are five application specific series, offering a broad choice in range and frequencies for the operator. These have been selected and constructed to match standard configurations and are compatible with Sonatest's veo range and other phased array equipment.

The veo provides a simple-to-use interface with rugged housing design. A full suite of transducers and accessories is available. The range of applications includes weld inspection, pipeline inspection, corrosion mapping, aerospace and composite testing.

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Surface crack detection system

THE ISOTEST 30 E mobile crack detection unit is a new, state-of-the-art power pack designed by Magnaflux GmbH of Essingen, Germany for magnetising specimens with AC or full-wave DC in magnetic powder testing. Satisfying a requirement expressed by numerous customers, this system complements the company's range of Isotest mobile systems 60E (for test currents up to 6,000 A DC) and 100 E (for test currents up to 10,000 A DC) with a model designed for test currents up to 3,000 A DC and AC. The model 30 E features a new, wear-free electronic high-current change-over switch, which enables easy and quick switching between DC and AC with the simple push of a button, without the need for re-connecting or re-assembling high-current cables.

This light-weight and extremely compact power pack provides exceptional mobility and flexibility on-site. Isotest 30 E is suitable for use in all industries where highest reliability under harsh conditions is a requirement, including the automotive and aeronautical industries, foundries, forging shops, steel production and processing, along with OEMs and suppliers, testing contractors and service providers.

All three Isotest models enable the demagnetisation of work pieces previously magnetised with full-wave DC current by means of a multi-stage, low-frequency demagnetisation system. The control system is programmed in such a way that current control starts at least with the selected test current intensity and is then continued until zero current is reached.

This ensures the complete demagnetisation of the work piece, as is required for many of the subsequent processing steps. Alternatively – depending on the type of magnetisation selected previously – demagnetisation with alternating current is also possible. To increase testing safety, the Isotest systems, which are designed for constant current magnetisation or impulse current magnetisation, feature a constant current control or (optional) current flow detection system. A broad spectrum of high-current cables, coils of various diameters and designs, and a variety of contacting options provides the user with maximum flexibility.

Holger Wilhelm, head of sales office and service at Magnaflux, Germany, commented: "In the design of the new Isotest 30 E system, we were guided strictly by market requirements. We are offering a system that provides a maximum of operator convenience, safety and mobility, with a combination of features which is, to our knowledge, currently unsurpassed anywhere in the world. Our customers can now choose exactly the performance level that best suits their requirements. In addition to our three mobile standard crack detection systems, we also offer stationary systems for testing large work pieces, as well as customised designs – for example, we have built several systems with test currents up to 3x17,000 A for multidirectional testing."

Magnaflux GmbH – Germany

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PRODUCT RANGE:	MATERIALS:	STANDARD:
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Pipe clamp for vee head stands

SUMNER Manufacturing's Hold-E pipe clamp is used for securing pipe from 3/4" to 6" in diameter on standard vee head pipe stands. The Hold-E is constructed from a steel frame and utilises a quick-release button to open and close the clamp arms in seconds.

"The Hold-E provides a quick, easy, safe clamp for holding pipe in vee head jack stands," said Sumner president Rob Collins. "The quick release button adds the extra feature of being able to quickly add or remove the clamp. The Hold-E is unique to the industry, providing a compact pipe clamp that is quick and simple to use."

The Hold-E features curved arm weldments that fit underneath the vee head, a ram weldment shaped to firmly grip both small and large pipe, a quick release button to quickly resize the clamp to fit over pipe, and a threaded t-handle assembly for manually tightening the pipe to the vee head. The Hold-E measures 10^{5/16}" wide, 2^{1/8}" deep and from 15^{3/4}" in height in its most compact form, to 23" high.

The clamp can be used on standard pipe or tubing, fittings and complex pipe layout work. The Hold-E is a clamping device that should not be used for threading or lifting.

Founded in 1965 in Houston, Texas, Sumner Manufacturing has served the welding and mechanical contracting industry for nearly a half century, creating material lifts, jack stands, pipe fit-up clamps, welding tools, and material carts that are currently used daily in more than 50 countries around the world, in numerous industries. The company maintains offices in the USA, Canada, China, the UK and the Netherlands.

Sumner Manufacturing Co, Inc – USA

Fax: +1 281 999 6966

Email: customerservice@sumner.com

Website: www.sumner.com

Sumner's Hold-E pipe clamp



Effective support for longevity of pipes

PROTECTIVE and resistant coatings applied during pipe manufacture, as well as manually on-site, are the tools of choice for reducing damage caused by corrosion. These thin shields against mechanical and chemical attacks need support by a careful and professional check for cracks, pores or other damage.

A check of the protective coating by means of high voltage impulses can provide the certainty that unprotected spots, which are consequently targets for corrosion, are detected no matter how small. A reliable method needs to be able to find material defects such as pores and cracks; other mechanical damage; and the results of handling errors in applying the coating material.

The testing of coverings and coatings with NDT devices that make use of pulse-type high voltage technology has been introduced worldwide due to its many advantages. Isotest® equipment based on this technology supplies the required safety margin, and can maintain the chosen testing voltage even when facing rough conditions and growing pipe diameters.

Two major components are important in this context: the built-in sphere gap, which stabilises high voltage permanently; and powerful and automatic regulation of the test voltage, which guarantees that even under demanding test conditions, such as moisture on the surface, the voltage is adjusted to the set value in a fraction of a second.

If the pipe is still lying or hanging freely, a spiral electrode can perform an all-embracing job, and the test can be done in a single step, around the complete circumference of the pipe. This is also the easiest and quickest way to test longer sections of pipe. If the pipe has already been laid in the trench, a half-round brush is a suitable alternative. This is the easiest and quickest method when there is a longer section ahead.

In addition to electrodes for the testing of the outer circumference, which generally involves the more robust type of coating, there are various types for thin or delicate coatings. In these cases the metal brush set is replaced by a special type of conductive rubber. A further alternative may be an electrode for the testing of the inside of the pipes, combining stainless steel and nylon bristles.

The use of a grounding sleeve has proved its worth in cases where a conductive connection to the test object cannot be reached. It is also recommended to use a grounding sleeve on poorly conductive or extremely dry ground. The grounding sleeve consists of a special type of conductive rubber and represents a form of capacitive grounding that can only be achieved by using pulse-type testing technology.

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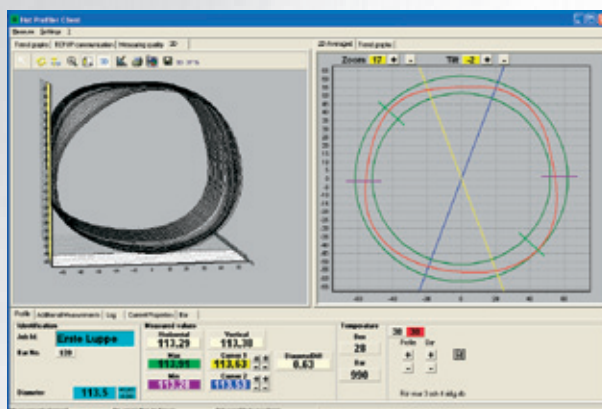
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ROSENBERGER AG has been designing and manufacturing specialised tube processing equipment and related machines since 1980. The company's engineers design and develop turnkey problem solutions for its customers, from individual machines up to complete production work cells. Based on this essential knowledge, the company claims to have been the first to successfully introduce solely servo-electric driven tube bending machines.

Rosenberger provides a one-stop source for the entire spectrum of chipless tube processing machines. The company does not use hydraulic systems at all. Servo-electric drives have considerably lower energy consumption, require less maintenance, and work more efficiently and precisely

than hydraulic drive units. Another important advantage is the unsurpassed quality – starting with the very first part.

Features of the company's range include bending for diameters up to 20, 30, 45 and 60mm; endforming with a RAM pressure from 7 to 30 metric tons; rollforming with rotating profile rollers up to a fitting diameter of 22mm; straightening and cut-to-length from coil or bar stock with rotating cutter wheels; tube end finishing (chamfering); and integration into complex work cell layouts.

Rosenberger also provides comprehensive support, including specialist support from sales and engineering departments; training programmes, either at Rosenberger's or the customer's premises; use of standard components available world-

wide; remote diagnostics via Internet; and an all-embracing service network, on request, available within 48 hours.

Rosenberger has developed the Twister, a highly flexible and future-orientated bending system for bending of tube and hose assemblies. The system features a KUKA robot as the core unit. Programs and technology can be modified to suit customers' requirements.

Within the process flow, the Twister can be linked to and combined with all required machines. Its operation is extremely simple, and the entire process flow can be programmed via a familiar Windows XP-based user interface.

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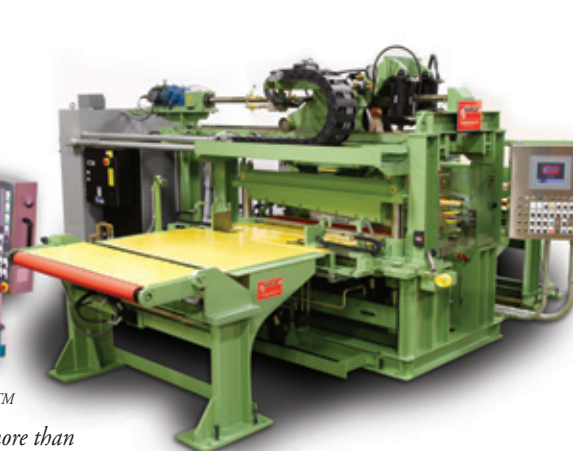
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Compact pipeline leak detection and environmental protection with ultrasonic pig

ACTIVE environmental protection and prevention of income loss in pipelines can be reliably integrated using the GLD leak detection system.

For cost reasons, many pipelines are only rarely inspected with smart pigs, because shutdowns for several inspections per year would mean huge economic losses. Real-time monitoring systems are a good way to detect large leaks, but even those are often difficult to locate. At worst, several hundred metres (yards) of pipeline must be uncovered and inspected – a disproportionate effort.

To fulfil all the requirements, Gottsberg Leak Detection has developed the GLD 202: a compact and robust leak detector, which can be deployed easily and often. Pipeline operation is almost unaffected

during pigging, and even the smallest insidious leaks can be accurately detected and located.

With this system, GLD puts control into the hands of pipeline operators and service providers. The world's only intelligent pig that – thanks to its ATEX approval for Zone 0 – can be used in any liquid pipeline, without compromising operation.

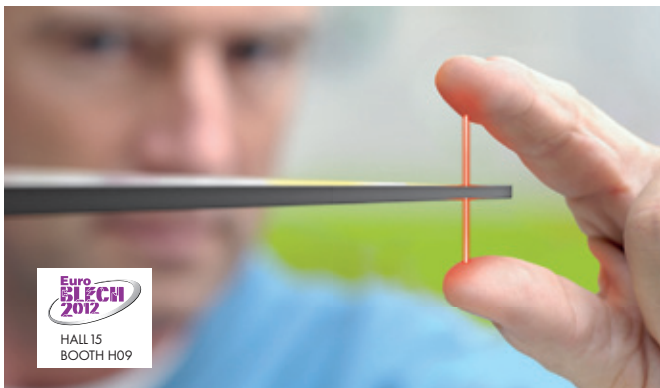
The GLD 202 leak detection system works by using multi-spectral analysis of events, and records the noise during the entire pipeline run every second on 128 channels. The data is suitable for an analysis of potential leaks, and even gives other information on the condition of the pipeline (eg wax deposits on pipe joints, movement of sliders). The North German company offers a very small

inspection pig with unusual abilities, which can be used in combination with the GLD 30x chassis in any pipeline with an inside diameter of 200mm or more.

With the GLD 202, inspection of pipelines is easy. Analysis of the data is largely automated, so after a short time of analysis, pipeline operators and inspection providers reliably know the state of the pipeline.

For the first time, such pigging inspection can be carried out by non-experts. This is partly because the GLD 700 analysis software, running under Microsoft Windows, is very simple to use.

Gottsberg Leak Detection – Germany
Website: www.leak-detection.de



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Innovative software platform

PREMIERED at the Tube show in Düsseldorf, Germany in March 2012, AICON's newly developed software platform BendingStudio is now ready for use.

BendingStudio connects all data and processes around production of bent parts: from production process planning to manufacturing to quality control. It is the only tool to meet and combine these requirements with emphasis on metrological processes.

Especially in combination with AICON's TubeInspect and MoveInspect Technology systems, BendingStudio offers efficient and customer-orientated solutions for all applications around production of bent parts. The software platform combines all data belonging to a certain part and allows manufacturers to monitor, quantify, visualise and document all changes in the different process steps. BendingStudio optimises the data handling for every production step and offers the right solution for every user.

At the same time BendingStudio has a simple and clearly structured handling concept. Many small tools ease

the daily work in all areas of bent part manufacturing. For example, it is possible to construct bend data from centre line data. Or, before applying corrections, the effects of a modified bending program can be simulated.

The data concept of BendingStudio is already prepared for future applications. Be it if the connection to different measurement systems, the integration

of new manufacturing technologies or the addition of new applications around bending like end forming or assembly management – the AICON BendingStudio offers a platform for the optimised integration of all data and processes for bent parts.

AICON – Germany
Website: www.aicon3d.com

Recycling composite materials

COMPOSITE materials such as metal and plastics or plastics and glass fibre composite materials are very popular: it is easy to produce lighter material-saving parts with these compound materials. The recycling of the emerging production waste has also to be taken into consideration – as well as the recycling of post-consumer parts. With the latest state-of-the-art technology from Herbold Meckesheim GmbH these materials can be sorted in a cost-effective way and recycled for reuse into homogeneous material categories with a high degree of purity. The main focus is on the purity of all resulting fractions.

Herbold Meckesheim GmbH –
Germany
Website: www.herbold.com



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Cooper and Turner Ltd chooses RALC-Conni

COOPER and Turner Ltd, an industrial fastener manufacturer from Sheffield, UK, can trace its manufacturing roots back to the 1800s, and has supplied products from historical icons such as the Model 'T' Ford car to modern day icons such as the Burj Khalifa in Dubai.

The company has developed into a global manufacturing business with production facilities around the world. It focuses on meeting the quality, performance and service demands of its customer base, which has involved projects as diverse as bridges, tunnels, railways, skyscrapers and wind turbines, both on-shore and off-shore. These new, high-specification and engineered bolts have required Cooper and Turner to re-think its existing production methods, and this has led to the conclusion that new investment in the latest technology is required to further develop these new products.

Having manufactured bolts at its Sheffield facility for literally hundreds of years, there is little about sawing solid materials that Cooper and Turner has not experienced. Today the company uses several modern carbide technology sawing machines. Paul Marston, Cooper and Turner Ltd's works manager, said, "After reviewing possible solutions for this application, we quickly arrived at the conclusion that we required a machine supplier capable of thinking outside the standard specification box. Amongst the many potential suppliers we contacted was Sawcraft UK Ltd, who we have known for many years. Sawcraft UK Ltd listened to our requirements and suggested the renowned Italian manufacturer RALC-Conni as the ideal supplier to meet our needs. After studying their initial proposals and realising that they had the technology to incorporate additional processes such as product identification within a fully automated line, we realised that we had found our supplier."

The final specification RALC-Conni Gemini 802 HM carbide machine, which has now been installed, is a testament to this flexibility and includes many customer specific modifications designed to optimise the processing of the new Cooper and Turner products.

Examples of these modifications include: front-loading 8m length, 5t weight capacity automatic bundle loader with an increased bundle storage capacity to hold two full bundles of material; extended electric axis carriage feed stroke of 1m to increase output rates on the longer length products; a unique 'moving' cutting vice to allow maximum material utilisation with the minimum possible scrap ends; a customer-specific powered off-loading system capable of handling cut lengths of up to 4m long; programmable in-line product identification with corporate logo and part number ID; and magazine storage with operator controlled product release.

The complete line has been designed and built by RALC-Conni and is totally integrated into the sawing machine's PLC and operator control panel.

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Burr free cold
saw fly cut off

Burr free cold
saw fly cut off

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* under ideal working conditions



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New generation laser sensor

A NEW laser sensor has been launched by British manufacturer, Meta Vision Systems, for all types of mechanised and robotic welding. It is the first such sensor to incorporate high performance image processing in the sensor head itself, rather than needing a separate computer, and has many applications throughout manufacturing industry.

Installing the new Smart Laser Sensor (SLS) at least halves the cost of automating arc welding equipment and robot welders, compared with using conventional laser sensors. The cost can be a small fraction of the previous outlay if the welding equipment has an Ethernet or CANbus interface, allowing direct connection of the SLS.

Other functions of the SLS, in addition to seam tracking during welding, include inspection of the bevel on pipe ends before welding, and of the weld bead after it is laid with tracking position detection and measuring accuracy to within $\pm 0.1\text{mm}$.

The sensor was developed by Meta in collaboration with CRC-Evans Pipeline International, Inc of Houston, USA, a world leader in pipeline welding. The company is the launch customer for the product and has worldwide exclusivity for its use in pipelines. The version of the SLS for pipeline welding and inspection is called "CiRCvision". Meta will be servicing demand for the sensor in all markets other than pipeline.

Off-the-shelf laser systems are capable of high-speed joint tracking, but have limitations regarding unit cost, robustness, ease of use and suitability for typical pipeline construction field conditions. These limitations made previous generation systems unsuitable



The new Smart Laser Sensor from Meta Vision Systems

for general use with the large CRC-Evans welder fleet.

The company's brief to Meta was to create a low-cost, self contained, intelligent, smart vision system with digital communication capabilities to be used in enhancing weld joining applications at 3m/min or better and also for inspection of pipelines. CRC-Evans identified that the overall pipe joining process could be dramatically improved if additional information about weld preparations and welds could be obtained before, during and after welding.

The result is the Meta SLS, which consists of a robust CMOS megapixel image sensor with very large scale integration devices, including a large FPGA (field-programmable gate array) and a powerful DSP (digital signal processor) inside the sensor head itself.

The nature of narrow gap welding in pipelines makes it impossible to have precise alignment all around a given weld joint due to irregularities in joint fit-up as a result of variations in pipe diameter and ovality. This leads to local changes in joint geometry and position.

The SLS measures these changes in real time during welding. Tracking data is sent via a high-speed Ethernet or CANbus interface to the motion control system driving the external welding system. The resulting closed loop control ensures reliable, noise-free data transmission, ensuring that the welding electrodes are always where they should be.

Meta Vision Systems Ltd – UK

Email: sales@meta-mvs.com

Website: www.meta-mvs.com

New and improved pipe clamp

The new E-Z Fit Red pipe clamp



IN a reaction to the markets' growing need for varying styles of pipe clamp for ever-changing welding applications, Prestige Industrial Pipework Equipment Ltd (PIPE Ltd) has re-launched its E-Z Fit Red range.

Offering an alternative to the already established E-Z Fit Gold, the new E-Z Fit Red boasts the widest single clamp range among the fixed leg style clamps, enabling the E-Z Fit Red to cover the range from 1" to 12" in just three clamps.

As with all the other clamps in Pipe Ltd's range, the E-Z Fit Red can be used on exotic materials such as stainless steel and Duplex, by fitting the optional stainless steel shoes and screws, making all contact points between clamp and pipe stainless steel, eliminating the possibility of cross contamination.

PIPE Ltd – UK

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PCT introduces advanced pipe coiling and delivery system

PCT has introduced a unique pipe coiling and delivery system that provides the ability to coil pipes PE100 up to DN250 x 250m without vehicle escorts.

PCT's well-established low ovality coiling technology has been combined with its newly developed, unique multi-trailer road train design which enables pipe manufacturers to deliver 3x250m coils of DN250 in one delivery.

The trailer design also allows free-standing coils or reels of pipe to be dispensed via the built-in roller supports. This is only possible with the use of Low Ovality Technology coiling machinery which allows the pipe to be coiled at these tighter bending ratios. Smaller pipe sizes can also be coiled and transported, for example, the three trailers would carry over 1km of DN180 in three lengths with less than 5 per cent pipe ovality occurring.

"Combining Low Ovality Coiling

Technology with our newly developed delivery system allows pipe manufacturers to see the huge cost and time savings associated with transporting very long lengths of pipe and minimal jointing", says Iain Wallace, PCT.

"If you take into account the ability in some countries for road trains to exceed our three trailer European limit, this length can very easily be extended to four or five trailers per road train for long distance transport."

Coils can be unloaded on-site or alternatively, each trailer can be dropped at points equal to the pipe coil length ready for an on-site tow vehicle to lay-out. Either way, this provides the ability to string out and only make three butt welds before a string of pipe is ready for installation compared to having to make 20 times the number of welds if the same pipe (DN250) is

delivered in 12m stick lengths. PCT Ltd is a privately owned company based in Newcastle, UK with subsidiaries in the USA and China. The company designs and supplies coiling, handling and packaging solutions for flexible products such as plastic pipe, sub-sea umbilical, power cables, flow-lines and steel wire rope.

PCT – UK


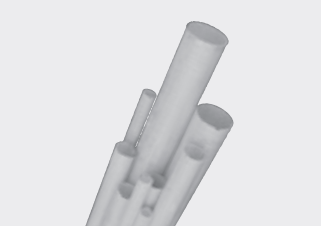


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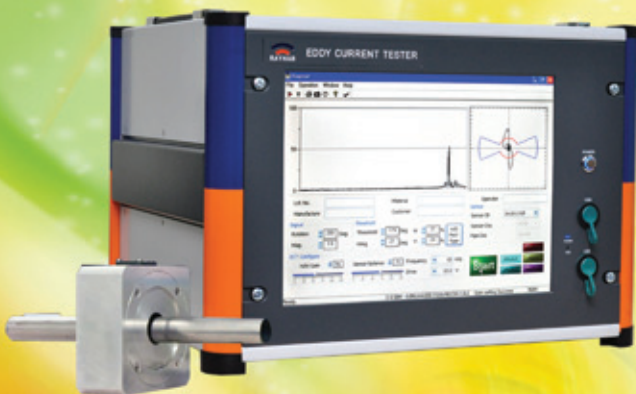
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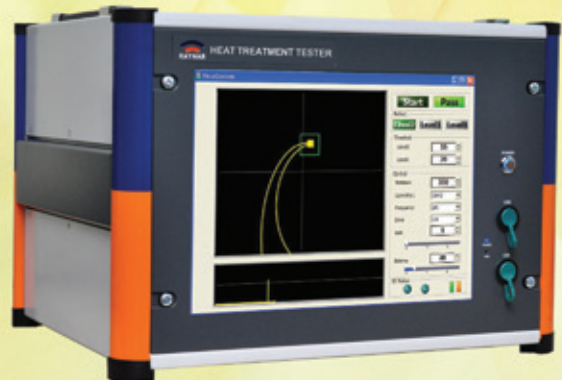
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Forming rolls manufacturer

THE Atlas brand (DB Engineering) was formed 60 years ago, and has evolved to become one of India's largest tool equipment manufacturers, currently with over 600 employees and an annual turnover of over \$20mn. The forming rolls division was established 25 years ago, and produces over 24,000 rolls per year.

With specialist knowledge of various steel grades gained over six decades, and with an in-house design team, the company provides a complete one-stop shop for customers in the cold rolling industry.

By incorporating world-leading roll forming software the company is able to provide technical advice on rolls and

optimisation of production processes. This approach, combined with ISO-certified quality standards, has helped Atlas to become a leading Indian manufacturer of rolls for the production of tubes and other roll formed open and closed sections.

The company can design and produce tube forming and open section-forming rolls ranging from 50 to 800mm in diameter. Before production all roll designs undergo a simulation and finite element analysis to achieve a meticulous final product. All manufacturing is done in the company's state-of-the-art manufacturing workshop with over 15 CNC turning centres.

The ISO-certified in-house heat treatment facility has a capacity of over 300tn/month, allowing the company to maintain world-class standards for all of its products.

Over the last few years the company has made significant inroads in the worldwide tube and section manufacturing industry by supplying to Australia, North and South Africa, the Far East, Canada, Russia, the Middle East, Europe, and various mill OEMs in India.

Atlas Knives (DB Engineering) – India
Fax: +91 11 26386453
Email: sales@atlas knives.com
Website: www.atlas knives.com

Dos and don'ts when buying a second-hand machine

LOWER investment volume, adequate production capacity – the arguments for buying a second-hand machine are obvious. However, in the case of complex tube bending machines, there is a whole range of factors determining the efficiency of using a second-hand system.

Who buys a car without a test drive and without knowing its features? Investment in a second-hand system resembles this scenario, particularly if complex tube bending machines from a niche area are bought without consulting the original manufacturer. Pipe bending processing on an industrial scale is a good example of this: customer-specific system solutions are used in many sectors, ensuring high-precision bending results by means of CNC control, high performance drives and bending tools with a complex structure. The sophisticated plant technology cannot be simply dismantled and reconstructed to produce new components in a different company.

"Detailed questions of component geometry, material and output quantity have a decisive impact on the possible applications of the machine," said Hartmut Stöhr, managing director of bending machine specialist Schwarze-Robitec. "In our case, the procedure itself complicates the sale of second-hand machines by third parties. If one



of our tube bending machines has been designed for example to process thin-walled exhaust pipes in mass production, it might not be suitable for bending thick-walled high-pressure tubes for plant construction. Ultimately, whether the drive concept and machine design can produce perfect component quality under the new conditions can be judged only by one of our specialists."

"Before buying, it should at least be ensured that the machine actually works properly. The control must show no errors, the mechanics must not be worn and the machine must be complete in terms of its components," said Schwarze-Robitec's Bert Zorn. "It must then be presented in test mode, in order to be able to clarify for example that all

of the axles still work properly. However, these criteria are really the absolute minimum and they are adequate in only the rarest of cases."

"There are various options if you contact us," explained Jürgen Korte, authorised representative at Schwarze-Robitec. "We can look at our records to see exactly which machine is being offered. In addition to the delivery condition and the exact age of the machine, we can then also provide statements about whether the machine has undergone regular maintenance by the manufacturer."

Schwarze-Robitec GmbH – Germany
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Levelling and cut-to-length lines

A NUMBER of things are changing in the market of steel sheet, with important consequences for machines designed to produce it and turn the strip from coil (in various widths and thicknesses) into cut sheets prepared for the processing of final products.

Cut-to-length lines are the most affected by this evolution. The growing demand for rolled products prompts an increase in speed and precision of cutting: working speed of thickness up to 3mm is 80m/min, with an accuracy of ± 0.25 mm on the length (cut with rotary shear). For thicknesses up to 8mm working speed is 40m/min, cutting accuracy ± 0.25 mm on the length (cut with rotary shear). For thickness from 4 to 20mm, the speed is 40/20m/min, with

a length tolerance ± 0.5 mm (cut with flying shear).

In recent years there has also been a spread of high strength steels whose superior mechanical properties require – for cutting and levelling – forces and higher powers involving the critical review of the entire mechanics of machines that make up these lines.

The importance of the levelling (not to be confused with the straightening that only serves to remove the residual curvature of the winding coil) is generally underestimated. The operation is, however, of fundamental importance for the quality of the sheet. If levelling is not perfect, the plate may seem flat but retain residual stresses in it. In its transformation into finished products, for

example by precision trimming (or fine trimming), cutting the material with the punch, the fibres are cut and the internal tensions are released. The result is uncontrolled deformations and blanks geometrically different from the punch and the drawing. Deformations are often unacceptable for quality products.

The same drawback occurs in heat precision cutting, for example with high-definition plasma or laser. The increase of the quality requirements imposes an almost perfect levelling, and levelling lines of greater efficacy and efficiency.

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API pipe finishing equipment

FIVES Bronx offers Bronx/Taylor-Wilson pipe testing and straightening machines that have a global reputation and admiration for their unsurpassed quality and durability. What speaks volumes more than anything is that Fives Bronx has supplied over 100 new straightening installations and over 50 new pipe testing installations during the last ten years. The leading pipe producers used extensive research to make the name Fives Bronx the technological choice for their pipe finishing needs.

The company is currently in the design and manufacturing stages for two hydrostatic pipe testers for the TMK group. The first installation is for TMK's Sinara division in Russia for a hydrostatic pipe tester which requires pressures for API standard Q125, product diameters ranging from 60.3 to 168.3mm, for pressures up to 150 Mpa. The tester design load of 2.962kN is based on Q125 grade with a 168.3mm diameter.

The second installation, located at the Koppel division in the USA, is for a hydrostatic pipe tester that will be integrated within the heat treatment OCTG line. The product diameter ranges from 60.3 to 192mm for pressures up to 20,000psi. The tester design load of 592,661 pounds is based on a 177.8mm diameter testing at a pressure of 15,400 psi.

TMK's decision to procure the



Series 6CR10 pipe straightening machine

equipment from Fives Bronx was made solely due to the intellectual market expertise that has been proven in previous installations in the USA, Russia, Saudi Arabia and China.

In the last year Fives Bronx has installed and successfully commissioned three 177.8mm hydrotesters at Baoji in China for API 5CT. Two six-roll series 6CR9 heavy-duty pipe straightening machines were also added. With these installations, the Fives Bronx group has successfully established over 25 new pipe finishing installations in the Chinese market.

Currently Fives Bronx is also in the installation and commissioning stages for a world-leading producer to build an API

OCTG pipe plant in Saudi Arabia. The line will include two 355.6mm hydrostatic pipe testers with end load designs above 1,000,000 pounds. The heat treatment hydrotesters will be processing the diameter range above 20,000 psi, with the second machine processing line pipe. The second machine will be for line pipe and will only be testing at a maximum pressure of 7,250 psi. Also included within this facility will be a 177.8mm heat treatment hydrotester.

This particular installation will have a maximum end load of 592,596 pounds and will process OCTG API pipe at a pressure of 30,250 psi. As part of the complete pipe finishing line, Fives Bronx has installed three API heavy-duty pipe straightening machines. Two are Bronx 6CR11 heavy-duty design machines and will process pipe from 114.3 to 355.6mm. The third machine is also a heavy-duty design straightening installation and is the Bronx series 6CR9, for pipe ranging from 60.3 to 177.8mm. Completing the line requirements were two 355.6mm end facing and bevelling machines.

Included within the pipe plant in Saudi Arabia is a complete lab testing facility for off-line collapse resistance specimens.

Fives Bronx – USA

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Dealing with the internal cleaning of pipes and shafts

THE cleaning of pipes and shafts can be – especially in the case of internal cleaning – a special challenge for conventional cleaning devices like high pressure and ultrasound washing machines. The difficulties increase further with small diameters or long and curved pipes.

For this case ph-cleantec, with its universal low pressure hot cleaning technology, offers a simple and flexible alternative.

The basic concept of this technological device consists of hand-guided systems operating with low pressure (up to a max 14 bar) and high water temperature (up to 95°C).

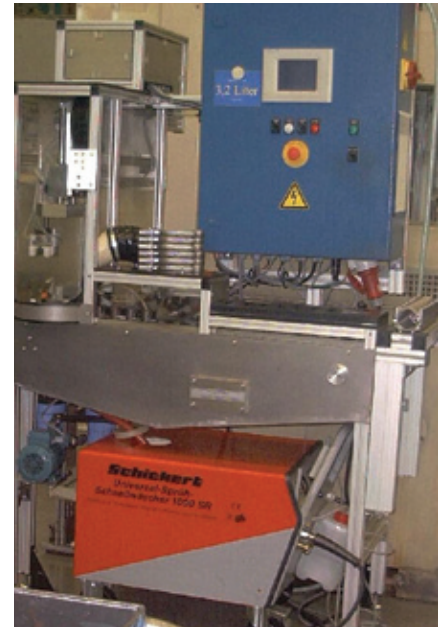
By means of an electrical flow heater the technology is ready for operation within 1 minute and the low pressure makes sure that nothing is damaged and that the procedure can be used in the workshop without affecting workers and

the environment. For internal cleaning different lances or flexible nozzles from a diameter of 4mm in desired lengths are available. Therefore it is possible to clean sensitive components with curvatures and close passages much more easily. Of course the procedure is also well suited to the outside cleaning of shafts, pipes and cubic components at a factory.

Larger and heavy parts can be cleaned on stationary collectors with desired dimensions and the water is reprocessed by a special recycling procedure so it can be reused.

Besides the close-to-process parts cleaning the ph-cleantec cleaning devices can also be used in the field of machine maintenance.

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A number of solutions for the revamping of cold rolling mills

EZTM JSC has developed a number of solutions for the revamping of cold rolling tube mills of the third model, including the facilitated stand DUO with vertical roll configuration, with the ring

dies provided with single-side drive.

Due to the stand design, the combination of centre-to-centre distance between work rolls and pinion gear mounted is in accord with the optimal

mangling diameter. This minimises the rolling axial force that in return affects the quality of the produced tubes, the stability of rolling process, reduction of wear of pinion gears and racks and also provides the possibility of multiple-use of worn-out dies due to their regrinding.

The use of ring dies provides the possibility to reduce overall dimensions of the stand, decrease its mass (by 1.5 times) and reduce the loads on the drive mechanism. Roll changing is performed by the assembly rolls and takes not more than one hour.

The technical solutions, implemented in the suggested design, allow increased accuracy of rolled tubes; decreased loads on the mill mechanisms to increase their durability; increased die life; reduced roll changing time; increased number of strokes of the stand (due to the decreasing of its mass) when the loads on the drive are the same, and as a consequence increased capacity; and improved work conditions.

EZTM JSC has gained experience in using mechanisms with the planetary crank conversion device of the continuous rotation into interrupted (impulse) one. The values of maximum forces in the links of such sizes are 3-4 times less than in some other types of mechanical feed mechanisms. The exact feed and turn of the tube by the new mechanism are provided by firm kinematical connection of the impulse turn of its output links (connected with the transmission of the turn and lead screw) with the continuous rotation drive through the device.

Providing the mill with the mechanism with the planetary conversion device allows the implementation of the rolling scheme with the feed and turn in both end positions of the work stand (double feed and turn), which allows it to divide feed and increase the total feed, to increase the mill capacity.

The use of feed and turn mechanisms allows increased accuracy and configuration of produced tubes; and increased total feed for double stand stroke due to the usage of the rolling scheme and increased capacity.

EZTM JSC – Russia
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Scanners offering diameter control in cold processes

ZUMBACH Electronic, Switzerland, has extended its range of ODAC® laser scanners for non-contact inline diameter measurement for large size solutions. With the ODAC 550 it is now possible to measure large steel bars, tubes and

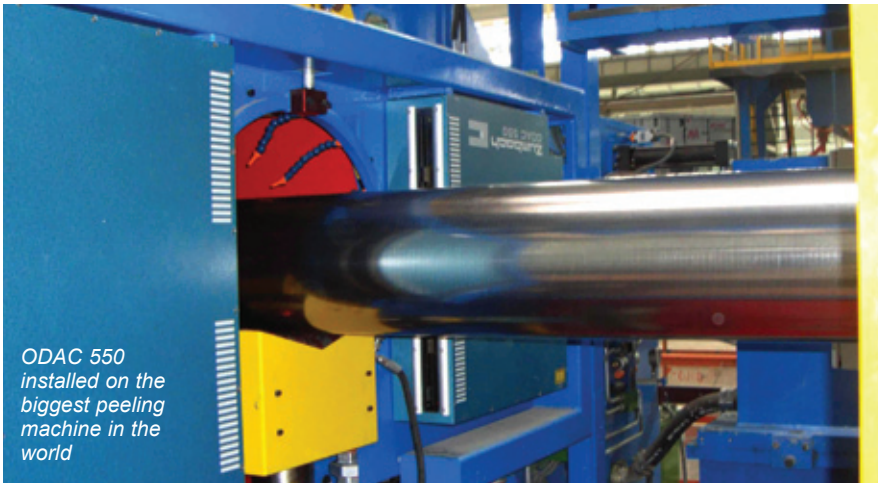
rolls up to 500mm or more at accuracies of a few metric microns and rates of up to 2,000 measurements/s. Other materials, such as titanium, brass, alloys and plastic, work as well.

This was made possible by the

development of a revolutionary optical scanning technique with a highly parallel and seamless measuring field (no dead zone). The technology also allows mounting emitter and receiver far apart from each other, depending on the available space conditions. Typical processes where the system offers new solutions are peeling, grinding, polishing and straightening, as well as in quality control lines (NDT).

The dimensional data for diameter, ovality, etc, can be fed directly to the user's network or displayed in real-time for the operator by USYS processors, and also for feedback to the machine. Complete accessories like secondary protection enclosures, cooling devices, air purging and air knives are available for heavy-duty environments.

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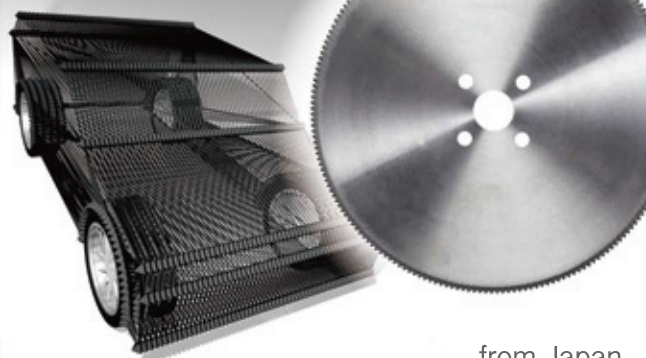
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New loading trolleys

IN order to satisfy the growing problems of worldwide customers, OTO has finalised the project and manufacturing of several types of trolleys having the purpose of collecting the coils from the coil storage (turnstile for example) and loading them on to the decoiler mandrel to enable a quicker and fully automated coil loading cycle.

The device will enable a coil loading cycle in shorter time as well as safer working conditions in the entry area, in addition to the fact that the continuous presence of the operator is not usually required. In addition to the above function, the new trolley generation has the ability to orientate the burr in the desired position (for example by rotating the coils by 180°), thus avoiding the operator having to do this operation.

Dedicated software enables the control of the movements of the trolley from the coil storage to the decoiler's mandrel with extremely smooth acceleration/deceleration to enable a safe stability on the coils and the same is the case with narrower ones.

The coil is held from the top and from the bottom: the closing force of the top retainer is controlled through a servovalve according to the coil size, with the aim of reducing possible ovalisation of the coil, mostly the case when packing coils with light strip thickness.

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The new lightweight transport trolley is easy to move around and provides an ergonomic working platform and fatigue-free operation. Analysis results are typically available in a few seconds



and are displayed on a bright, 15" TFT LED screen. Spectro software features like ICAL, which automatically re-standardises the instrument with a single sample, or APF-Plus, which selects the calibration method based on the identification of the base metal, greatly simplify operation. For materials identification there is access to the Spectro Metal Database, or the user's own library can be created using the Grade Library Builder, which is a part of the Metal Database software.

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Oil & Gas

The roster of bidders eager to work the Afghan-Tajik Basin suggests rapid development of Afghanistan's oil and gas sector

Seven energy companies have joined Exxon Mobil Corp, of the US, in seeking to bid for the right to explore for oil and gas in the Afghan-Tajik Basin in northern Afghanistan, according to a release issued 4 July by that country's Ministry of Mines. The other firms identified as having submitted "expressions of interest" are: Dubai-based Dragon Oil Plc; Kuwait Energy Co; India's ONGC Videsh Ltd; Petra Energia SA, of Brazil; Pakistan Petroleum Ltd; PTT Exploration & Production, of Thailand; and Turkey's TPAO.

Reporting from Houston in the *Wall Street Journal*, Tom Fowler said a formal expression of interest gives a company access to seismic and well log data in and around the area that is being let out for bidding in northern Afghanistan, near the city of Mazari-Sharif. Bids were to be collected in the fall. The US Geological Survey estimates the reserves in the Afghan-Tajik Basin blocks at up to one billion barrels of oil.

"Building on the success of last year's tender in the Amu Darya Basin, we believe this tender magnifies the progress we are making," Minister of Mines Wahidullah Shahrani said in a statement that referred to a bid offering made last year. The bidding was won by a joint venture between China National Petroleum Corp and a local Afghan partner. The Ministry of Mines said that the company, which began production in Amu Darya on 24 June, is expected to produce at least 150,000 barrels of oil in 2012.

Mr Fowler's report indicates that the authorities in Afghanistan are particular about which energy firms will be invited to work the Afghan-Tajik Basin. Of 20 companies that sought participation in the bidding round, 12 were disqualified. The Ministry of Mines said they lacked the required financial resources or technical expertise, or did not submit their information by the 30 June deadline, or submitted incomplete information.

'Idle iron'

Something very new in the ecology movement: a vigorous effort to save an abandoned Gulf of Mexico oil platform from demolition

Thirty years after it was built and months after it was decommissioned, an oil platform set to be demolished under US Interior Department rules governing non-producing ocean structures has acquired some unusual defenders. The platform, High Island 389-A – one of about 650 such oil and

gas industry relics known as idle iron – rises out of the Gulf of Mexico about 100 miles southeast of Galveston, Texas. A visitor, Melissa Gaskill, might almost be rendering the scene for readers of the journal *Nature*:

"Below the surface, corals, sea fans and sponges cover its maze of pipes. Schools of jack and snapper, solitary grouper and barracuda circle in its shadows. Dive boats periodically stop at the enormous structure, where dolphins, sea turtles and sharks are often spotted."

In fact, her description of the lush ecosystem that has grown around High Island 389-A appeared in the *International Herald Tribune*, and Ms Gaskill's tranquil tone changed quickly. Much of the marine life on or around the structure will likely die with its planned demolition, either from the explosions to separate the platform from its supports or when it is toppled or towed to shore and recycled as scrap metal.

To save both platform and ecosystem from this fate, an unusual collection of allies is hoping to convert High Island and many similar structures into protected reefs. ("In Its First Life, an Oil Platform; in Its Next, a Reef?", 17 June)

According to estimates by government scientists cited by the *Herald Tribune*, a typical four-legged platform becomes the equivalent of two to three acres of habitat. "These structures attract marine life that normally wouldn't use the area," said Greg Stuntz, chairman of ocean and fisheries health at the Hartz Research Institute for Gulf of Mexico Studies at Texas A&M University (Corpus Christi). "Much is growing on them, from corals up to marine mammals."

Somewhat ironically, the removal of High Island 389-A was itself dictated on environmental grounds. The platform, built in 1981, falls within the 56-square-mile Flower Garden Banks National Marine Sanctuary, one of 14 federally designated underwater areas protected by the National Oceanic and Atmospheric Administration's Office of National Marine Sanctuaries – and the only such area in the Gulf. The Interior Department gives owners of a non-producing platform within the preserve one to five years to remove it, depending on the terms of the drilling lease and the location of the structure. High Island's owner has until January to act.

STAY OF EXECUTION

Efforts are under way to save the platform. Earlier this year, W&T Offshore, the oil and gas acquisition and exploration company that owns it, told GP Schmahl, superintendent of the Flower Garden Banks sanctuary, that the company would prefer to convert High Island to an artificial reef. If the plan is approved, the structure would likely be dismantled to 85 feet below the water surface, as required under a federal rigs-to-reefs programme. (At the time that the *Herald Tribune* article was published, W&T officials had not responded to requests for comment.)

Ms Gaskill wrote that sanctuary officials said they were "comfortable" with a partial removal, but were concerned over liability and maintenance issues. In May, the Flower Garden Banks advisory council voted unanimously to request a moratorium on High Island's removal until at least September 2013.

So the friends of the platform have some breathing room. But the Interior Department's Bureau of Safety and Environmental Enforcement reports that 265 platforms were removed in 2011; and industry sources say that 150 or more of the 650 on the bureau's list are scheduled for removal in 2012.

➤ More broadly inclusive campaigns to save the new endangered species are under way. The Gulf of Mexico Fishery Management Council – which exercises federal control over fishery resources in a zone 9 to 200 miles off the Texas coast – is seeking recognition of offshore platforms as essential fish habitat. That designation could bring into play the Sustainable Fisheries Act, which prohibits removal of protected corals from federal waters.

The governor of Texas and a state congressman have asked the Interior Department to reevaluate the removal rules, as has a coalition of seven recreational angling organisations, including the Coastal Conservation Association. The coalition is supporting legislation to require more thorough review of platform removal.

➤ Ms Gaskill noted that Interior has legitimate concerns about the risk and expense of removing structures damaged or toppled by storms, as well as the potential for spills from old wells. Looking to the future, John Hoffman, the CEO of Black Elk Energy, an oil and gas company based in Houston, has founded a non-profit organisation, Save the Blue, to help insure and maintain platforms that are spared removal.

Meanwhile, one platform's reprieve is gratifying to scuba divers as well as environmentalists.

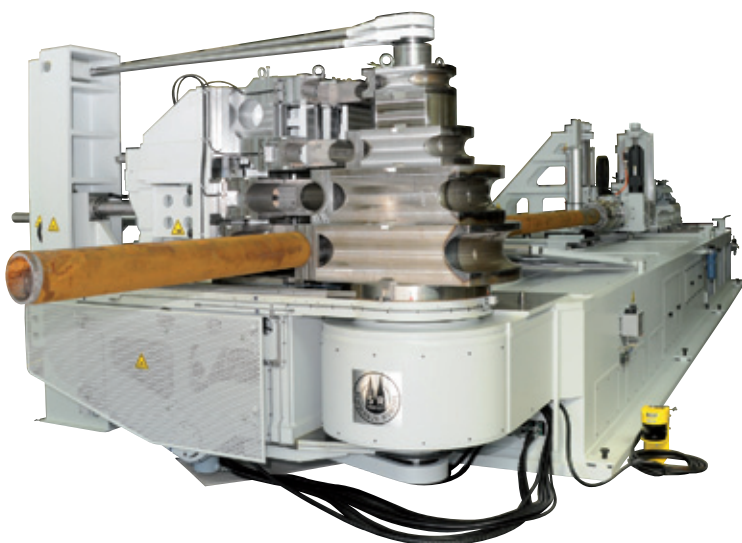
"Some people say High Island is their favourite dive in the sanctuary, and it is an exhilarating experience," said Mr Schmahl, of Flower Garden Banks. "The number of fish can be overwhelming. It's like no other kind of diving."

Elsewhere in oil and gas . . .

➤ New facilities at the huge Halfaya oil field in Iraq have started production in a development phase that will take output to 70,000 barrels per day (bpd). Subsequent phases are intended to raise production to a plateau rate of 535,000 bpd. As reported in *Oil & Gas Journal* (27 June), a group led by PetroChina has a 20-year service contract to develop the field, which was producing 3,100 bpd from four wells when the contract was signed in late 2009. The contract provides for cost recovery and remuneration of \$1.40 per barrel (bbl) when production exceeds the initial 70,000 bpd.

Former Iraqi Oil Minister Issam Al-Chalabi has estimated Halfaya reserves at 4.6 billion bbl; original oil in place, at 16 billion bbl. Paris-based Total E&P holds an 18.75 per cent interest in the consortium, in partnership with the national oil company of Malaysia, Petronas Carigali (also 18.75 per cent); the Iraqi national South Oil Co (25 per cent); and operator PetroChina (37.5 per cent).

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In the 1970s, the French company brought the Buzurgan and Abu Ghirab fields on stream. Since then, Total E&P Iraq has maintained an Iraqi presence by conducting technical studies and training local engineers.

➤ On 7 June, in Oslo, British Prime Minister David Cameron and his Norwegian counterpart Jens Stoltenberg signed the “Energy Partnership for Sustainable Growth” that elaborates an earlier memorandum of understanding that Norway’s Statoil will invest \$27.8bn in developing Britain’s Mariner and Bressay oil fields in the North Sea.

The Mariner field is believed to hold recoverable resources of between 300 and 500 million barrels of oil equivalent, while recoverable resources at the Bressay field are estimated at 200 to 300 million barrels.

Statoil and Centrica – the parent company of British Gas – are the dominant players in North Sea oil and gas. As partners they also envisage joint exploitation of the Arctic’s vast energy riches and cooperation on renewable energy and carbon capture and storage (CCS), an experimental technology for trapping exhausts from polluting power plants.

Norway, Europe’s second-biggest gas supplier behind Russia, meets more than a third of British gas needs by way of two dedicated subsea pipelines.

Automotive

Even as China’s car sales slow at home, its low-priced exports to emerging markets are surging

“Roads in countries like Algeria, Brazil, Iran, Russia, Saudi Arabia and South Africa are increasingly dotted with cars from manufacturers like Geely, Great Wall Motors and Chery.”

Chinese companies, all. Keith Bradsher, writing from Beijing in the *New York Times*, was making the point that China’s car exports to emerging markets are booming. These exports were up 21 per cent in the first five months of this year; in May, they were up 43 per cent from May 2011. But China is shipping just a few thousand cars a year to the European Union, and virtually none to the US.

Mr Bradsher, the *Times*’s Hong Kong bureau chief, noted the irony that, for more than a decade, automakers around the world have been nervously awaiting the day when China would start exporting sizable numbers of cars to the West. Now it seems they mistook the real threat. Less affluent buyers from Santiago to Baghdad are starting to buy low-priced Chinese cars as alternatives to used cars, motorcycles, and low-end models sold by the multinationals. (“Chinese Cars Make Valuable Gains in Emerging Markets.” 5 July)



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Already pouring billions into new factories, Chinese automakers say they are preparing to escalate their exports to developing countries. The prevailing optimism seems justified. A 43-year-old shopper in Santiago, Chile, was looking to buy a new car after having owned several used ones. Against the advice of her mechanic, she chose a Chery S21 over more established (and more expensive) models from Japanese, European and American companies.

“The price factor is fairly decisive,” she told Mr Bradsher. “I paid \$5,500 new and [fully equipped]. Toyota with similar features costs around \$12,000.”

From the sellers’ side, Steven Wang, the deputy general manager for exports at Great Wall Motors Co, made the point that the importing countries “are easy for us to operate in.” In contrast, he said, Europe has “lots of laws for new entrants,” as well as a customer base that tends to be loyal to familiar brands.

▶ Annual auto sales in developing countries other than China have risen by 45 per cent since 2005, to 21.3 million cars and light trucks last year, according to the global data company LMC Automotive. Including China, emerging markets passed industrialised countries in 2010 for the first time in the number of cars and light trucks sold.

Even so, because sticker prices tend to be considerably higher in industrialised countries that is still the more lucrative market. But Michael Manley, the head of Chrysler’s



Chinese motor exports are surging ahead

international operations, pointed out that, with so much growth in developing countries, “You have to be incredibly aware of the domestic brands” emerging in China.

▶ The *Times*’s Mr Bradsher concurs that the Chinese auto makers pose a potential challenge for the overseas divisions of companies like General Motors, Ford, Toyota, Volkswagen and Fiat – all of which are looking to emerging markets for growth and watching the Chinese contenders with varying levels of concern.

To what lengths might that concern lead them? Mr Bradsher wrote, “Western automakers have been buying a wide range of Chinese cars and then having engineers dismantle them to study the quality and likely cost of major components.”

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Energy

Japan is poised to overtake Italy to become the world's second-biggest market for solar power

The *Japan Times* on 4 July took note that Japan is about to become the No 2 solar market after Germany — the global leader by installations. Citing a Bloomberg New Energy Finance forecast, Chisaki Watanabe reported from Tokyo that new government incentives are driving sales for equipment makers like Kyocera and Sharp. Industry Minister Yukio Edano on 18 June set a premium price for solar electricity that is about triple what industrial users now pay for conventional power.

Utilities will pay about a half-dollar a kilowatt hour (kWh) for 20 years to solar power producers, almost twice the rate in Germany. Bloomberg believes that could spur at least \$9.5bn in new installations adding 3.2 gigawatts (gW) of capacity.

A gigawatt is enough to supply about 243,000 homes in Japan. The country ranked sixth worldwide by new solar installations last year, when it added 1.3gW to bring its installed base to five gigawatts. Japanese builders next year will erect another 3.2gW to 4.7gW, London-based New Energy Finance forecasts.

That the prospective new power is about equal to the output of three atomic reactors is significant. Atomic energy provided some 30 per cent of Japan's power before the nuclear crisis that followed the earthquake and tsunami of March 2011. Prime Minister Yoshihiko Noda's effort to cut dependence on atomic energy benefits the domestic solar industry at a time when its European counterparts have been suffering incentive cuts.

"The tariff is very attractive," Mina Sekiguchi, associate partner at the accounting group KPMG in Japan, told the *Times*. "The rate reflects the government's intention to set up many solar power stations very quickly."

Under the new programme, utilities will buy solar, biomass, wind, geothermal and hydro power. All costs will be passed on to consumers in surcharges, which the government said will average out at \$1.09 a month per household: down from its previous estimate of \$1.25.

▶ The solar initiative is not without its detractors. It is, Ms Watanabe observed, raising concern among Japanese business groups that promoting clean power will raise bills and slow the economic recovery. One sceptic is Masami Hasegawa, senior manager of the environmental policy bureau of Keidanren, Japan's most powerful business lobby, which counts Toyota Motor Corp and Nippon Steel Corp among its members. "This is a mechanism with a high degree of market intervention by setting tariffs artificially high and making users shoulder the cost," Mr Hasegawa said. "We question the effectiveness of such a scheme."

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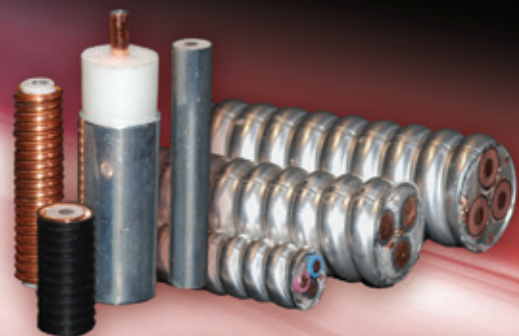
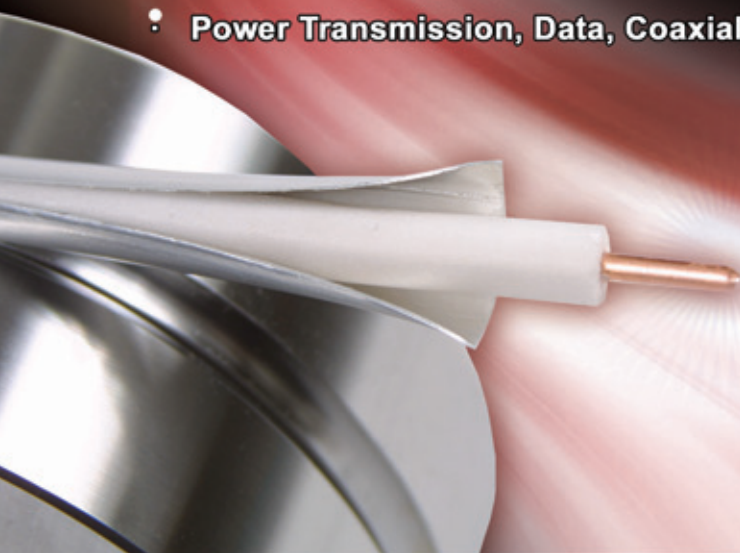
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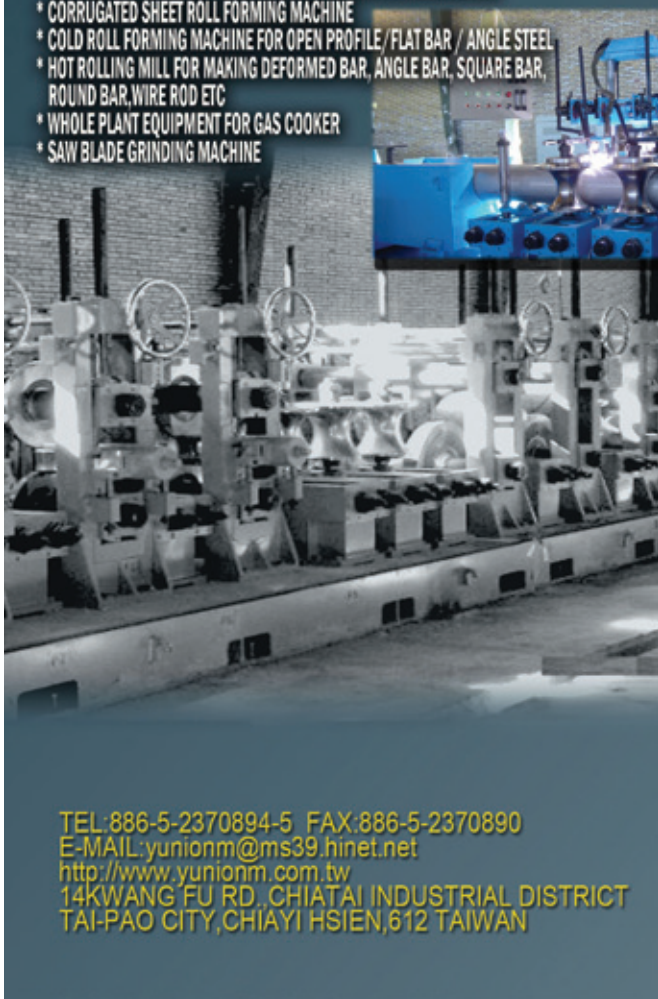
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Steel

China's Hebei Steel shores up its access to iron ore supplies by joining a project on Canada's Atlantic coast

The official Chinese news agency Xinhua on 9 July quoted local authorities as saying that Hebei Iron & Steel Group, China's largest steel producer, had obtained the go-ahead from Beijing to invest in Canadian iron ore developer Alderon Iron Ore Corporation. In April, Hebei Steel said that it planned an investment of about C\$194mn (US\$195mn) for a near-20 per cent stake in Alderon itself and a 25 per cent interest in Alderon's Kami project, located in the Labrador Trough on the east coast of Canada.

Identified as a very promising region, the Labrador Trough in the Canadian Maritimes would seem poised to become one of the world's major iron ore producing regions. Demand for iron ore is surging worldwide. With active encouragement from Ottawa, the Canadian iron ore sector attracted \$15bn in investment in 2011 alone.

The Kami project has proven reserves of about a billion metric tons, with an expected annual output of 8 million mt of iron ore after it goes into production in 2015, Xinhua said. The deal would also give Hebei the right to buy 60 per cent of Kami output every year.

As noted by Reuters (9 July), the Hebei-Alderon deal announced in July may be seen as an effort by Chinese steel producers to bolster their access to foreign iron ore supplies, dominated by a handful of global miners. China's steel mills have been urged by the government to source at least half of their iron ore imports from Chinese-owned or -invested projects by 2015.

Of related interest . . .

▶ In Beijing on 4 July, a spokesman for Wuhan Iron & Steel Group firmly denied a local business newspaper report that China's fourth-largest steel producer had shelved a project to build a steel plant in Brazil on grounds that the projected costs are too high. The \$5bn plant is slated to produce 5 million metric tons of steel a year at a site at the port of Acu, in Rio de Janeiro state, but its launch date has not been confirmed.

However, *Marketwatch.com* reported that the Brazil-based research unit of Barclays Capital considers the completion of the Acu project improbable.

According to Barclays, the Wuhan venture to produce slabs in partnership with Brazil's EBX Group is still at the feasibility study stage and runs "high risks" of not gaining the necessary approvals, as it guarantees only a minimal rate of return on investment.

Wuhan's head of operations in Brazil was quoted by the Estado newswire to have acknowledged difficulties related to

infrastructure, especially delays in construction of a 186-mile rail link to serve the planned Acu works.

➤ Other Brazilian news – from Nomura International, the London-based subsidiary of the Japanese financial services group – concerned the German steelmaker ThyssenKrupp AG's proposed sale of its stake in the Companhia Siderurgica do Atlantico (CSA) works, also in Rio de Janeiro state. Nomura said the sale could provide potential investors with "an attractive alternative to greenfield investment in a Brazilian steel mill, given the likely [capital expenditure] overruns and delays typically associated with building out capacity in Brazil."

The Nomura research report (4 July) continued, "The confirmation that Wuhan continues to consider investment in Brazil keeps us comfortable that a sale of CSA will be possible in the next 12 months."

➤ As reported from New Delhi in the *Wall Street Journal* (3 July), the Steel Authority of India Ltd and Japan's Kobe Steel Ltd were to sign a joint-venture agreement within the week to set up an iron processing plant in India with a capacity of 500,000 metric tons of nuggets per year. The information was attributed to Indian steel secretary DRS Chaudhary, who said the 50-50 partnership would make a total investment of \$272mn in the plant, to be set up in the eastern town of Durgapur. The two companies in 2010 entered into an initial agreement to make nuggets using Kobe technology.

Elsewhere in metals . . .

➤ A growing environmental movement in China has begun to make polluting projects harder to build. On 3 July, strong protests against the planned construction of one of the largest copper and molybdenum smelting complexes anywhere prompted local officials in southwestern China's Sichuan Province to backpedal. The local government of Shifang, the planned site of the smelter, announced in a statement that construction of the \$1.6bn complex had not merely been suspended: it was halted permanently.

The smelter had been intended as the centrepiece of the economic revitalisation of an area devastated by the 2008 Sichuan earthquake, but a crowd estimated by local residents at several thousand strong demonstrated its opposition.

As noted by *Time* (4 July), the earthquake destroyed two chemical plants in Shifang, forcing 6,000 people to evacuate when 80 tons of ammonia leaked. Fears linger about the susceptibility of industry to damage and the possibility of more such dangerous leaks after a natural disaster.

Sichuan Hongda Chemical Industry Co, China's third-largest zinc producer, was to have erected the smelter. On news of the cancellation the company's shares slumped 9.2 per cent, its biggest drop since November 2010.

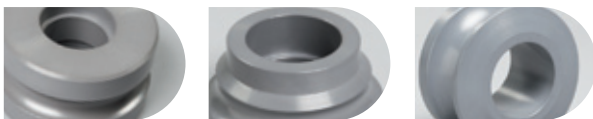
Dorothy Fabian, Features Editor (USA)

CERAMIC WELD ROLLS

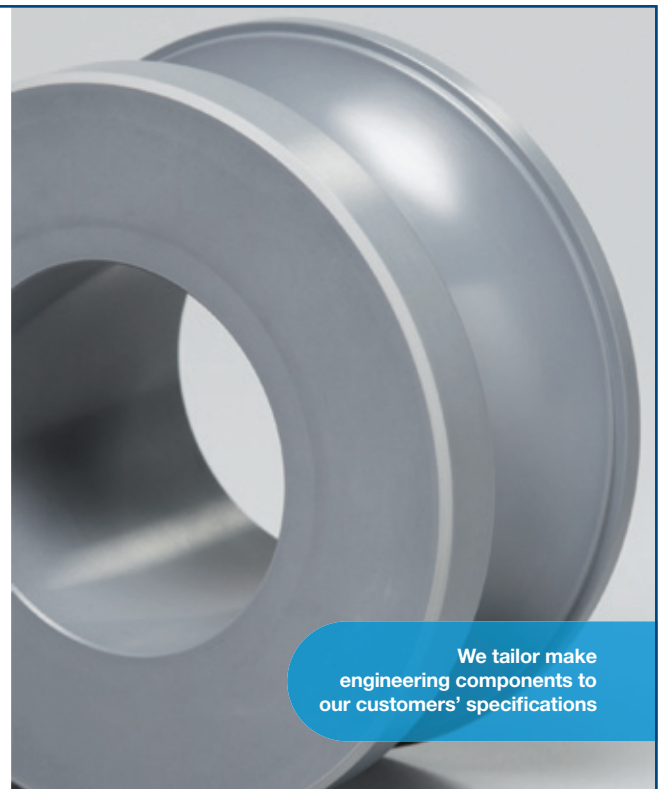
Innovative Solutions

Our unique Technide® S10 Ceramic Weld Rolls have exceptional wear life and are used with great success within the tubing industry.

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- Saves up to 20% on energy costs.
- Reduces machine downtime and maintenance.
- Better surface quality of product, reduces galling marks.
- Better repeatability of product.
- Reduces coolant consumption.



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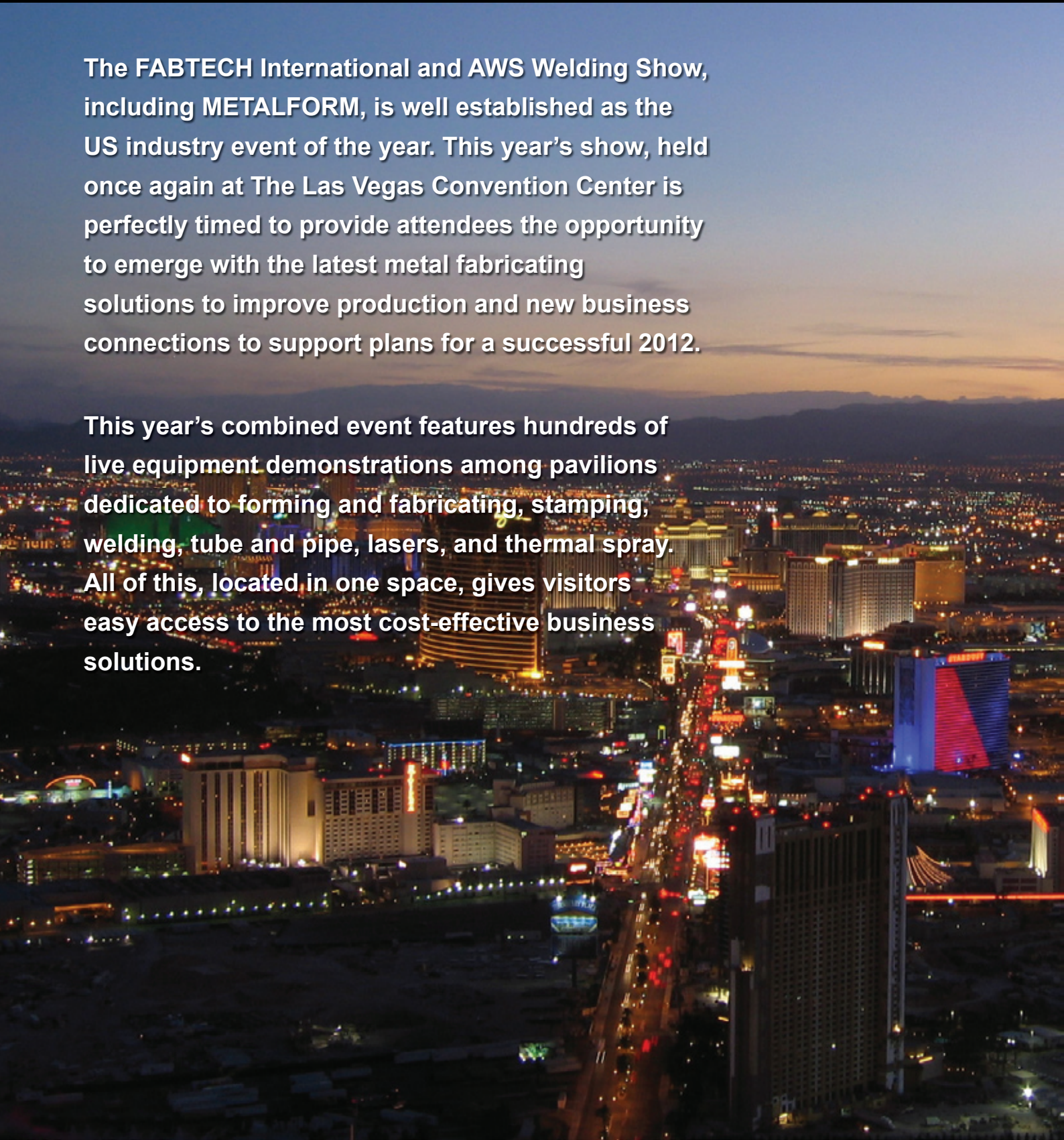


12-14 November 2012

**Las Vegas Convention Center
Nevada, USA**

The FABTECH International and AWS Welding Show, including METALFORM, is well established as the US industry event of the year. This year's show, held once again at The Las Vegas Convention Center is perfectly timed to provide attendees the opportunity to emerge with the latest metal fabricating solutions to improve production and new business connections to support plans for a successful 2012.

This year's combined event features hundreds of live equipment demonstrations among pavilions dedicated to forming and fabricating, stamping, welding, tube and pipe, lasers, and thermal spray. All of this, located in one space, gives visitors easy access to the most cost-effective business solutions.



www.fabtechexpo.com



Show Venue

Halls: North and Central
Las Vegas Convention Center
3150 Paradise Road
Las Vegas, NV 89109, USA
Tel: +1 702 892 0711
Website: www.lvcva.com

Opening times

Monday, 12 November	9:00am – 6:00pm
Tuesday, 13 November	9:00am – 5:00pm
Wednesday, 14 November	9:00am – 4:00pm

Organiser

Society of Manufacturing Engineers
Tel: +1 313 425 3000
Email: jcatalano@sme.org

Show contacts

Fabricators & Manufacturers Association, International
Tel: +1 815 399 8775
Email: mhoper@mfafabtech.com

Society of Manufacturing Engineers
Tel: +1 313 425 3000
Email: jcatalano@sme.org

American Welding Society
Tel: +1 305 443 9353
Email: jweber@aws.org

Precision Metalforming Association
Tel: +1 216 901 8800
Email: ppirogowicz@pma.org

CML USA, Inc Ercolina

USA

C3739

ERCOLINA'S TM76 mandrel bender is suitable for prototype or daily production purposes. CML USA, Inc, North American supplier of Ercolina tube, pipe and profile bending and metalworking machinery, has introduced the TM76 with a bending capacity to 3" round tube and capable of bends to CLR as small as 1.5D.

This model offers unlimited storage of bend programs, material library and job information with USB. Controls are designed for easy access to manual and auto operating modes, system

TM76 mandrel bender



diagnostics and multiple languages. The interactive touch screen displays absolute (ABS) or incremental (INC) positioning with inch or metric readout. Model TM76 incorporates programmable mandrel positioning with anticipated mandrel retraction, clamping, pressure die and boost die movements. Tailstock Y and B position display resets to zero after each bend for easy setup while maintaining absolute position.

Patented by Ercolina, finger style clamping system minimises distance between bends. A heavy, one-piece steel structure improves rigidity and minimises vibration.

Ercolina's tubing benders and fabricating machinery are designed to reliably and accurately produce applications, improving product quality and finish.

Website: www.ercolinacnc.com

Fontijne Grotnes BV

The Netherlands

C2136

FONTIJNE Grotnes will be exhibiting its latest metal forming solutions.

Fontijne Grotnes builds specialised production equipment that can be used in complex manufacturing processes and has been active in the metalforming industry for more than 100 years. Its sizing technologies, consisting of expanding, shrinking and rollforming processes, are a valuable contribution to diverse production processes, to calibrate and form different parts such as rings, cylinders and cones, which require tight tolerances. These processes often eliminate machining and fabricating steps, save time and material and thereby improve operational efficiency and profitability.

Fontijne Grotnes expanders and rollformers are widely used to form finely detailed profiles in cylindrical or conical shaped blanks from tubing, pipe or coiled and welded sheet metal.

To form a profile the blank is positioned around the collapsed dies of the expander, which have the desired profile. Cone and drawbar are in the extended position. As the drawbar pulls the cone down the inclined surfaces of the cone force the jaws and dies outward. Outward expansion stretches the part past its yield point to the

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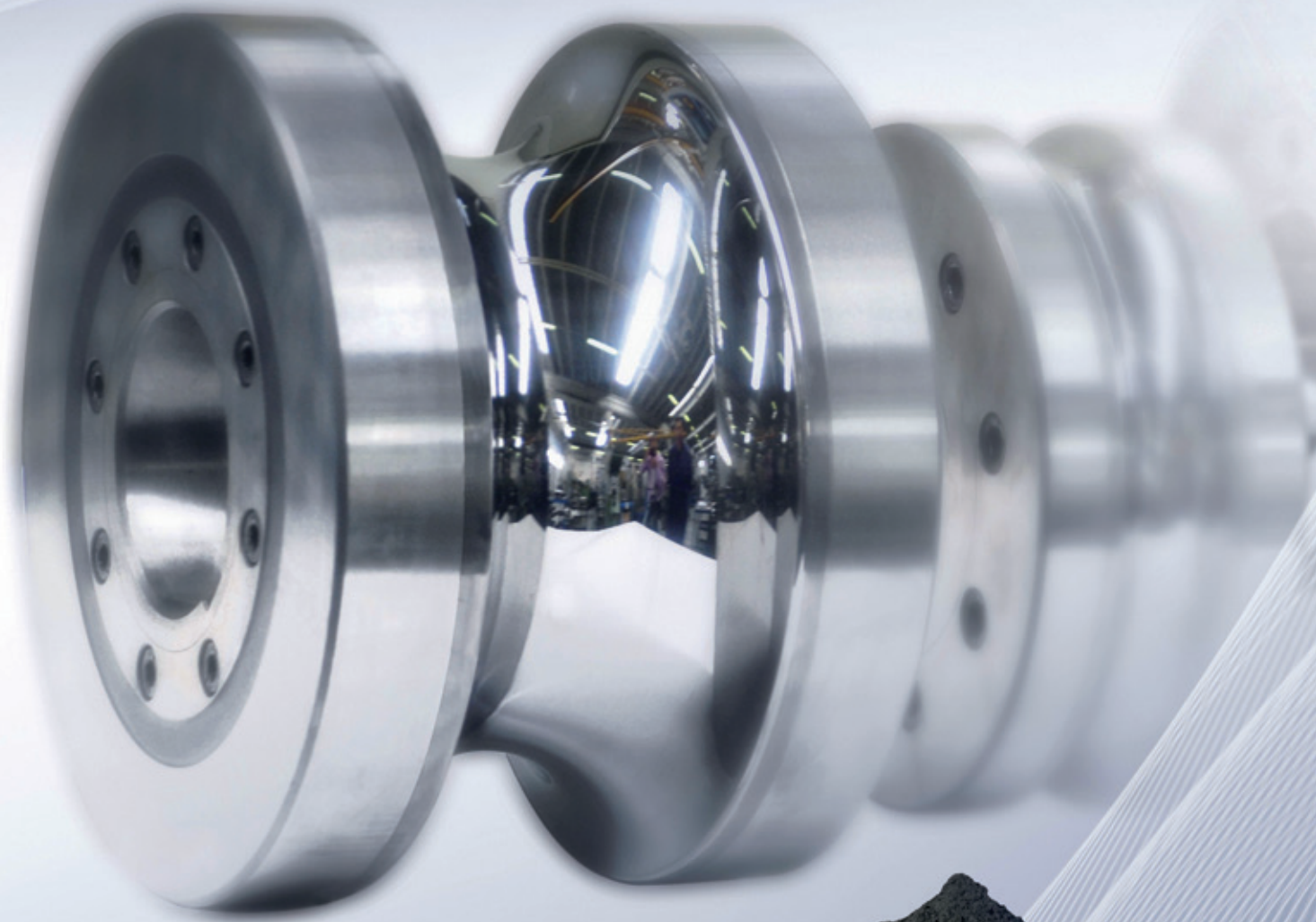
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ATOMAT

STEEL & TUNGSTEN CARBIDE ROLLS



BEYOND ROLLS

Steel & Tungsten Carbide

desired shape. When the part reaches its desired shape and size the drawbar/cone assembly returns to the extended position and the jaws and dies return to their original position.

Website: www.fontijnegrotnes.com

Innerspec

USA

N2217

INNERSPEC provides non-destructive testing (NDT) solutions that require high-power ultrasonic instrumentation, non-contact techniques, or customised integrations. Headquartered in Central Virginia, USA, with offices in Europe and Asia, Innerspec has installed and supports more than 200 factory integrated inspection systems in 25 countries, and offers a wide range of high-performance portable instrumentation and standard sensors and accessories.

At Fabtech 2012, Innerspec will show a number of NDT applications for tube, pipe and weld inspection using ultrasonic Electro Magnetic Acoustic

Transducer (EMAT) technology. EMAT is a non-contact, no-couplant technique that generates the sound in the part instead of the transducer, making it ideal for high-speed, high-temperature, and automated applications.

Applications that will be presented at Fabtech include: Thin weld (<6mm) inspection. Using a proprietary technique, the company will introduce the only system on the market capable of performing 100 per cent ultrasonic inspection of thin welds and detect defects as small as 0.1mm in diameter at speeds of 1m/s; thick weld (>6mm) inspection. Its EMAT technique permits inspection of thick welds without couplant and meets the most stringent code requirements. The Innerspec systems can perform inspections at high temperatures immediately after welding without quenching the weld with couplant or refrigerants; plate and skelp inspection for internal flaws; meets EN10160 and ideal for high and low temperature in automated environments; volumetric inspection of thin strip and laminated products; volumetric inspection of tubes and billets; surface and near surface inspection of plates,

tubes, billets, strip at production speeds and high-temperatures; thickness measurement at high temperatures (up to 1,000°C) for steel, aluminium, copper, ductile iron and most metals; automated roll inspection for hot and cold mill rolls; and properties measurement equipment (anisotropy, stress, bolt load and nodularity).

Website: www.innerspec.com

Likest

Taiwan

C5528

LIKEST has been a leading manufacturer of tube drilling, piercing and punching technology machines since 1985. Its newest tube piercing and punching machine is the U-type three hydraulic cylinders automatic tube punching machine with three punching heads (two horizontal and one vertical) with rotation servo motor. The machine can punch six kinds of different holes (or more) on the same tube. Its new functions are U type with three settings: power press (punching

fast cleaning of pipe ends!

...TPP 5090 polish machine

With the TPP 5090 tube and pipe ends as well as plates can be polished very quickly. Both inside and outside at the same time. Check the demo video on our website --> www.wortelboer.ws



Both spindles of the air driven TPP are adjustable to the thickness of the pipe wall or plate thickness. Also speeds are adjustable. Call or email us for more information.

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TENRYU

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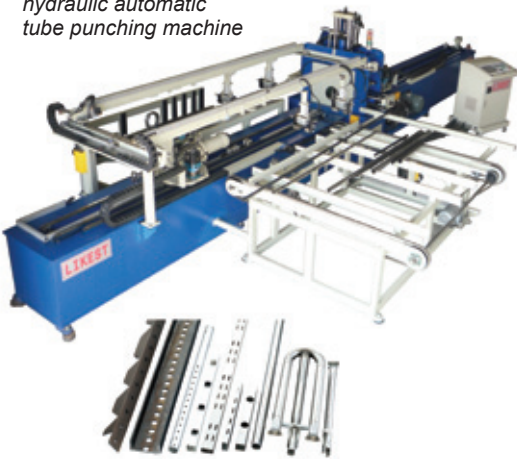
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TENRYU (CHINA) SAW MFG. CO., LTD. | P.R. of China, Hebei, www.tenryu.cn

The U-type three hydraulic automatic tube punching machine



device with hydraulic cylinder), dies and auto feeder. Its punching capacity includes: hydraulic punching machine with two horizontal heads and one vertical head, each having maximum power, top vertical punching head and left horizontal punching head and right horizontal punching head. The user can punch different hole size and shape on UPN channel or any profile without changing the mould.

This machine is driven with an auto feeding function for the tubes. Servo

feed-in positioner frame for material length: 3,000mm (standard size, special design or longer tubes are welcome) for different variable lengths of the tubes.

The punching/piercing types for holes are: blind hole, through hole and perforation. It also has Y-Axis (feed) and B-Axis (rotate) servo motors, which can clip the tube and rotate the tube to punch the holes in the different angles.

The machine can be used to create mobile shelving systems, scaffolding, metalworking industries manufacturing

for automotive manufacturing, gas stove, power energy and electrical wire distribution, racking and shelving and base of custom signs, electronic displays, resorts and casinos, outdoor media and repairs and maintenance, high volume and different purpose punching for rectangle tube/round tube/circle tube/square tube/ellipse tube/perforation and more.

Website www.punching-machine.com

Osborn International GmbH

Germany **N3309 & C2737**

OSBORN is a leading supplier of surface treatment solutions and high-quality finishing tools for hundreds of industrial and commercial applications such as metal finishing, honing, surface polishing and welding. Professionals choose Osborn products because they are unsurpassed in quality and service life, and can be counted on to be rugged, efficient and compatible with their equipment.

Osborn stocks more than 10,000 standard products and provides more than 100,000 customised solutions. It offers the largest mix of heavy-duty brushes for surface preparation, cleaning and finishing. Osborn also creates specialist tools for applications that need a customised solution. When presented with the need for a new brush, abrasive or compound solution, Osborn has the people to make it happen. Customised solutions are created with the determination to pass on the greatest value to the customer, >>>



VEGA ENGINEERING CORPORATION

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Laser Welding Line



Tricathode Welding Line



MAIN PRODUCTS:

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- ❖ Laser Welding Tube Forming Mill
- ❖ Titanium Tube Forming Mill & Inspection Equipment
- ❖ Bright / Dull Annealing Equipment
- ❖ Plasma / Tri-cathode Welding Equipment

ERW Line for 304/409



Heavy Duty ERW Line



$\frac{t}{d}$ ratio 20%



Delivering the Highest Quality Metal Cutting Solutions for the Tube and Pipe Industry

***Coated Blades and Cryogenically Treated Jaws,
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◀ ◀ ◀ incorporating the optimum materials and manufacturing methods to ensure maximum performance.

Website: www.osborn.com

Quaker Chemical Corp

USA

C1852

QUAKER Chemical, a chemical supplier to the tube and pipe industry that offers system-wide expertise, as well as a comprehensive portfolio of processing fluids and coatings, has improved production operations for customers in welded and seamless tubular mills worldwide.

The company was asked by a major tube and pipe manufacturer for help with issues it was experiencing at one of its facilities. It had premature corrosion on its pipes before they left the warehouse, and the company was losing money due to end-user warranty claims. Additive restraints at the plant were also causing film flow issues and the company was experiencing low coating film builds.

Quaker's experienced field staff quickly identified several important factors. Heavy mill oil on incoming steel was impacting coating adhesion on the pipe; gummy deposits in the tube forming/welding operations were causing appearance and dirt issues on the end product; the washer the manufacturer was using was unable to overcome coolant issues, resulting in marginal cleaning performance; and vacuum issues were affecting the coating applications.

Quaker advised the customer to evaluate Quakercoat® 036 UV, an instant and UV-cured coating that is free of VOCs (volatile organic compounds). This custom-formulated product eliminated the warranty claims and gunk deposits that had plagued the company, and gave better film builds, a better product surface, and drier pipes. Because the coating is more flexible, it also met the performance expectations of the manufacturer's sister-mill and expanded its client base, with improved quality and consistency.

This tube and pipe maker now spends less time dealing with issues due to multiple suppliers, and Quaker provides routine system-wide service visits to ensure any operator questions or concerns are addressed in a timely manner.

Website: www.quakerchem.com

T-Drill Industries Inc

USA

C2121

PIPE and tube fabrication machinery manufacturer T-Drill Industries, Inc has launched the S-54 collaring machine. The S-54 collaring system is capable of producing tees as small as 1/4" and as large as 2 1/8" in materials such as copper, aluminium, steel, brass and stainless steel.

The S-54 is available in versions from a simple hand load model to a completely automated version.

Some of the options available include a manual feed table, or an automatic feed table, with auto load and part number storage.

At Fabtech the company will be exhibiting its range of equipment for tube and pipe fabrication, including rotary cut-off, end-forming and spinning machines.

Website: www.t-drill.com

Xiris Automation Inc

Canada

C2312

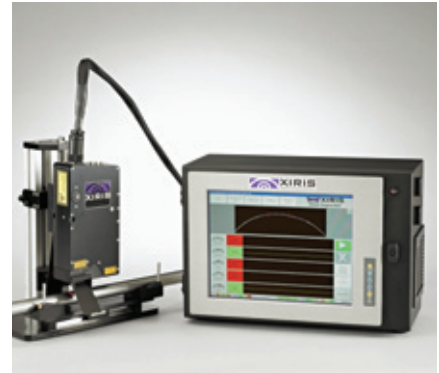
XIRIS Automation specialises in developing machine vision products for the tube and pipe and metal fabrication industries.

At Fabtech Xiris will be exhibiting the newly enhanced XVC-O weld monitoring camera along with the WI2000p, a quality tool for in-line inspection of welds on tubes and pipes.

The XVC-O weld camera can monitor any open arc welding process used on tube and pipe mills.

The camera combines revolutionary sensor technology with advanced electronics to provide a high contrast, wide dynamic range (> 140db) image, capable of seeing the brightest features

Xiris XVC-O weld monitoring camera



WI2000p post weld inspection system

of a welding torch while still being able to see the weld seam, weld pool and surrounding darker background.

The images from the camera are displayed on an IP54 rated HMI console with software features that include image post-processing, image recording and playback.

Up to 500 hours of video can be recorded for later review in order to debug, troubleshoot or audit a tube welding process.

The XVC-O features a camera module with integrated lighting, adjustable focus and air or liquid cooling, all housed in a rugged enclosure able to withstand operating in harsh welding environments. The base package offers a complete robust system, with additional options such as a window de-dusting system, and a variety of console and camera mounts to allow the camera to operate in a variety of hostile environments.

The WI2000p post weld inspection system has been developed to detect quality issues related to the welding process including weld undercut, sunk welds, pinholes, weld height, weld register (mismatch) bead roll/position and freeze line. A high speed laser based camera combined with fast data capture and analysis rates provides 7µm resolution to detect weld and forming issues independent of surface conditions.

The process of welding tube and pipe requires several variables to be in check for efficient and stable production and to meet the quality demands of the industry.

Mill dynamics, from setup to production, have an impact on the stability of these variables. Measuring and monitoring these variables is the first step in controlling them and improving weld quality.

Website: www.xiris.com

Euro BLECH 2012

The World's No.1



As the World's No 1 exhibition and business barometer for the sheet metal working industry, the show offers its audience a comprehensive idea of the prevailing technological trends and economic situation. Currently the economic outlook for the industry sector is cautiously positive.

Despite some uncertainty due to the global economic situation and the currency crisis in the Euro zone, the sheet metal working industry presents itself as stabilised and confident. A total of 1,516

exhibitors from 38 countries have already booked a net exhibition space of 85,000m² at EuroBLECH 2012. Compared to the previous event in 2010, this is an increase of 4 per cent in exhibitor numbers and of 8 per cent in exhibition space. A total of 61,500 trade visitors from all over the world attended the previous show.

Featuring an enormous amount of live machine demonstrations, EuroBLECH is the ideal event for sheet metal working professionals to find smart solutions and the right equipment for their companies.

23-27 October 2012



Show Venue

Exhibition Grounds, Hanover, Germany

Halls 11, 12, 13, 14, 15, 16, 17, 27

Show dates

23-27 October 2012

Opening times

Tuesday, 23 – Friday, 26 October 9.00am – 6.00pm

Saturday, 27 October 9:00am – 3.00pm

Contact

EuroBLECH 2012

Tel: +44 1727 814 400

Fax: +44 1727 814 401

Email: info@euroblech.com

www.euroblech.com

AGTOS GmbH

Germany

Hall 13 Stand B63

AGTOS is a specialist in the production of shot-blasting machines for cleaning, derusting, descaling and hardening of surfaces. It also offers high quality second-hand machines.

AGTOS sets a high value on a comprehensive service around the blasting technology. Therefore, AGTOS provides suitable spare parts for blast machines of many brands and realises the repairs.

During EuroBLECH 2012 AGTOS will present a new roller conveyor shot blast machine. Innovative turbine and filter systems as well as optimised installations for maintenance help to ensure the economic way of surface treatment for sheet metal, profiles and constructions.

Website: www.agtos.de

Alma

France

Hall 11 Stand G33

ALMA will present the latest version of its act/tubes CAD/CAM software for the programming of tube cutting machines and robots, which is part of a complete software range for sheet metal working and tube processing.

act/tubes is a user-friendly and highly automated solution dedicated to tube and profile cutting. The software integrates all the programming steps, including tube modelling, 3D import, nesting of sections to be cut, creation and sequencing of cutting tasks, and post-processing. It can also take into account peripheral equipment such as loading/unloading units.

The software can control any kind of tube-cutting systems: 2D machines with a rotative axis, 4-axis machines dedicated to tube cutting, 5-axis machines with one or several rotative axes, and robot cells aimed at cutting tubes.

3D modelling of tubes and of any kind of section bars can be performed with Tube Designer, a dedicated module of act/tubes. 3D models of bars and tubes can also be generated thanks to existing libraries of predefined tube sections and extruded bars. 3D parts can be imported from various CAD systems, either directly or using STEP, IGES or SAT formats.

Tube nesting can be performed in batch mode, with no manual intervention. act/tubes can perform a 'true 3D' tube nesting on non-straight cuts in order to save material.

The programming of 4- or 5-axis machines and robots allows a complete modelling of the machine and its 3D environment, together with the machine kinematics, regardless of the number of machine or robot axes.

act/tubes recognises tube cutting contours, manages head orientation, and calculates trajectories thanks to a powerful algorithm optimising paths while avoiding collisions. It creates and validates the cutting program using realistic simulation and automatic control functions and visual anomaly indicators. ISO programs are generated using postprocessor specific to the manufacturing machines or robots.

Website: www.almacam.com

Atlas Knives (DB Engg)

India

Hall 14 Stand R28

THE Atlas brand (DB Engg) was formed 60 years ago and has evolved to become one of India's largest tool equipment manufacturers with currently more than 600 employees and an annual turnover of more than \$20mn.

The forming rolls division was established 25 years ago and currently the company produces 24,000 rolls a year.

With its specialist knowledge of various steel grades gained over six decades and an in-house design team with a combined experience of 20 years Atlas prides itself in providing a complete one-stop shop for all customers in the cold rolling industry.

By incorporating a world-leading roll forming software it is able to provide excellent technical advice on rolls and optimisation of production processes for its customers. This approach combined with its ISO certified quality standards has helped enable Atlas to become one of the leading Indian manufacturers of rolls for the production of tubes and other roll formed open and closed sections.

The company can design and produce tube forming and open section-forming rolls ranging from 50mm to 800mm in diameter. Before production all roll designs undergo a simulation and finite element analysis to achieve a meticulous final product. All manufacturing is done in its state-of-the-art manufacturing

workshop with more than 15 CNC turning centres.

With an ISO certified in-house heat treatment facility having a capacity of over 300 tn/month it is able to maintain world-class standards for all its products.

The company over the last few years has made significant inroads in the worldwide tube and section manufacturing industry by supplying to Australia, North and South Africa, the Far East, Canada, Russia, the Middle East, Europe and various mill OEMs in India.

Website: www.atlasknives.com

Combilift

Ireland

Hall 12 Stand F74

THE global expert in the long load handling sector Combilift Ltd continues to develop new models on a regular basis, so the company's stand is always worth a visit to see what this innovative Irish manufacturer has come up with since the last show. Combilift manufactures a wide range of customised 4-way forklifts, all of which are designed for the safe and space saving handling of the large and bulky loads typically handled in the sheet metal sector.

Combilifts work as counterbalance, sideloader, and narrow-aisle forklifts. Their versatility to operate both inside and out on semi rough terrain, and in harsh weather conditions enables users to not only maximise available storage space but to also improve productivity in and around the warehouse. Sideways travel with loads resting on the platform enables the trucks to work in aisles widths of just two metres, and avoids the need for hazardous high level transportation, significantly improving safety procedures. With fully synchronised 4-way steering guaranteeing excellent manoeuvrability



4-way forklifts

(EFFICIENCY)^M

3D FABRI GEAR Mk II series

Automatic 3D laser cutting for long, heavy tube & profile

The 3D FABRI GEAR Mk II series provides highly accurate angle cutting of almost any profile shape. Giving an excellent fit in joint connections between tubes, this allows for significant reductions in welding and assembly time.

The new MAZAK FX CNC System and new ECO-MODE resonator give ultimate flexibility and total control to your business.

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Choose exponential growth for your productivity and efficiency.

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FD Machinery



Booth No: E1-E61

During the fair, FD is showing the most advanced researches-The world first AUTO-DNSA full automatic roll changing pipe mill. This is another great achievement after the development of CFS flexible square and rectangular pipe mill with automatic size changing.

Automatic pipe mill is no longer a mirage

It is right in front of you

Special thanks to the first buyer for AUTO-DNSA full automatic roll changing pipe mill-a famous Taiwan pipe manufacture company

Internationally renowned equipment manufacture enterprise and Founder of automatic pipe welding machine-FD Machinery CO.

FD is consistent with:

Innovative thinking

User-friendly design

Strict quality control

Excellent support team

Production test mode of delivery

Remote fault diagnosis- Efficient customer service

Achievement of excellence with FD machine

Serving customers around the world

All of this stems from

FD 25 years experience accumulation and unremitting efforts

In addition, we are looking for an idle workshop and Customer service agent, Conditions negotiable



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Tel: (86)-411-83192715 Fax: (86)-411-83192716

Email: fd@fdmachinery.com Web: www.fdmachinery.com

and flexibility of use, Combilifts can be deployed from the initial stages of offloading raw materials, during the manufacturing process, through to the handling, storage and dispatch of finished product.

Capacities range from 2.5t to 25t, with a choice of diesel, LPG and AC electric power options. The wide variety of lift capacities, mast heights, platform dimensions and range of attachments available means that practically every Combilift is purpose-built to provide a truly customised handling solution.

Website: www.combilift.com

Danobat

Spain

Hall 12 Stand A50

DANOBAT GROUP is a leading machine tool company, with more than 55 years of experience and more than 1,300 employees. It is present in the manufacturing of several different types of machines: grinders, lathes, bandsaws, drilling units and 3D plasma cutting. Together with the technological knowledge of its sawing and drilling

division, Danobat is able to offer complete solutions for the steel structure industry.

Danobat offers complete sawing and drilling lines with different specifications according to customer needs. It also offers a 3D plasma cutting machine equipped with a special patented system that allows the machine to work on all type of pieces: profiles, pipes and square tubes.

Machining of round and square tubes is becoming more and more competitive and Danobat has developed a machine able to mechanise all sides of a tube without having to rotate it on its axis. In fact, it is the head of the machine that is able to move around the piece, which allows all type of cuts, chamfers, cod mouth and junctions between pieces.

As a result the 3D plasma Danobat machine provides steel structure producers with solutions for all these machining needs with a single machine, minimising the occupied area in the workshop and saving processing time.

Danobat's 3D plasma cutting machine for the steel structure industry is composed

of seven CNC controlled axes (six axes on the plasmahead and the last one on the feeding system). The software of the plasma machine allows the operator to program in three different ways: importing files (DSTV, CAM, SAT, XML), with pre-designed macros or free programming. Furthermore, it is possible to see all programmed jobs in 3D and to simulate the piece before sending it to the machine. What is more, Danobat can talk about automatic or manual nesting, data store, profitability system of remnant or others. Danobat can demonstrate once more the importance of going further in technology together with all customer needs.

Website: www.danobatgroup.com



SMART PIPING SOLUTIONS



Machines

Innovative machine technology for bending and processing pipes and profiles



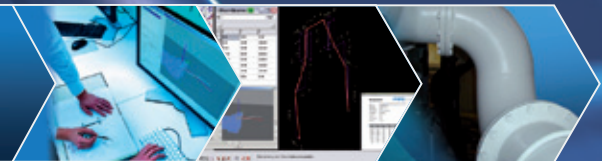
Measuring technology

Highly precise measuring systems and methods for quality assurance and reverse engineering



Software

Pipe shop automation, workflow optimization and lifecycle management for piping



TRACTO-TECHNIK GmbH & Co. KG

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Email: tubomat@tracto-technik.de · <http://pipebending.tracto-technik.com>



**data M Sheet Metal
Solutions GmbH**

Germany Hall 27 Stand F91

DATA M Sheet Metal Solutions GmbH is the developer of the leading roll form engineering software COPRA® and also a well-known partner for providing engineering and R&D services in this specific industrial area.

At EuroBlech 2012 data M will share information about how its software technology is being used in the various industries worldwide and how it helps companies in improving the know-how not only as a software vendor, but as a reliable engineering and consulting company.

"In 2012 data M celebrates its 25th anniversary. Behind us there are 25 eventful years in which we have subsequently emerged. In this course of time we have expanded our business from being a mere developer of market leading software solutions for sheet processing, to today offering beside CAD/CAM and CAE software solutions, in particular technical advice and services such as software development

for sheet metal bending and the roll forming industry, consulting and design services, roll form tool design and manufacture, system integration and heterogeneous networks, image processing systems for quality control and production processes and our latest development is COPRA® RF 2013," said company founder Albert Sedlmaier.

Service plays a big role at data M. The company aims at servicing its customers extremely well. For this reason data M has already opened branch offices all over the world: In the US, India, Brazil, Poland, Sweden and in the UK. Thus data M engineers have their eyes and ears with their customers and additionally get first hand information about demand and market developments. These data M services shall also be extended in the near future.

Website: www.datam.de

Dreistern

Germany Hall 27 Stand E24

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EBS Ink Jet Systeme GmbH

Germany **Hall 14 Stand Q32**

EBS Inkjet Systems GmbH has a neat solution for customers who have to mark products for identification or tracking purposes, ie with batch numbers, product details or other data.

The new Handjet EBS-250, for manual printing on metals, plastics, cardboard and many other materials, features large data memory, Bluetooth transmission and efficient ink management system.

The company will also be displaying its economical solutions for automatic, contact-free marking, for manufacturing processes.

Website: www.ebs-inkjet.de



The Handjet EBS-250 from EBS Inkjet Systems

Fontijne Grotnes BV

The Netherlands **Hall 27 Stand G23**

WORLDWIDE technology leader Fontijne Grotnes will be exhibiting its latest metal forming solutions at the two leading trade fairs in the metal forming industry this autumn: EuroBLECH 2012 in Germany, this October 23-27 and Fabtech in Las Vegas, United States, from 12 to 14 November.

Fontijne Grotnes builds specialist production equipment that can be used in complex manufacturing processes and has been active in the metalforming industry for more than 100 years. Its sizing technologies, consisting of expanding, shrinking and rollforming processes, are a valuable contribution to diverse production processes, to calibrate and form different parts such as rings, cylinders and cones, which require tight tolerances. These processes often eliminate machining and fabricating steps, save time and material and thereby improve operational efficiency and profitability.

Fontijne Grotnes expanders and

rollformers are widely used to form finely detailed profiles in cylindrical or conical shaped blanks from tubing, pipe or coiled and welded sheet metal.

To form a profile the blank is positioned around the collapsed dies of the expander, which have the desired profile. Cone and drawbar are in the extended position. As the drawbar pulls the cone down the inclined surfaces of the cone force the jaws and dies outward. Outward expansion stretches the part past its yield point to the desired shape. When the part reaches its desired shape and size the drawbar/cone assembly returns to the extended position and the jaws and dies return to their original position.

When the profile is rather 'sharp', outer dies can be used for more precision. Other possibilities are heated dies to increase the deformability of metals like titanium or a combination of an expander and a shrinker to form intricate profiles.

Rollformers can be used when not only fine detail, but also a good surface quality is required. The coiled and welded cylindrical blank is positioned over the rolling die of the lower spindle.

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◀ ◀ ◀ The lower spindle is raised to achieve contact between blank and both forming rolls. As the spindles rotate the part revolves between the rolling dies. The lower spindle continues to elevate and transmit applied force to form the metal.

Website: www.fontijnegrotnes.com

Kjellberg Germany

Germany

Hall 14 Stand B46

At the international technology trade show for sheet metal processing in Hanover from 23 – 27 October 2012, the Kjellberg Finsterwalde Group will present a wide range of products and technologies for thermal metalworking.

The main focus is on products that improve the efficiency and precision of the production process. Plasma power sources of the HiFocus series and new plasma torches for exact and quick cutting in combination with guiding systems guarantee best results. For cutting very small holes on thin sheets and for marking tasks, cutting systems can be completed with the compact laser system XFocus.

In addition to power sources for welding, a number of different guiding systems and gantries are shown. This includes a rotating and clamping device for pipe welding as well as a height-adjustable turntable. It is part of a welding gantry for the highly efficient welding technology InFocus. The pipe welding device is flexible to use and can be equipped with GMAW and submerged-arc welding technique.

Website: www.kjellberg.de

LAP GmbH Laser Applikationen

Germany

Hall 15 Stand H09

HIGH energy costs can strongly influence competitiveness in the steel industry. In particular, scrap and offcuts in the production of slabs, sheet metal and pipes require a great deal of energy when they are remelted. Using LAP measuring systems significantly increases measuring accuracy. The amount of scrap is reduced almost to zero, and energy costs are permanently lowered.

LAP GmbH is a specialist in the development, production, installation and commissioning of laser measuring systems for measuring the dimensions of unfinished and finished products in the metal and steel industry. "Preventing scrap which takes a lot of energy to melt down is one of the basic rules of steel production. LAP measuring systems are excellent in this regard, especially the Antaris Scan sensors in conjunction with our evaluation software, Slab Check," noted Dr Axel Schulz, sales manager for the steel industry at LAP.

LAP laser measuring systems check the dimensions of long and flat products including slabs, billets and pipes. LAP fabricates laser-supported systems for the contact-free measurement of distance, width, thickness, length, diameter, contour and flatness for the entire process chain from continuous casting to the finished product.

LAP laser measuring systems enhance cost-effectiveness by reducing scrap and increasing throughput. "The more scrap is produced, the higher the production costs," states Dr Schulz. "Let me give you an example. Let's assume that you produce 1,000,000 tons of sheet

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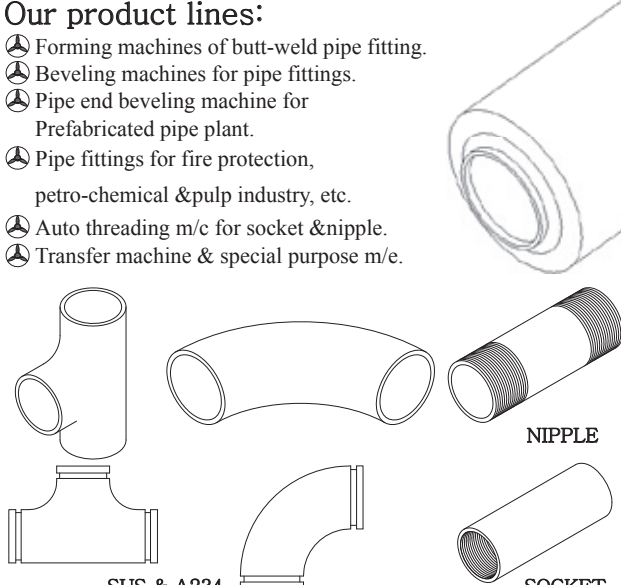


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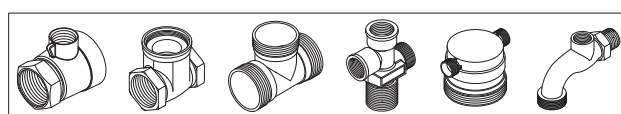
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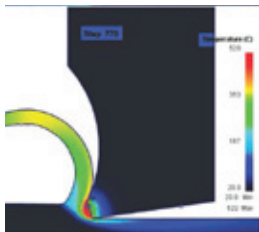


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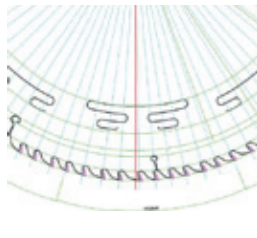
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metal a year with sections measuring 5,000mm x 45,000mm x 10mm with an optimisation potential of 50mm on each side when cutting the width. Each ton of steel sheet metal sold yields a profit of €400 per ton with a sales price of €650 per ton and scrap price of €250 per ton. If you could reduce the amount of scrap when cutting to size by just 2 per cent, you could save or earn, actually, up to €8mn."

The sensors of the Antaris series use a triangulation method. A laser beam is reflected off the surface of the measured object and is projected by a lens system and deflection mirror onto a light-sensitive target camera. Depending on the distance from the measured object, the position of the point of light changes. The signal processor calculates the distance between the sensor and surface of the steel products from this data.

By using LAP measuring systems, customers avoid excess slab weight. This helps guarantee the per metre weight in sheet metal production, for example. Not only do you save material, you refine production in the energy intensive steel industry. "In

addition, these savings mean that the LAP measuring systems pay for themselves quickly, as the calculation example shows," notes Dr Schulz. "Don't remelt, measure," could be the motto of all steel manufacturers in the future.

Website: www.lap-laser.com

Laser Mechanisms

Belgium

Hall 15 Stand K59

LASER Mechanisms will use EuroBLECH 2012 to introduce an all-new auto-focus, motor-driven lens processing head for X-Y flatbed laser cutters. Featuring three separate lens drawers, the head can use 125mm, 200mm and 250mm focal length lenses that are programmable for optimum processing of materials of varying thicknesses.

Also slated for introduction at EuroBLECH is the company's new zoom collimator. This next generation collimator can vary the spot size while using the same focus lens, allowing the processing of different materials

and thicknesses using the same beam delivery.

In addition, Laser Mechanisms will show, for the first time, a new z-axis slide for its FiberMini line of laser processing heads. For use on X-Y flatbed laser cutters, the slide simplifies design requirements for machine builders by directly packaging the z-axis with the cutting head.

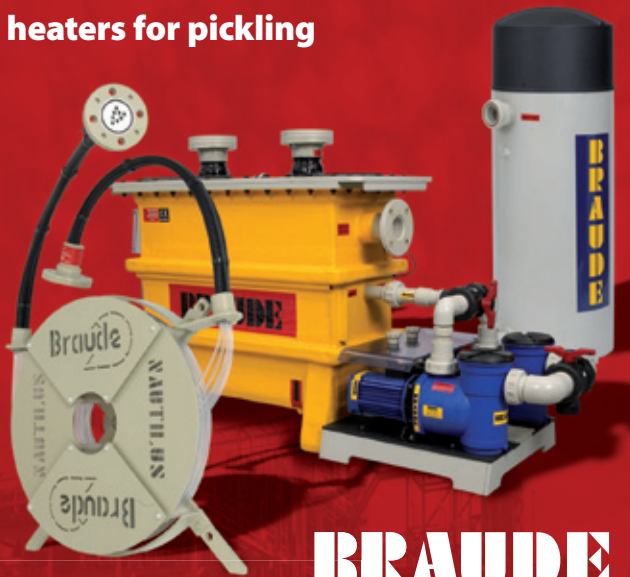
Also on display will be the company's complete line of FiberCut processing heads for robotic applications, the FiberMini series for X-Y flatbed cutters, and the µKerf head for micromachining.

"The multiple product introductions we have planned, combined with all of the new designs we've launched in recent years, should result in strong crowds at Laser Mech's EuroBLECH booth," said Dr Arvi Ramaswami, managing director of Laser Mech Europe. "Even though we've publically announced several product introductions for EuroBLECH, we still may have a few surprises at the show."

Founded in 1980, Laser Mechanisms, Inc designs and manufactures laser beam delivery components and articulated arm systems for high

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Schwarze-Robitec GmbH

Germany Hall 11 Stand C06

SCHWARZE-ROBITEC, a manufacturer of tube cold-bending machines, will present its broad spectrum of solutions at EuroBLECH, ranging from tube bending machines and fully equipped, automatic tube bending production lines to measuring devices and bending tools, tube perforating and special machines. Particular emphasis is placed on energy-efficient solutions as well as machines for bending new, high-strength materials.

The company will present its extended portfolio of bending machines for processing tubes with diameters between 4 and 420mm to specialist visitors at EuroBLECH. Tailored to the individual requirements of the automotive, shipbuilding and offshore industry, power plant construction, the chemical industry and the aerospace industry, the bending specialist offers a range of machines and accessories that can be configured in modules.

One major focus is on the comprehensive advisory competence for the different production concepts. "Together with our customers, we always produce an individual solution that is tailored precisely to the needs of the user," said managing director Bert Zorn. "This might be a newly developed bending tool, a bending machine that can be specifically configured, or even a complete, fully automated bending line – from tube separation through production

process to continuous quality control of the bent parts."

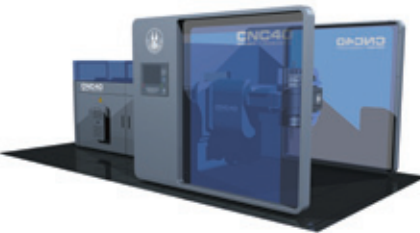
One significant topic on the Schwarze-Robitec trade fair stand is the energy efficiency of tube bending machines. Different energy-saving concepts ensure optimum handling of valuable resources. As such, an improved energy balance is achieved in the case of electrical drives, including by the use of innovative feed-in and recovery modules. Hydraulic tube bending machines save energy, eg with adjustable pump drives. Hybrid drives also achieve convincing results.

"The purchase of energy-efficient machines pays off not only in the light of high energy prices, stricter international legislation and increasing energy awareness," Mr Zorn emphasised. "Investments of this nature are subsidised in many cases – with certain restrictions – by one's own state or by the EU through energy efficiency programmes, or they are promoted through reduced interest on borrowing."

The processing of new, high-strength materials is a second central focal point of the trade fair for the tube bending specialists; the cold reshaping of harder materials requires significantly greater bending forces. At the same time, the materials react more sensitively.

Website: www.schwarze-robitec.com

Schwarze-Robitec will present its new, diverse range of solutions at EuroBLECH



Siempelkamp

Germany Hall 27 Stand D66

AT EuroBLECH 2012 in Hanover, Siempelkamp will present presses for the complete manufacturing process of large-diameter pipes via C-, U- and O-forming. As a single-source systems provider, Siempelkamp not only offers the machine engineering, but also demonstrates the processing technology for all three applications.

For O-forming presses Siempelkamp has developed an improved control concept: the incoming steel cannings are generally positioned in the press centre. Therefore, independent of the length of the workpiece, the press force is introduced exactly into the plate. This results in a better load distribution and, at the same time, a lower mechanical load.

Furthermore, Siempelkamp has optimised its proven tooling concept featuring exchangeable shells. The outline of the half-shells, which were optimised with the finite-element method, evens out deformations from the tools in transverse directions. Combined with the patented tool clamping, which compensates the occurring forces in longitudinal direction, Siempelkamp has achieved the optimal pipe geometry for the subsequent production steps.

Once more a new order of a long-standing customer proves that Siempelkamp has set the right course with its C-, U- and O-forming presses. Tenaris Confab ordered a 18-MN U-press for the works in Pindamonhangaba, Brazil. It will go on line together with the O-press that had been ordered shortly before. With a new control system it is featured by particular energy efficiency.

A particular feature of the Tenaris

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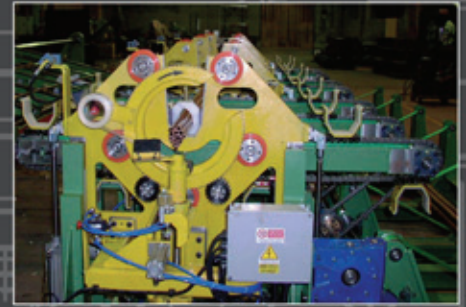
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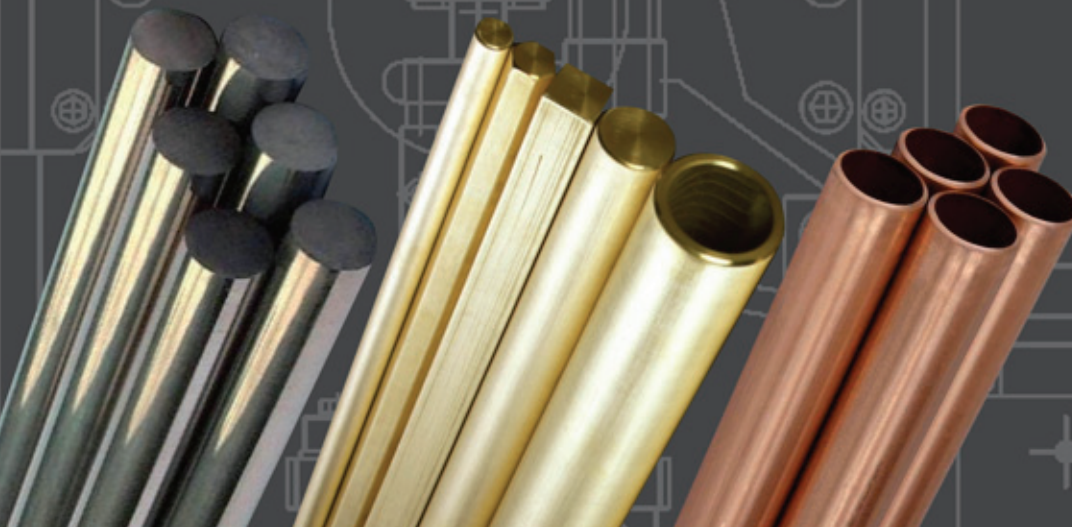
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Website: www.siempekkamp.com

Tracto-Technik GmbH

Germany

Hall 11 Stand D54

AT EuroBLECH 2012 Tracto-Technik will present innovative machinery for bending and working pipes, precise measuring systems for quality assurance and reverse engineering of pipe figures as well as intelligent software solutions for workflow management in pipe workshops. A highlight is the servo-electric CNC multi-radii bending machine TUBOTRON 25 MR for pipes from 4 to 25mm outside diameter. An exposed and compact bending head allows for bending of complex pipe shapes with bending speeds up to 170°/s. Main applications are within the aviation and aerospace industry, hydraulic, automotive and furniture

industry. Another new development TT shows in Hanover is the TUBOFORM A5, an axial pipe end working machine, that allows for efficient forming of pipe ends up to 20mm outside diameter in small and middle-sized series.

The compact and rugged table-top device can be equipped with customer-specific forming tools, is user-friendly and easy to service. Practical applications include bead forming of hose nipples for air braking systems or precise flares on hydraulic brake pipes. Where pipe measuring is applied, Tracto-Technik presents the Tuboscan S optical pipe measuring cell. This system determines the geometric data of pipe shapes within the blink of an eye. The data can either be compared with a master pipe in order to assure quality of pipe bending products or be used for calculating pipe-bending data in order to produce identical pipe figures. Last but not least TT provides the PIPEFAB workflow management software, a comprehensive branch solution that integrates all areas of the life cycle of pipelines, from engineering over materials handling, production and calculation to assembly

and maintenance. The software pack optimises pipe fabrication workflows and leads to considerable savings of time and money.

Website:

<http://pipebending.tracto-technik.com>

Transfluid

Germany

Hall 11 Stand E02

TRANSFLUID is the reputable world-wide partner for the manufacturing of tube bending machines and tube processing machines. Since 1988 transfluid has been developing client-orientated technologies for tube processing and can offer customised solutions: from plant building and mechanical engineering, automotive and furniture industry to ship manufacturing to railing production and conveying systems. Being a brand famous all over the world, the company from South-Westphalia, Germany offers local presence through its service offices in Europe and Asia.

Website: www.transfluid.de



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While the specialist tasks considered here are not more precision-centered than others in tubemaking practice, measuring and marking do bear responsibility for communicating the most basic information in all of commerce: What is this? How much of it are we talking about?

Only after scrupulously accurate measurement – and with the markings that are the pledge of traceability – is a production run of first-quality tubing ready for the next step, whether that be further processing or clearance for delivery to the customer.

Solutions for tube checking

PRODIM International is a manufacturer of 2D and 3D portable measuring devices and associated measurement solutions. The company closely follows developments in the industry and listens to the users of the Proliner measuring devices, which allows it to keep improving the measuring devices and developing new solutions for several industries.

Whether manufacturers of bent tubes and pipes want to check products upon arrival, on the roller machine, or after manufacturing, it is very important to get the desired data quickly and accurately. To get the outline measurements of bent tubes and pipes has always been very difficult. Because of the form of the tubes, accurate measurement of the angles or radius of the bent parts is almost impossible. Self-made measuring tools try to fill this gap within the existing measuring equipment. An ideal solution would offer a movable product that can quickly measure the

shapes of tubes and compare these with the original CAD drawings.

Prodim developed the TubeCheck for quality control on tubes. This allows a tube to be measured at any time, at any place, and for the measured tube to be immediately checked on-screen. The measurement can be compared with the original CAD drawings and to check if the new product is within its tolerance. Angles and radii can be checked quickly and easily, and element lengths and total lengths can be viewed.

The measured tube with the desired data and additional project data can be stored as a report document in PDF format. This all takes place within the Proliner, meaning that there is no need for external equipment. Operating the Proliner is easy, so there is no need for additional knowledge of CAD programming. Everything can be done in the fabrication process, and the system provides an easy way to check if a tube or pipe is bent within its tolerance

and ready for shipment.

The Proliner can also be used to measure rooms and buildings, such as complete engine rooms on-board a ship. Obstacles in those rooms and the tube/pipe fixture points are measured and used as a base for the new pipe and tube design. Defective tube elements are easily measured as a base to construct a new pipe.

These measurements are directly available as 2D and 3D DXF file. The measurements are used to design the tubes in the CAD software so as to avoid any obstacles within the room. The connection points are often not in one line or there are obstacles (in height or width) that should be avoided. This is visible in the measurement and must be taken into account in the design.

Prodim International BV –
The Netherlands
Fax: +31 492 579059
Website: www.prodim.eu

Weighing and length measurement marking for steel pipe

QINGDAO Rising provides special equipment used for the weighing, length measurement and marking of pipe and colour band equipment, drifter machines, spraying paint of steel pipe surface during seamless steel pipe, straight seam steel pipe and oil pipe production processes.

The equipment for weighing and length measurement marking for steel pipe is mainly composed of a weighing device, length measurement device, spraying code equipment, marking equipment, colour band equipment and an electric automatic control system. Some users can increase or decrease the devices to meet their own requirements, such as before steel pipe packaging, the need to detect and mark steel pipe according to API standard requirements. The main purposes are: to measure steel pipe bar by bar, to judge whether it is qualified (whether the pipes' length, wall thickness and weight are matched, and whether the length scope is qualified); to facilitate production statistics and determine total

length, weight and number of various specifications of pipes; to mark the steel pipes' grade with different colour bands; and to mark the pipes' manufacturer, standard, heat number and production date on the pipe surface.

The steel pipe drifter machine is mainly used to detect a pipe's straightness, passing from one end of the pipe to the other with a standard drift diameter gauge. The equipment is mainly composed of frame, feed gauge device, launch gauge device, conveying system and receive gauge device.

The steel pipe spraying paint machine is used for anti-corrosion of pipe surface, to avoid rust during transportation and storage. The working process is to move the steel pipe on the spraying vertical conveyor, and uniformly pass the outer wall spraying device carrying the pipe at a certain speed. When the spraying device detects the workpiece and marks the diameter, the automatic spray gun will open and automatically



spray the workpiece's surface. The spray gun automatically shuts off when the workpiece moves out of the spraying station.

During the spraying process, overspray is collected by a recycling hopper and flowed into a recycling tank. The recyclable paint is reused after being filtered. Through the mist and waste gas processing systems, the distributing mist and organic waste gas during the spraying process are exhausted outdoors by fan.

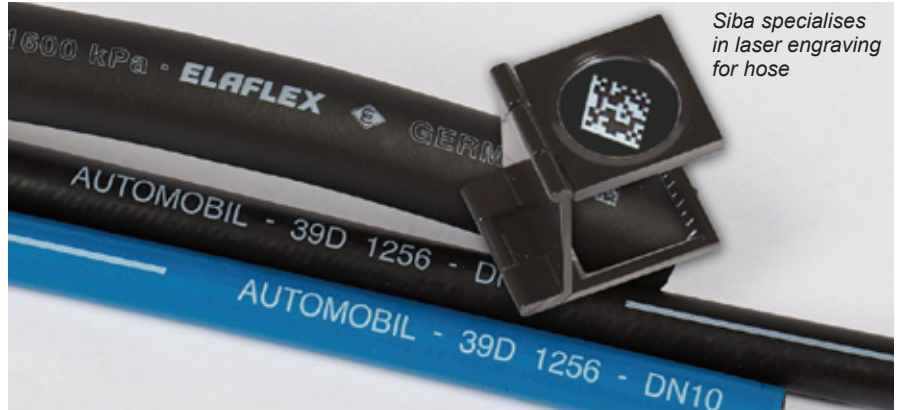
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SPECIALISING in the laser engraving of printing rolls made of steel, especially dedicated to the cable and hose industry, Siba has extended its delivery programme and services by offering a large range of gravure and ringmarking inks and customised solutions for the online video inspection of printed materials.

Siba is not simply offering goods like engraved wheels mirror polished and bright printing inks, but an accurate comprehension of customers' problems, thanks to the experience of its staff acting in this branch for many years.

In barely two years, the Siba team and its innovative approach to the markets allowed it to reach a recognised position in the cable and hose industry, and to play a significant role in the market as reliable supplier. Equipped with the newest engraving technologies,



Siba specialises in laser engraving for hose

orientated on tailor-made solutions, Siba matches its customers' specific requirements with its famous sense of service and technical knowledge.

Accuracy in customer assistance, quality in goods and rapidity in delivery remain the key guideline. To strengthen its commitment in terms of quality and

reliability Siba is now completing the whole ISO certification procedure, in order to be certified ISO 9001 till the end of 2012.

Siba – Germany

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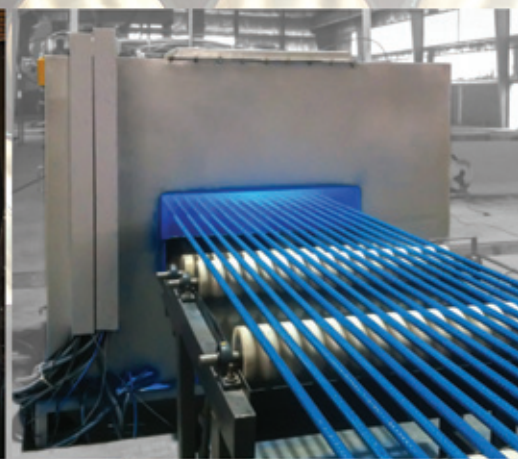
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www.wagner-group.com

Weld camera for tube and pipe production

DUE to the extremely bright light emitted by an open weld arc (such as found in a TIG, laser or plasma process), monitoring the welding process on a tube or pipe mill for control or tracking of specific parameters can be a difficult challenge. A view of the weld tip and its immediate environment on a tube mill is important to ensure that the weld tip is properly aligned with the tube seam it is welding, that the weld pool is properly formed during the welding process, and that a number of material inputs such as welding wire or gas are all being fed at ideal speeds.

To overcome the visual monitoring challenges created by having to image a dynamic range between the very bright light source of the weld arc and the dark area of its immediate environment, a wide dynamic range camera system is required. Typically a weld tip might be as much as ten million times brighter (or greater than 140db signal to noise

ratio) than the background metal area around it. To image this is a great challenge as most cameras today are capable of only 60dB (about 1,000:1 dynamic range of brightness).

Cameras that are able to provide a high contrast, wide dynamic range (> 140db) image of the weld seam, weld pool and surrounding darker background offer tube and pipe producers the ability to see a number of features in their welding process with better clarity, providing numerous productivity, quality and health and safety benefits for tube and pipe production.

Xiris has developed a wide dynamic range camera system that can be mounted right by the welding tip to allow the operator to remotely view the welding process.

Wide dynamic range cameras for weld monitoring are suitable for a range of applications, including MIG, MAG, TIG, plasma and laser welding,

as they provide operators with better monitoring of inputs in the weld environment; reduced set up time; run time productivity; and operational productivity.

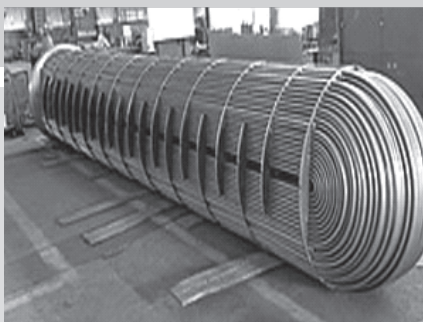
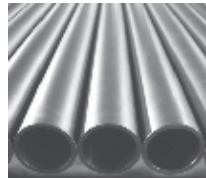
Real time verification provides a direct view of the welding arc and the work environment with enough detail for immediate adjustment, including the ability to see the molten weld pool solidify on a tube mill and other details such as weld undercut, the chevrons forming after the weld and slag and dross contaminants forming in the pool. Video recording provides the ability to record, store and review vital welding processes off line for quality assurance monitoring, process verification and improvement, and operator training.

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Tube India 2012



30 October to 1 November 2012

The biennial Tube India International's fifth edition has moved from its traditional position in the year, early February, to late autumn with the 2012 edition taking place from 30 October to 1 November at the Bombay Convention & Exhibition Centre, Goregaon (East), Mumbai. This year Tube India will run concurrently with related and complementary exhibitions Metallurgy India and Welding & Cutting India.

India is an increasingly important market. When the Government of India in 1991 ushered in an era of de-licensing, price decontrol, lowering of import restrictions, lowering of duties and abolition of freight equalisation it resulted in increased domestic production and further opened up opportunities for doing business in India. The Indian copper pipes and tubes industry is poised for around 25 per cent growth in the next few years. Estimated investments in Indian steel production capacity will be nearly 243 million tons by the year 2020. This will take India from

being the current 5th largest steel producer to the 3rd largest by 2015 and 2nd largest by 2020, second only to China. India will offer \$20bn worth of investment opportunities over the next three years for expansion of new ferrous and non-ferrous plants. As energy consumption and inefficiency in Indian smelters have been major problems, there is ample scope for improvement in the efficiencies of operations and India has the potential to rank among the world's top 5 suppliers and markets for steel and aluminium.

Major projects in diversified sectors like rail and air transport, energy, infrastructure, steel, power, oil refining, chemicals, manufacturing, automobiles, environment, defence and so forth promise a lot in terms of investment, growth and business opportunities in India. There is no doubt that Tube India International and the three concurrent exhibitions are must-visit events for metal forming and processing industry professionals.



Show Venue

Halls 1 & 5
Bombay Convention &
Exhibition Centre
Goregaon (East), Mumbai

Dates

30 October – 1 November 2012

Opening Times

Tuesday: 10am to 6pm
Wednesday: 10am to 6pm
Thursday: 10am to 5pm

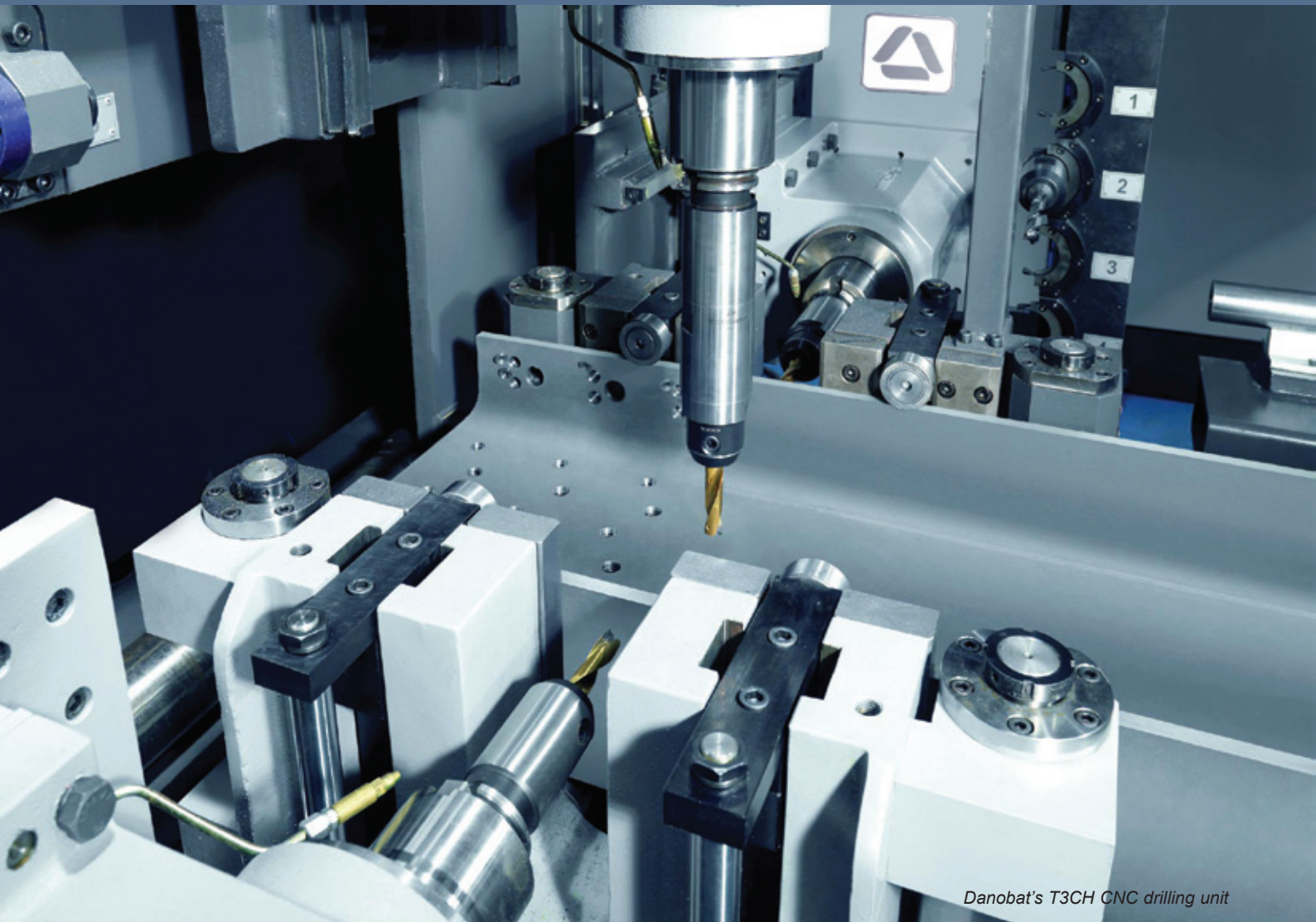
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Drilling, piercing and punching technology



Danobat's T3CH CNC drilling unit

In an era of widespread registration to ISO 9001 and other rigorous standards, a faulty drilled, pierced, or punched perforation – one that is misaligned or less than clean or in the slightest degree “off” in diameter – would mean scrapping an otherwise perfect tube, and not just one. As an unintended consequence of the marvel of reproducibility in a state-of-the-art mill, a single rejection can compel the sacrifice of an entire production run of perfect tubes. Expensive scrap indeed.

It shouldn't happen... and it doesn't. That confident assertion rests squarely on the skill and experience that make up the stock-in-trade of companies like those whose products and services are reviewed in this section of Tube & Pipe Technology.

T3CH CNC drilling unit makes light work of structural steel sections

THE compact design of Danobat's T3CH CNC drilling unit imparts rigidity, with a direct and positive influence on cutting tool life.

In addition to drilling with the three independent spindles, other machining operations such as external countersinking, external counterboring, threading, centre pointing and marking are also possible. Each of the three drilling heads – two horizontal and one vertical – is driven by a brushless motor under CNC control, the tools allocated to each spindle being exchanged via three fully automatic toolchangers.

Two models are available – T3CH 104 and T3CH 126 – and both have a 9kW/13kW main drive motor providing tool rotation speeds up to 2,500 rev/min. These models are capable of drilling diameters from 6mm to 40mm diameter at a maximum feed rate of 12mm/sec.

The T3CH CNC drilling unit can be linked to a Danobat CNC 3D plasma cutting system capable of cutting profiles and round and square tubes. The RTCP (Rotation Tool Center Point) function of this innovative system ensures that the plasma cutting tip follows the programmed profile regardless of the position and orientation of the plasma.

The T3CH CNC drilling unit can also be linked with a Danobat CNC saw, either in-line or as two parallel processes, to provide an integrated sawing and drilling solution for large structural steel sections. The CPI horizontal bandsaw can cut mitres from $-45^{\circ}/+60^{\circ}$ using high speed steel or carbide tipped blades, thanks to the innovative cutting software that allows changes of the downfeed and cutting speed to be made automatically. Depending on the section that is cutting each moment, the running-in process

is also automatic. A choice of loading/unloading systems contributes to a fully automated sawing and drilling line. A feeding gripper on the in-feed rollerway and a measuring stop on the out-feed rollerway, both functioning under NC control, ensure accurate positioning of the steel section prior to both machining operations.

The optional DanoSort system permits the extraction of parts up to 2,200mm long, with automatic extraction of 'last scrap' pieces up to 30mm long. This particular load/unload system can accommodate various section types including double T (horizontal/vertical, web/flange) profiles, U-profiles, T-profiles and L-profiles as well as square tube.

Danobat – Spain
Website: www.danobatgroup.com

Double mitre bandsawing machine

MACHINES from product line MEBAeco are based on a continuously advanced "construction kit system" out of which innumerable models can be configured, enabling the customer to specify his machine, depending on his needs and giving individuality at an affordable price. Everything is possible: from simple semi-automatic machines for straight line cuts to patented double mitre bandsawing automatic machines. Cutting range is at maximum 410 x 700mm according to the type of machine.

Features like the trend-setting electric saw feed, the stepless frequency controlled saw drive as well as the latest linear feed technique for all applicable tracks are the answers to continuously higher need of flexibility and faster operation in the steel industry at an outstanding accuracy.

The version MEBAeco 410 DGA offers the possibility of a flexible infeed

gripper, which is expandable to nearly all lengths. Like this, lengths of cycles can be reduced substantially, especially when sawing taller lengths. The infeed gripper is built on a rigid stock roller, which can be driven as an option. Due to the unique patented MEBA mitre system the hydraulic workpiece clamping always stays squarely to the material and close to the sawing blade. The material vice adjusts according to desired mitre automatically in material direction.

The saw frame is operating through anti vibration, no tolerance linear guidance.

Speed of the stepless frequency controlled AC-drive can be chosen between 15 and 150m/min.

MEBA double mitre bandsawing machines allow execution of various mitre and length combinations. Visualised control surfaces enable a

continuously uncomplicated input and monitoring of the sawing program.

As a final consequence, these machines can even be connected with material bearing feeding and rejecting logistics for a fully automated sawing process. In connection with for example bearing drilling systems, sandblast systems, pantograph milling machines or welding robots almost any automatic line operation of steel constructions can be realised.

The machines are easily accessible to all machine parts, for changing the saw blades or for cleaning. All machines of the MEBAeco line are outstandingly easy to handle, so that the operator can concentrate on his prime work.

MEBA Metall-Bandsagemaschinen GmbH – Germany
Email: goll@meba-saw.de
Website: www.meba-saw.de

Come and see us at Tube India... Stand 1G42

30th Oct - 1st Nov 2012

The International magazine for the Tube & Pipe Industries



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By Ramon Grande, Oberkornel and Peter Runtz (DPO Industries)

The July Issue

This issue we have features on tube scarfing systems and welding and, as always, a comprehensive round-up of the very latest industry and technology news.

Eagle-eyed readers may notice that this issue we have made several design changes to the magazine. On the front cover the Tube & Pipe Technology logo has been updated and given a fresh modern look. We have also updated the contents pages and used a new font style throughout the magazine, which aims to make the articles and features even easier on the eye for readers. We are very excited about the changes and we hope you enjoy the fresh new look as much as we do.

This is also a special Tube China show issue and, although still relatively new, the show has already become a massive date on the international tube calendar. This year it will again be held at the excellent Shanghai New International Expo Centre in Shanghai. It is a great international city and always offers a warm welcome. When I was at the show two years ago it attracted 1,300 exhibitors and the tube machinery and tube production market in China has continued to grow at a healthy pace since, so expect an even bigger show this year.

In the September issue we will have a first look at EuroTech 2012, FASTECH 2012 and Tube India 2012. We also have features on drilling, peening and polishing technology and measuring and marking. Thanks for reading.

Rory Widdie - Editor

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High speed tube perforating

THE Sanderson range of high speed tube perforating machines provide an efficient method of perforating muffler baffle tubes commonly found in automotive exhaust mufflers. The leading edge TPM4 machines have a consistent punch rate of 64 holes per second in stainless steel.

Sanderson has announced the release of the TPML perforating machine. This is described as the

first commercially available machine capable of perforating the tube from the inside out. The benefits of this process include the absence of burrs to interfere with the gas flow, and an added bonus is the ability to produce the outward double and single louvre tube. The parts are punched row by row along the length of the pipe, allowing for parts to be made more closely to print without the need to alter them to suit the machine.

Sanderson has been building tube perforating machines for over 20 years and has amassed a large amount of experience in this field, with machines in daily use in nearly every industrialised country in the world.

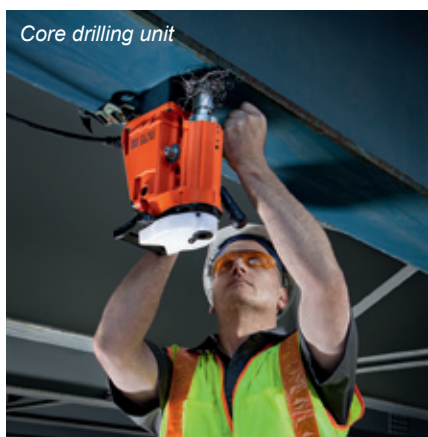
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New metal core drilling units

FEIN is adding robust metal core drilling units, speed-optimised for HSS core drills, to its extensive product range. The tools were developed by Jancy Engineering Inc in Iowa, USA, a respected engineering company in the core drill market, acquired by FEIN in early 2011. FEIN is now adding four of the robust tried-and-tested KBB tools and matching HSS core drills to its product range.

The FEIN KBB 38 core drilling unit is suitable for diameters of 12mm–38mm and depths of up to 50mm. It features a powerful motor for efficient drilling. At 14.4kg, the tool is comfortable to use in different working positions on the construction site.

When space is at a premium, the best choice is the FEIN KBB 40 for diameters of up to 40mm and depths of up to 50mm. At just 305mm in height, this is a compact construction tool, and because the motor and jig are made from a single part, the motor does not move up during operation. The maintenance-free drill shaft is mounted without play in a spindle sleeve.



Core drilling unit

The FEIN KBB 60 is a core drilling unit with two-speed gearbox, designed for use in the workshop, for diameters of up to 60mm. The extra-long shaft allows it to handle materials up to 75mm thick. The two-speed gearbox mechanically adapts the speed to the core diameter.

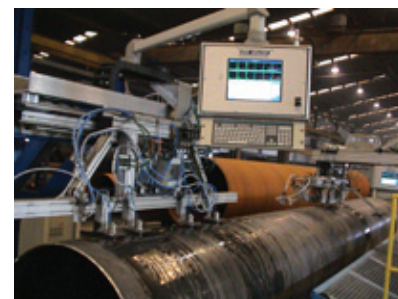
The FEIN KBB 30 is an extremely compact core drilling unit for on-site drilling. With a motor housing made of fibreglass-reinforced plastic, it weighs just 10kg (according to EPTA), making it suitable for working at heights, for example in the construction of industrial and other large-scale premises or steel structures. The FEIN KBB 30 is suitable for diameters of up to 30mm and depths of up to 50mm and has been available since August.

The merger with Jancy means direct benefits for FEIN users, because the new HSS core drills incorporate many years of production expertise previously marketed under the Slugger brand. The FEIN HSS NOVA, a high-quality core drill, is now available with Weldon and QuickIN tool mountings for diameters of 12mm–60mm and depths of 25mm, 50mm and 75mm. The FEIN HSS DURA models come with titanium nitrite coating for high heat resistance and have excellent smooth work progress.

The addition of the new FEIN KBB models means that FEIN now offers two core drilling ranges. Each of the FEIN KBM core drilling systems is designed for a specific task or application. The FEIN KBM 32 Q is a compact core drilling unit for construction work. The FEIN KBM 50 QX has a mechanical two-speed gearbox for core diameters of up to 50mm, while the lightweight, two-speed FEIN KBM 52 U is suitable for universal

on-site use. The powerful FEIN KBM 65 Q and 65 QF are designed for use in the workshop and for diameters of up to 65mm.

FEIN – UK
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Representatives welcome

Single pass plasma processor for square and rectangular tubing

PEDDINGHAUS Corporation, the global leader of CNC equipment for the structural steel and heavy plate industries, has developed the Ring of Fire plasma processor for the production of square tubing, rectangular tubing, and structural steel members.

An economic alternative to traditional tube processing methods, the Ring of Fire utilises a Hypertherm HPR400 plasma torch fixed to a rotating and beveling ring to process all four sides of a profile (top, bottom, and sides). This technology is leveraged for the application of bolt holes, copes, notches, layout marks, slots, cutouts, weld preparations and end cuts (both straight

and mitred) to sections that can range from 75mm×75mm to 508mm×508mm.

The use of plasma technology allows the Ring of Fire to accept material of varying thicknesses, and qualities. Using Hypertherm's latest Hydefinition plasma cutting technology, the Ring of Fire is capable of cutting material ranging from 6mm thick to 50mm thick.

Additionally, material grade or condition is of little concern, as the plasma process is unaffected by the existence of typical mill scale or corrosion.

Material handling is optimised on the Ring of Fire with the application of Peddinghaus' patented Roller Measurement technology.



Drilling rectangular tubing

Raw material need only be loaded on the entry area of the machine, and removed at the exit as completed parts are conveyed outward from the operating area. This technology helps to eliminate the need for an entry gripper carriage or feed-cart. Scrap or small components are automatically conveyed from the operating area of the Ring of Fire by means of a rugged steel conveyor belt.

Manufacturers and structural fabricators alike have experienced the benefits that this system has to offer. In equipment manufacturing applications, the Ring of Fire has been known to provide some customers with cost savings in excess of 60 per cent. Within the structural realm, the Ring of Fire works as an all-in-one work station capable of processing all structural sections including beams, channels, angles and flat bar.

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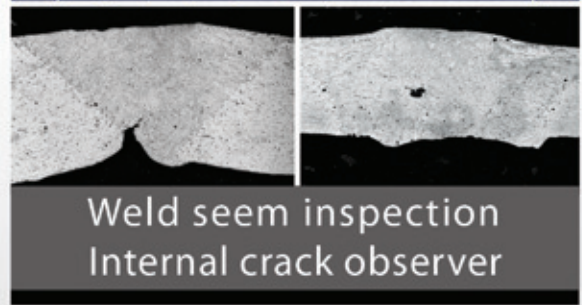
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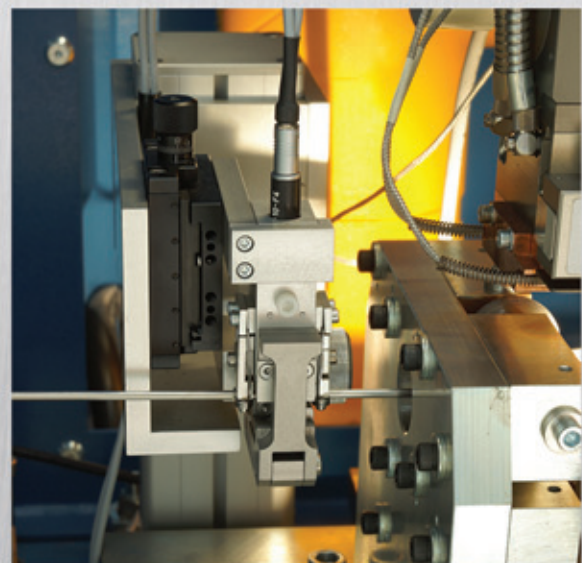
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的中文读者介绍国
际管道行业的最新
技术和行业新闻的
综合信息。

现场管道切割和加坡口技术创新

PIPE Ltd有限公司是英国一家专业的管道工程制作切割和加坡口设备供应商。

公司可以满足您在车间或现场进行管道热式或冷式切割和加坡口的所有要求。最受欢迎的其中两台机器是分段式构架切割和坡口机：大型钢框架“超级切割机”和轻质合金体“MCA Clamshell”机。这些机器用于管道冷切割和加坡口，针对禁止使用热切割或要求机械加工坡口时。分段式构架设计使操作者能够沿管线任何地方安装机器，同时用于管道切割和加坡口。现场作业或在因管道设计外形低而使通道受限区域来说是理想的，机器一旦用夹钳固定到管道上，内部旋转环就可以完成切割和坡口加工，安装在弹簧装载工具盒里的切割

刀具沿管道轮廓完成精确的焊缝准备。切割刀具可用于加工低碳钢、不锈钢和特殊材质如双相钢和超级双相钢。机器有电动、启动或液电机。提供切割1"到 60"（更大的需要定制）管道的机型，所有焊接准备形式都可以在高达60毫米壁厚的管道上实现。

在其他管道工程设备中，Pipe Ltd生产和供货范围包括各种管道夹具和支撑架，管道焊接对准钳以及专业的管道清洗设备。

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Schuler获得大型管道专业知识

管道施工对大型管道的需求正在不断增加。德国Schuler AG公司对这一趋势作出了响应，并扩大了产品范围，包括大型管道经济生产交钥匙系统解决方案。

公司通过收购该领域专家ATIS GmbH工程公司使这成为可能。双方合同已于4月份签订。

Schuler公司在金属成形领域有着170多年的专业知识以及广泛的研发、大型设备制造、工程处理和全球服务网络技术。ATIS公司将为全球提供整个管道设

备和系统规划、开发、交付以及现代化方面的详细知识。

“这种强有力的伙伴关系将为我们的客户带来很多好处，”Schuler Pressen GmbH公司董事总经理Jochen Früh说到。

管道必须跨越很大的距离穿过荒芜地区而且通常暴露于极端环境下。温度远远低于冰点以及巨大的压力，比如在海底，管道承载巨大负荷。同时，为了延长运输物流的距离，管内压力正不断上升。

“所制造管道的稳定性和绝对质量因此更加重要，”ATIS公司董事总经理Dietmar Rieser解释道。在他们的制造过程中，使用超声波设备以及x射线和水压力（用水压试验机）仔细检查了管道。生产过程本身有两种基本方法：“大型管道要么是用金属卷板成螺旋焊接到一起要么是用纵向焊缝弯曲成“O”型，”Schuler SMG GmbH & Co KG公司董事总经理Manfred Wischnewski解释道。

螺旋成型管生产长度高达24米，直径450到3500毫米，壁厚6到25毫米。成型和焊接阶段可以直接连着进行（在线处理）。直径1625毫米、壁厚65毫米以内的纵向焊管可由压接机、U型和O型成型压力机或者工步成形压力机——如Schuler公司的Linear Feeding J-Press (LFJ 压力机)生产。纵向焊管通常生产长度为12米或18米。新型LFJ压力机也可生产长度高达24米的管道。

不锈钢管的低价替代品、用来输送侵蚀性或敏感性物料的是衬里管道——薄壁不锈钢管和传统输送管的结合体。在管道成型过程中，他们也由液压成型压力机生产出来。生产长度高达12米，直径高达530毫米。

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螺旋管厂视图

切割机用于现有精整线管端优化切割

今年杜塞尔多夫管材展第一个成果就是来自管道行业世界领先者Vallourec & Mannesmann公司的一份大订单。公司订购了两台切断机用于超声检测后优化管端切割。

“新的切断设备将能够在管道通过集成相控阵检测系统(一种先进的超声检测方法)后全自动切割未检测的管端以及缺陷区。这将在相控阵检测后在给定的周期内将未检测的或有缺陷的管端以及样品分开。”Reika的董事总经理Hans-Jörg Braun说。切割机包括输送机将集成到现有物料流中。

“使用我们的切割机，一个单行程就能够实现各种提高，”Braun先生补充道。“首先，通过精确切割不合规管

端而不是切割固定长度提高了材料利用率，从而留下最大可能的素长度。考虑到不合规管端长度将有所不同以及特殊缺陷区域也必须切除的可能性，产生的管道素长度也将不同。在这种情况下，可根据客户订单记录通过优化实际的素长度来避免不必要的材料损失。其实，检测后实际的素长度最适合客户的订单记录，以便多个订单可以同时累积，从而限制材料损失和优化利用率。”

通过新型集成切割机，客户将减少非增值运输而且还能使检查后返工无需排序。此外，未检测的管端能够轻易地分开以及取样，导致增加了已检测产品运行时优化。

Hagen公司提供的所有切割机都能保

证精确切割，配有硬质合金刀具——垂直的和水平的，因此对表面没有损害，Braun先生表示，“刀具寿命长也正在降低工具成本，而高速旋转切割头以及大工具进给减少了切割时间。短的停机时间和总循环时间增加了生产力。”

加工过程干净、干爽，无需冷却润滑剂，因此不再需要另外的加工步骤。Hans-Jörg Braun总结道：“简单而有效——就像我们全部机器一样。”

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用KSS1600锯切大型坯料

乌克兰唯一的铁路车轮制造商也跟随大型坯料锯切全球趋势并依靠来自Linsinger的KSS1600斜床锯床。今年4月，为客户提供了一台配有材料运输系统的机器。为辛苦的三班倒作业设计的该系统总重量为115吨。

这台全球唯一的斜床锯床概念是综合卧式和立式锯切机的优点产生的。当切割大直径时，好处很快就显出来了——锯切机的坚固、3点工件张力以及极其安静和无振动的运行确保刀具使用寿命长。

11台斜床锯切机已经在俄罗斯和独联体国家使用。铁路车轮制造商如Vyksa Steel Works、NTMK Nizhny Tagil 以及NTRP Dnepropetrovsk都是Linsinger的一些客户。过去几年Linsinger收到了来自全球的轮锯订单，这是对其进一步发展的证明。

工具持续的成本，按整个机器使用寿命计算，可形成多次机器采购成本。在该区域可以节省很多钱，但也可以消耗掉。Linsinger提供自己公司生产的刀具，这样客户可以免受任何糟糕的意外。当在工厂调试时，他们与机器结合起来。因此在客户工厂调试后不再需要一些繁琐的测试，生产可以在最短的时间内按既定的性能开始运行。

新刀具技术的开发也是Linsinger最关注的问题。LINCUT®圆盘铣刀带螺纹连接的硬质合金刀片，开启了锯切的新时代。因有涂层，刀子使用寿命更长，而且易于更换，并有助于大大降低持续操作成本。这意味着，比如，直径450毫米的每次切割成本仅为e2(只算刀具成本)。另外一个好处是避



Linsinger 锯床

免了车削中心采购和运行成本。

使用LINCUT®侧铣刀三年的实践经验确认了我们的成功途径。目前有40多套带LINCUT®的Linsinger系统在运行。

Linsinger – 奥地利

网址: www.linsinger.com

独特的皮尔格式冷轧管机

EZTM JSC公司正在开发一台独特的皮尔格式冷轧管机CRTM 380，用于无缝冷轧碳钢、合金钢和不锈钢管生产。

该轧机轧制的管道壁厚、内外径尺寸精确，内外表面质量高。这些管道用于空间和航空工程、石油和化学工程、造船及其它行业。

用于CRTM-R 380的设计决策是专利技术。

——这是第一次当轧机执行这种尺寸加工时使用端式装车方案，这样无需从变形区抽出心轴就可以进行卸载，增加

成品钢管的精确度，而且可以使用有轻微锥形的心轴。

——这是第一次用轧机轧制这种尺寸的坯料，无需传动装置，使用伺服驱动机器装置进行进给和转动，大大增加其技术能力——机架装置以及驱动装置的设计布置消除了对高效冷却润滑剂基础的侵入，冷却润滑剂以矿物油为基础，用于变形区冷却，以及与润滑剂混合用于驱动装置——三辊轧机机架新型设计，独特的硬度参数以及受到的轧制力保证得到精确的管道到外径——驱动装

置可接受的方案以及手柄驱动的使用不仅提供了调整最优轧制路径模具轧制半径的可能性而且在变形区执行时也不同，从而减少轴向轧制力，增加工具耐用性而且为进给装置提供伺服动力。——当提供更高的技术特性时，可接受方案使设备金属特定数量大大减少。

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Quaker任命新业务经理

QUAKER Chemical公司为管道工业提供全系统范围的专业知识,以及全面的加工液和涂料产品组合,在18个国家有制造和研发设施。公司能力包括为焊接和无缝管材厂全套生产作业提供加工专业知识、定制加工液以及涂料。公司在全球每个主要工业化地区都有技术支持人员,支持本地业务。

公司已宣布从2012年8月1日起, Andy

Barker将晋升为欧洲、中东、和非洲(EMEA)区管材业务经理。同时 John Fivash将从这一职位退休。

在Quaker只有不到20年,但Barker先生为这一职务带来从该公司各个业务部门工作中获得的大量经验。

Barker先生评价说:“此刻我非常高兴能够有机会在我们公司最令人振奋的业务部门工作。我们独特的产品供应涵

盖从前到后的整个液体加工,这意味着我将开始着手有趣的产品技术;并且我期待着和我们团队人员一起工作,为我们的客户创造节省成本的机会。”

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2012中国国际管材展即将在上海举行

亚洲头号管材工业展,第五届中国——国际管材工业交易展(2012中国国际管材展)将于2012年9月25日至28日再次在上海新国际博览中心举行第五次展览。今年的管材和线材展估计占用7.5个展览大厅,总面积为85,000平米。预计全球1500家参展商将参加,展示全球管道工业领域创新的技术、产品以及解决方案。根据World Steel Association协会的统计,中国粗钢年产量2011年为6.955亿吨,占全球产出的45%,同比增长8.9%,高于全球6.8%的平均增长率。2010年,中国粗钢产量占世界的44.7%,到2011年,增加到了45.5%。中国已经成为世界上最大的钢管生产国。从2011年1月到11月,中国无

缝管产量为2417万吨,同比增长8.90%。产量最高的三个省份是山东、江苏以及天津,各占总产量的19.21%、14.86%和13%。与此同时焊管产量达到3668万吨,同比增长28.36%,其中天津和河北超过全国产出的一半。节能减排将成为一个重要目标,新产品的开发将进一步加快,同时钢管生产和出口继续稳步增长。这对中国钢管行业重组以及成为钢铁强国来说是一个非常重要的战略时机。

2010中国管材展见证了共1306家参展商,在74500多平米展览场地展出了最新的技术和应用。并行的展览吸引了78个国家的26035名行业参观者来到上海收集信息,制造新的业务联系以及发出

订单。来自国外的如此规模的参观者和参展商促进和推动了展会的国际化和质量。会议和研讨会包括中国国际管材会和中国国际线材会,会议分享了业内最新的思想、技术和见解,丰富了展会的内容。2012中国国际管材展由中国国际贸易促进委员会冶金委员会(MC-CCPIT)以及杜塞尔多夫展览(上海)有限公司联合主办。在以往各届成功的基础上,鉴于规模在不断扩大,需求快速增长,作为2012著名的国际贸易平台,组织方希望达到新的顶点。

Tube China

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“液压绿色”技术在杜尔塞多夫展上获得成功

弯管设计、制造、工艺和管端成型技术专家俄亥俄州、安大略湖以及英国班巴布利治的AddisonMckee公司随着最近参加的2012杜尔塞多夫管材展,UK宣布其最成功的技术之一曾出现在展会上。

事实上,直接的说,从展会向来自100个国家的30000多个国际贸易参观者敞

开大门的那一刻起,AddisonMckee展台就以其令人振奋的新的创新以及绿色技术引起了轰动。杜尔塞多夫管材展参加者从世界各地赶来寻求具有开创性的新技术,而AddisonMckee的新型IO“液压绿色”成型机以及其新型eb80 ESRB机器受到很大关注。

公司创新型“液压绿色”技术使其最新的管端成型设备可利用液压动力的优点,与传统液压动力装置相比,不产生不断的噪声,不使用热量和能源。

传统的管段成型液压系统使用交流电机连续驱动液压泵,即使是在机器未使用以及无需油压和或流速要求时,而AddisonMckee公司的新技术是使泵仅在需要压力和流速时才运行。

在最后的分析中,新型HG70系列管端成型机的核心“液压绿色”解决方案与传统的液压油

路相比将带来很多好处,首先因大大减少了液压泵的工作周期而节省了50%电力,减少了热排放,噪音排放也大大降低了50%。

该系统还大大减少了所需液压维护量。而且较小的液压油箱油的使用也少了65%。

该技术的功能还将允许使用伺服泵变速速度控制油速和机器速度来增强机器移动控制。

新型eb80 ESRB机器是现有世界著名DB 75机器重要的替代品,而且不需要滚珠螺杆提供增压,允许齿轮箱和电机提供增压所需动力,能够实现机床全长自由成型弯曲,实现了重要的成本优势。

鉴于在工厂的占地面积成本,如果对机床长度灵活性要求高的话,新机器的模块化设计也有显著的好处。标准及其本身为两米长,但需要时可以通过螺栓将两部分连接起来来增加机床长度,可以简单且成本低的转变成3/4米的机型。

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AddisonMckee在2012管道展展示它的液压绿色环保技术

管子和管型材HFI/HFC纵缝焊接

ELOTHERM是唯一一家为客户提供既恒流又恒压的高频焊接发电机的制造商。

恒流焊机使用MOSFET晶体管并联谐振电路，用于功率高达800千瓦、频率为100到600千赫的焊接操作。EloWeld™恒压高频发电机有并联谐振电路和IGBT晶体管模块，由Elotherm于20世纪90年代中期推出，提供高达2000千瓦的焊接电源。

两个EloWeld™系统都具有方便可靠的负荷适应能力，使用气动开关切换的可再生电容器，由控制柜进行手动或自动控制。

变频调节的缺点，比如不同的任务要重调谐振电路，是需要重新调整恢复到原有频率、电压和电流设置，这可能很耗时。

为减少服务成本，带单个MOSFET或IGBT的易于更换的标准模块被用来替代昂贵的多晶体管紧凑型模块电源装置。数字可配置变频器具有现代化诊断、在线状态可视化以及纯文本故障显示功能。

变频器从外部谐振电路分离出来提供额外的决定性优势。外部谐振电路不包含由于振动和潮湿而有可能引发问题的未受保护的电子电源装置。没有敏感元件，如晶体管或驱动板，在焊缝附近。它们位于焊缝后面变频器柜内或在中控室内，以便维修。高频输出变压器设计成隔离变压器，一个气动感应器钳保护外部谐振电路不受变形管影响（有被拖住的风险）并简化了感应器的安全更换。

如果由于缺少空间阻抗器不能用于单个部分时，单独的接触装置使感应焊接转变到接触焊接变得很容易，而且有自动接触调整以及磨损指示。

接触磨损通过位置编码器监控以及补偿。

几乎所有高频可焊材料和管型材几十年来使用EloWeld™ HF发电机获得的广泛的专业处理技术使用户能够依靠符合焊接过程和规定焊接线能量的完全可重复频率来焊接出完美的焊缝。

SMS Elotherm有熟练的调试专家为客户提供支持服务，他们为系统操作员提供必要的系统以及工艺知识。

SMS Elotherm GmbH – 德国
网址: www.sms-elotherm.de

Allied Tube and Conduit投资Thermatool

THERMATOOL宣布为Atkore International公司的品牌Allied Tube and Conduit安装一套Alpha Mach 3切断系统。

Allied Tube and Conduit位于巴西南卡希亚斯，是镀锌钢管和管道、电缆管、金属成型系统制造以及建筑、电气、消防和安全、机械和汽车用零部件制造业领先者。

Mach 3 飞切系统的动力使其能够切割高抗拉力管，用于最具成本效益的、可靠的切割方案。虽然可剪切高抗拉强度材料，Thermatool Alpha Shear剪切机还是由高速工具钢制成，这种材料比市场上销售的其他任何材料都高级，因而锯片寿命很长。极佳的锯片寿命Alpha锯片更换次数减少，机器维护降低，或停机时间减少。停机时间的减少使Allied Tube and Conduit能更长时间地连续运行工厂，生产出有利润的

产品。以全速进行生产，速度高达500英尺每分，Mach 3 Flying Cutoff的切割精度达到 ± 0.039 英寸，使产品可直接从工厂装运，从而减少二次搬运并提高利润率。在减少二次搬运费用的同时，Thermatool Alpha Mach 3 Flying Cutoff飞切系统能生产出可直接运送给贵客户的精确切割产品。

Allied Tube and Conduit 购买的Thermatool Mach 3 Flying Cutoff飞切系统已安装在一台新轧机上，并能切割壁厚在0.028到0.250英寸之间的1008/1010低碳钢，在轧制速度高达500英尺每分的情况下切割公差为 ± 0.039 英寸。

Allied Tube and Conduit新调试的Mach 3 Flying Cutoff系统够买时带了2个不同大小的冲切模具，用来切割他们生产的不同尺寸的产品。ST-300双切割模以高达500英尺每分的

轧制速度切割1.500英寸到3.000"的钢。对于3.000英寸到5.000英寸的更大的产品，Allied Tube and Conduit可使用TRC-5005双切割模以350英尺每分的速度切割材料，长度为10英尺。冲切模是Alpha切压机切割的核心，控制整个切割的可靠性以及切割精度。

100马力的高性能齿条和齿轮系统减少周期时间，使短长度生产在线盈利成为现实。

2台40马力电机驱动Thermatool Mach 3 Alpha的双离合器杆飞轮和先进的双切割模具，可以高达500英尺每分的轧制速度提供高达5英寸和250英寸壁厚无凹痕产品切割。

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AICON在中国为TubeInspect开设新展厅

为了更高效地处理来自中国的需求以及为了开发管道光学测量系统TubeInspect中国市场，AICON最近在中国上海开设了新展厅。提供介绍、研讨会和培训课程用办公室及会议室。一套全尺寸TubeInspect系统已经安装并准备使用。

由于AICON在过去十年的努力，管道光学测量系统TubeInspect越来越成为管材和线材弯曲质量控制标准。汽车制造商、航空航天工业以及他们的供应商使用TubeInspect系统，因为其精确性高而

且能提高管材生产效率。快速投资回报也是显而易见的，因为TubeInspect系统能够取代机械仪表并能减少弯曲机设置时间。

AICON的TubeInspect系统，使用多倍高分辨率数码相机测量管子，几秒内就能计算出管子几何尺寸。测量结果以非常易于理解的方式记录，能非常清楚地告知管道是否在公差范围内。启动按钮，TubeInspect系统生成用户独立的可重复性测量报告，并可以转发给客户。

亚太地区区域经理Jonathan Kwon对这一新设置感到非常兴奋。“新展厅将使我们能够积极参与到中国客户中。这非常有意义，因为这里是我们的亚洲、欧洲和美国重要客户有重要生产设施的地方！”

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Precise, energy-efficient induction systems for the tube and pipe industry

By Gerd Ommer, co-author: Dirk M. Schibisch, SMS Elotherm GmbH

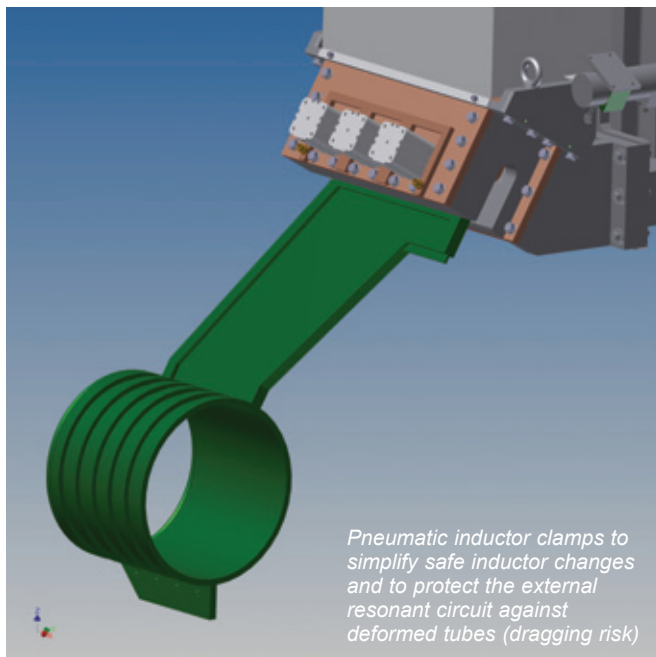
Effective solutions for induction welding and heating processes are a basic requirement for modern, cost-effective tube production.

SMS Elotherm combines comprehensive skills in tube production systems with advanced process expertise and achieves low energy consumption through intelligent technology. This results in highly efficient and economical induction solutions.

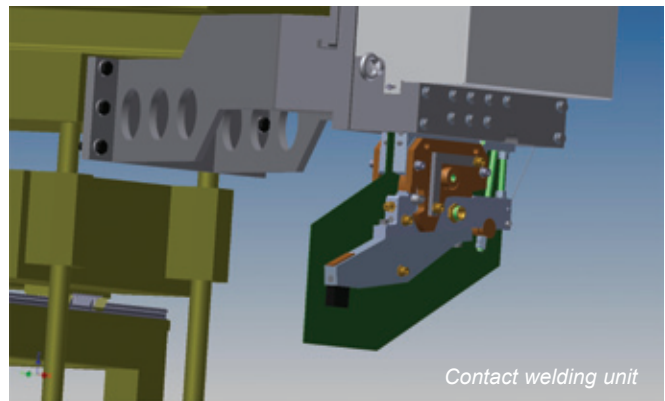
HFI/HFC longitudinal seam welding of tubes and tubular sections

Elotherm is the only manufacturer to offer customers both constant-current and constant-voltage high-frequency welding generators.

Constant-current welders using a parallel resonant circuit with MOSFET transistors are designed for welding powers up to 800kW and frequencies from 100 to 600kHz.



Pneumatic inductor clamps to simplify safe inductor changes and to protect the external resonant circuit against deformed tubes (dragging risk)



Contact welding unit

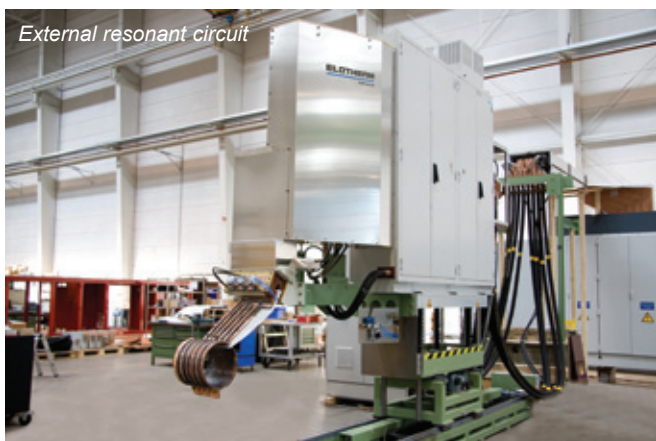
The EloWeld™ constant-voltage HF generator with a series resonant circuit and IGBT transistor modules, introduced by Elotherm in the mid-1990s, offers welding power up to 2,000kW.

Both EloWeld™ systems feature convenient and reliable load adaptation using reproducible capacitor switching with pneumatic switches, either manually or automatically from the control cabinet.

A drawback of variable frequency adjustment, eg retuning the resonant circuit for different jobs, is the need for readjustment to restore the original frequency, voltage and current settings, which may be very time-consuming.

To reduce service costs, easily replaceable standard modules with a single MOSFET or IGBT are used instead of expensive power units in the form of compact modules with many transistors. The digitally configurable converter features modern diagnostics and visualisation with online status and fault indications in plain text.

Separation of the converter from the external resonant circuit offers additional decisive advantages. The external resonant circuit contains no unprotected electronic power units liable to cause problems due to vibration and moisture. There are no sensitive components, such as transistors or driver boards, in the direct vicinity of the welding line. They are located in the converter cabinet behind the line or in a central control room for easy servicing. The HF output transformer is designed as an isolating transformer, and pneumatic inductor clamps protect the external resonant circuit against deformed tubes (risk of being dragged along) and simplify safe inductor changes.



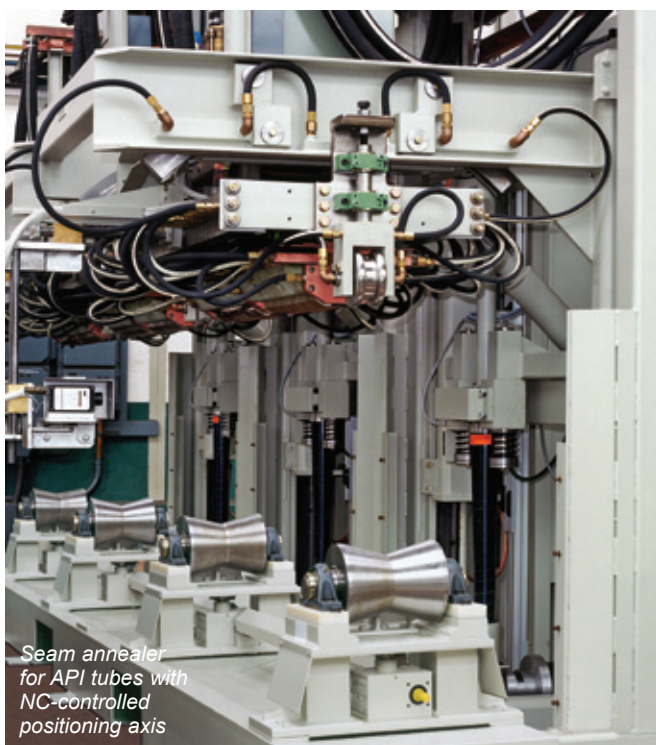
External resonant circuit

If impeders cannot be used in individual sections due to a lack of space, a separate contact unit makes it easy to change from induction welding to contact welding with automatic contact adjustment and wear indication. Contact wear is monitored and compensated by position encoders.

Extensive process expertise gained from using EloWeld™ HF generators with virtually all high-frequency weldable materials and tube sections over several decades enables users to produce perfect welds thanks to fully reproducible frequencies matched to production processes and defined welding energy. SMS Elotherm supports customers with the services of experienced commissioning specialists who provide system operators with the necessary system and process knowledge.

Inline seam annealing and normalising

Modern process-optimised EloSeam™ tube seam annealing systems enable inline induction annealing of high-frequency



Seam annealer for API tubes with NC-controlled positioning axis



Tube seam annealing with pilot line for orbital correction of the inductor position

welded tubes with wall thicknesses of up to 25mm. Calculation programs enable process-orientated system design in the project engineering phase, which usually avoids the need for inductor changes. The basic requirements here are the right frequency, the heating conductor width, orbital inductor tracking and inductor zones with sufficient length.

The induced power is individually calculated and controlled by multizone technology with EloMat™ L-LC converters (from the circuit architecture: L for pre-choke and LC for parallel resonant circuit). In contrast to existing single-converter technology with the same power modules, this enables maximum power induction in every heating phase without surface overheating. It is therefore important to ensure for every material specification that the inner seam is reliably heated at least in the width of the wall thickness to above AC3 – end of austenite formation at approximately 785°C.

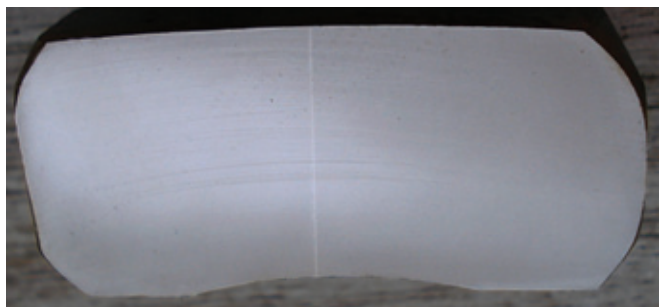
EloMat™ L-LC converters offer a constant high power factor ($\cos \phi > 0.95$) regardless of load conditions, including partial load operation. Mains harmonics are distinctly reduced by using 12-pulse L-LC converters.

Double annealing with quenching station

Heat treatment of the high-frequency welded seam region is necessary in order to match its mechanical properties to those of the tube.

In the past, single-stage induction seam annealing was followed by normalising in a continuous furnace.

Multi-stage induction annealing with water quenching, also known as double annealing, yields a fine grain structure and therefore high impact strength. Multi-stage annealing provides a high statistical confidence level in the event that tube manufacturers are held liable due to possible annealing defects.



Weld on a longitudinally welded pipe with subsequent double-annealing (microsection etched in order to show the ferrite line)

Repeating the alpha-gamma transformation process (alpha-gamma transformation starts at approximately 723°C and ends at approximately 785°C) in multi-stage annealing with water quenching greatly improves the quality of the seam.

In order to achieve the toughness properties of the parent metal in the weld area, the heated seam region must be water-quenched at higher than the critical cooling rate after annealing and then reheated above AC_3 .

The demand for higher notch impact strength can be met in practice only with the fine grain structure achieved by double annealing with intermediate cooling.

In inductive double annealing with water quenching after the first annealing stage, fine carbide precipitates in a fine crystalline matrix produce the desired favourable combination of strength and toughness.

Hardness values above 300HV can be achieved after normalisation. After the double annealing process, the hardness between the inside and outside surfaces in the seam region is approximately 180 to 200HV, which corresponds to the hardness of the parent metal.

No yield strength loss occurs in thermo-mechanically treated steels after induction double annealing of the seam region, unlike the situation with furnace annealing of tubes.

Dual annealing with cooling section

There is increasing demand for weld seam and full body annealing to achieve homogeneous material properties. The newly launched "Dual annealing with cooling" system combines induction full body annealing with EloTube™ and seam annealing with EloSeam™.

Modern internal scraper systems with coolant return are an essential element here. Even with tubes under 30mm in diameter, it is now possible to reliably achieve a uniformly annealed structure, both in the weld seam and over the tube cross-section, with full body heating of tubes without internal liquids. Full body heating is used for tubes with outside diameters up to approximately 40mm, while induction seam annealing is used for larger diameters to save energy. EloMat™ converters, preferably with L-LC technology, are used as the energy source for both annealing processes.

The dual annealing system is designed to be used with either round coils or linear inductors with field concentrators matched to the weld seam.

An energy source with a common cooling water system for induction full body and seam annealing enables cost-effective system design with a small footprint and optimal adaptation to individual annealing requirements in the temperature range extending from 500°C for recrystallisation annealing to 1,200°C for diffusion annealing.

Annealing processes in an inert gas atmosphere

Inline tube annealing processes are performed in a nitrogen atmosphere to prevent scale formation, while bright annealing requires a reducing hydrogen/argon atmosphere.

In the manufacture of brake pipes, the tubing is sized to a final diameter of 8.0mm, 6.35mm or 4.75mm after HF welding at a rate of approximately 100m/min. The sized tubes are induction annealed in a nitrogen atmosphere at temperatures above AC_3 and subsequently chilled to below 100°C in double-walled, water-cooled chilling tubes.

Inline bright annealing of tubes is normally used for tubes made from austenitic stainless steels, duplex steels, nickel alloys and titanium due to the limited welding rate of TIG and laser welding systems (up to 20m/min). The range of wall thicknesses is 0.5mm to 6.0mm, especially for tube diameters from 5.0mm to 114mm. For economic reasons, induction annealing is no longer used for larger tube diameters due to high gas consumption.

Inline bright annealing is integrated in continuous tube production processes and, as an independent unit, can be retrofitted in existing tube production lines.

Bright annealing creates a corrosion resistant seam while retaining the bright surface of the tube. The process requires a bright tube at the inlet of the induction zone. If necessary, a washing unit with a tank containing a suitable, heated solution must be used. This removes dirt, oil and grease from the tube surface as well as dries it.

It is essential that the tube transport system keeps the tube in equilibrium throughout the entire annealing process, ie the same compressive and tensile forces must be present when the tube is fed in to the heating zone and when it is removed from the annealing and cooling zone, in order to prevent tube compression, tapering or tearing at annealing temperatures between 1,100°C and 1,300°C.

In the inert gas chamber, the metallic bright tube passes through controlled induction heating and soaking zones. Heating to the required annealing temperature takes place in the chambers with the exclusion of oxygen and a reducing atmosphere.

Argon, hydrogen or a mixture of these gases can be used as inert gas. Hydrogen gas is burned off upon leaving the chamber. Argon, an inert gas used for welding, is used inside

the tube to protect the inner surface against oxidation in the annealed area.

After a short soaking zone, the red-hot tube is rapidly cooled below the oxidation threshold by special cooling elements in three stages. This cooling process also takes place with the exclusion of oxygen. Residual cooling of the tube to room temperature takes place in a water spray chamber.

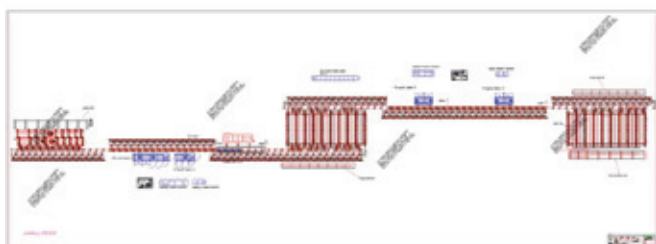
Induction tube hardening and tempering with EloMat™ multi-zone technology

Innovative solutions from SMS Elotherm offer higher flexibility than conventional furnace systems for induction hardening and tempering of long products, especially with small batch sizes.

In just a few minutes, tube hardening and tempering lines can be ramped up or down and reconfigured for the next material batch. In situations where materials of different sizes and batches with different steel grades need to be hardened and tempered at different temperatures on a daily basis, output capacity can sometimes be increased by more than half compared to hardening and tempering in a conventional furnace.

In induction tube hardening and tempering systems, thermal energy is induced directly in the material to achieve maximum throughput for the entire range of tube products. This avoids lost time due to conductive heating, which requires longer process times.

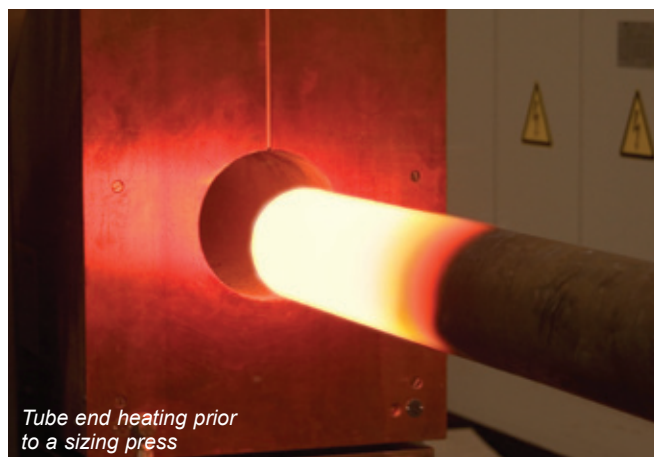
A significant feature of modern tube hardening and tempering systems is the high homogeneity of the tempered structure, with uniform Rockwell hardness (variation ± 1 HRC or better) measured over the entire tube length.



Layout of a typical induction equipment for heat treating of tubes (Quench & Temper)



Seamless, thick walled tubes after the quench & temper process



Tube end heating prior to a sizing press

Due to the very short heating times achieved with induction heating, surface decarburisation does not occur and scale formation is minimal compared to furnace hardening. The negative effect of tempering brittleness with various material grades that are preferably used for hardening and tempering does not occur with induction technology.

Precise process management with high reproducibility in conjunction with specific material handling during transport, induction heating with controllable multi-zone technology, effective quenching and a special cooling bed allow a high degree of tube straightness to be achieved after hardening and tempering. The straightness corresponds to that of the input material and usually does not exceed 2mm/m; sometimes it is even better.

SMS Elotherm offers to customers complete quench & temper system solutions with comprehensive process expertise.

Induction tube heating

Induction heating processes have been the key technology for round tubes and tubular sections for decades.

Cost-effective heating solutions for coating, bending and cutting have delivered an optimal performance in practice. Tube end heating before sizing or compression moulding in several steps is also a precise and cost-effective induction process.

In cooperation with a renowned German customer, SMS Elotherm has developed a modern tube end joining technology and has already delivered the first production systems. Unlike conventional friction welding of round tubes, this new induction pressure welding method also allows pressure-welded joints to be made with oval or square tubes. The new process avoids irritating material bulging at the joint as commonly seen with friction welding.

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For further information on how Thermatool's HAZControl™ Technology can improve your production process please visit us at upcoming Tube China, Tube India International, and Fabtech.



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