

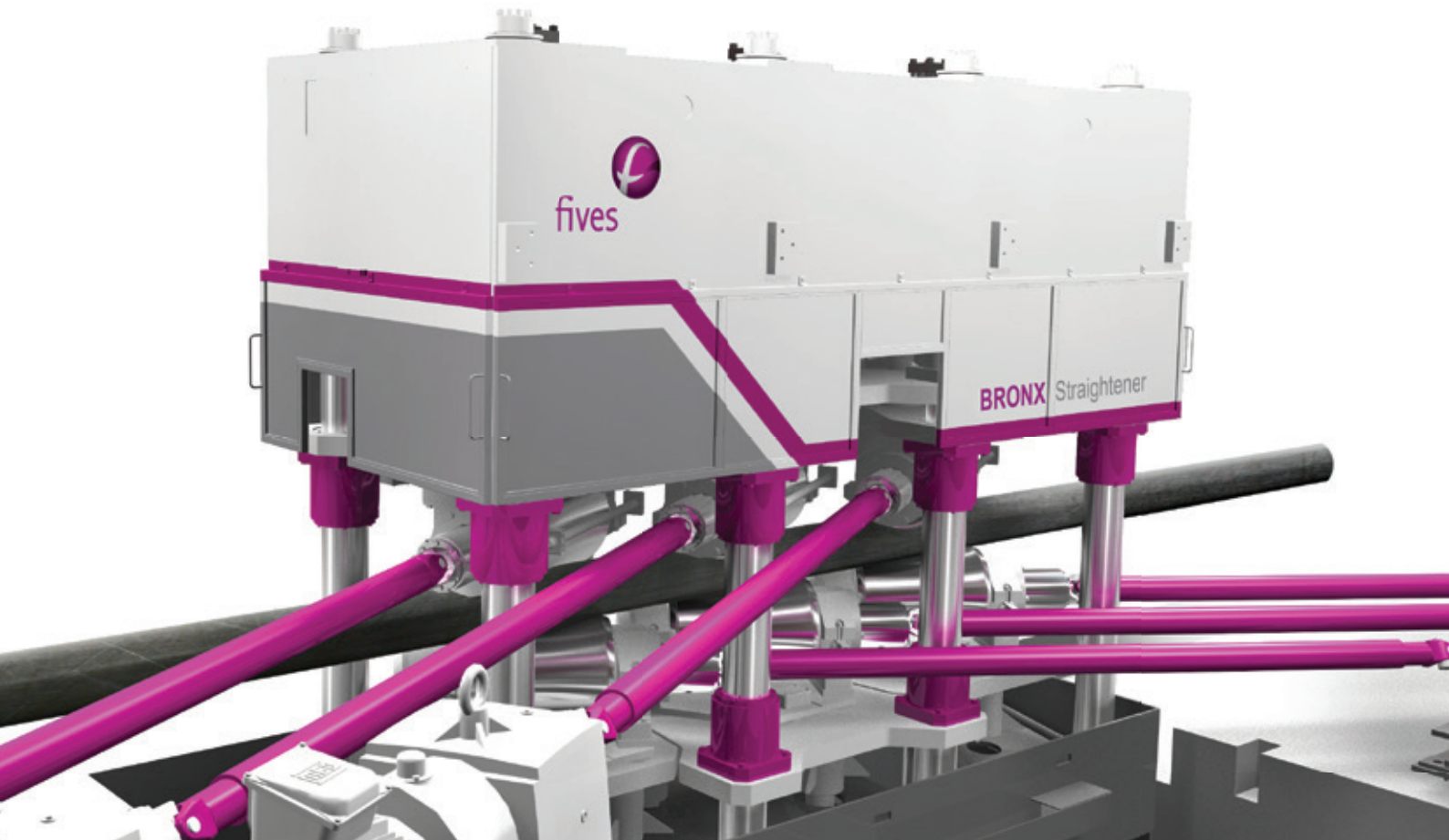
TUBE & PIPE

MAY 2015

管道技術 Technology

VOL 28 NO 3

US\$33



ULTIMATE MACHINES ULTIMATE FACTORY

Fives supplies Bronx, Abbey, OTO and Taylor-Wilson tube & pipe equipment for the energy, automotive, mechanical and structural sectors.

www.fivesgroup.com



fives ultimate machines
ultimate factory

»First class hoses and tubes are the benchmark!«

Holger Lieder
Sales Director SIKORA AG



Online quality assurance of hoses and tubes

The X-RAY 6000 PRO from SIKORA is a sophisticated system for continuous process control and online quality supervision in hose and tube extrusion lines.

Your benefits:

- Reduced start-up times by an online measurement of eccentricity, wall thickness, diameter and ovality of single and multi-layer products
- Increased productivity and cost saving
- No start-up scrap
- Process stability
- Reliability with no need for calibration



TIPO, CHINA / 8"-24"Ø



ORRCON, AUSTRALIA / 6"-20"Ø



DPI, CHINA / 8"-24"Ø



HLM, S.AFRICA / 8"-24"Ø



GIPI, OMAN / 8"-24"Ø



BSL, INDIA / 8"-25"Ø

PIPE MILL

ERW/API 20", 24", 26"Ø

TECHNOLOGY

- FULL CAGE FORMING SYSTEM
- QUICK ROLL CHANGE STAND
- EDGE MILLER & MILLING CUT-OFF
- SPIRAL ACCUMULATOR
- END FACING & CHAMFERING
- HYDROSTATIC TESTING LINE
- ULTRASONIC TESTING LINE
- AUTOMATIC MARKING LINE
- COMPUTERIZED CONTROL
- OPERATION MONITORING SYSTEM
- MATERIAL TRACKING SYSTEM
- INSTALLATION & COMMISSIONING
- TRAINING FOR OPERATION

MILLTECH

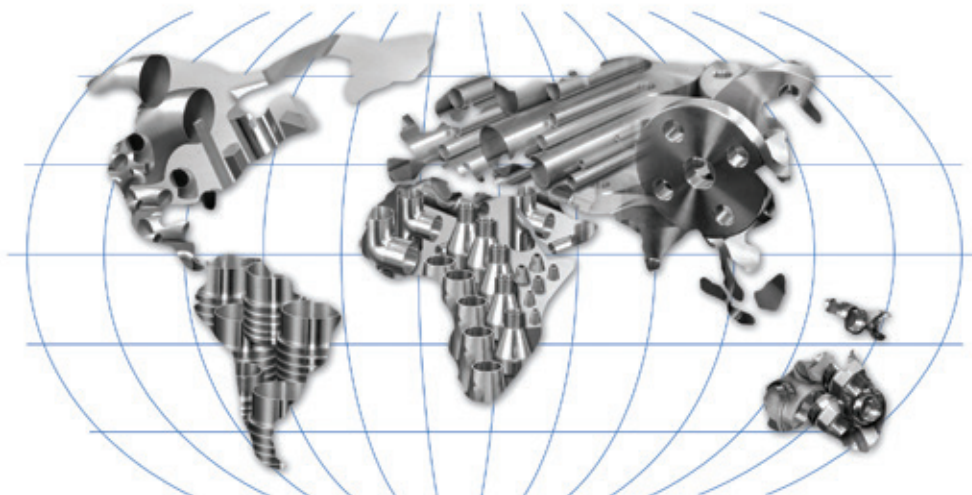
PIPE MILL ENG & MFG.
www.milltechco.com



LICENSE PARTNER

Acimex.....	77	Faspar SpA.....	41	Quaker Chemical Corp.....	30
Addison Saws Ltd.....	22	Fives.....	10, 22	Queins.....	79
AGTOS.....	13	Fontijne Grotnes Group.....	27	Rafter Equipment Corp.....	12
Alpha Metall GmbH & Co KG.....	71, 72, 75	Gem Tool Corp.....	71	REA Steam Cleaning Srl.....	36
Apollo Srl.....	39	Grieve Corp.....	36	RSA.....	8
Arc Energy Resources.....	18	Grind Master.....	40	Schwarze-Robitec GmbH.....	15, 57, 61
Asmag GmbH.....	77	Guild International.....	38	Seuthe GmbH.....	77
BBLubricants.....	32	Haven Manufacturing.....	38	Sikora AG.....	27, 54
Bewo Cutting Systems BV.....	34	Huntingdon Fusion Techniques.....	52	SMS Meer GmbH.....	20
Bossi Srl – Macchine Finitura Metalli.....	54	Inductotherm Group Russia.....	7	Spontan.....	74
The British Institute of Non-Destructive Testing.....	24	Inductotherm Heating & Welding Ltd.....	6, 30	Strong Hand Tools.....	40
Butech Bliss.....	10	Instron UK.....	43	Superior Technologies Europe Ltd.....	71
Combilift Ltd.....	12, 78	Interlaken Technology.....	56	T & H Lemont Inc.....	6
Contrôle Mesure Systèmes.....	48	Kemppi Oy.....	16	TAG Pipe Equipment Specialists.....	58
Copier Pipe Machinery.....	30	Kersten Europe GmbH.....	15	Tecnomatic Srl.....	44
DWT GmbH.....	37	Linsinger Maschinenbau GmbH.....	28	THE Machines Yvonand SA.....	28
EFD Induction AS.....	26	Magnetic Analysis Corp.....	34	Tosçelik Profile and Sheet Ind Co.....	30
Elcometer Ltd.....	54	McElroy.....	46, 53	transfluid Maschinenbau GmbH.....	26
Electronic Heating Equipment Inc.....	72	Nakata Mfg Co, Ltd.....	18	TSE GmbH Tube Scarfing Equipment.....	75
ENEMAC GmbH.....	77	Nelson Steel.....	10	Universal Tube & Rollform Equipment Corp.....	37
EnerSys.....	79	Olimpia 80 Srl.....	41, 43	Vero Software.....	60
Ernst Blissenbach GmbH.....	74	Peikko Group Corp.....	16	Violi Srl.....	53
Exol Lubricants Ltd.....	55	Primetals Technologies Ltd.....	50	Voss Fluid GmbH.....	40
Extractability.....	52	PWS GmbH.....	6		

HAVE SOLUTIONS FOR ALL YOUR STAINLESS STEEL CHALLENGES



AISI 303 / 304 / 309 / 316 / 310 AND SPECIAL ALLOYS

We play a leading role as the Stockist of Stainless Steel Materials in a full range of specifications according to International Standards.

60 YEARS EXPERIENCE

**FLAT PRODUCTS
LONG PRODUCTS
PIPE PRODUCTS
PIPE FITTINGS AND VALVES - FLANGES ETC.**

Phone: +90.232.457 85 85 (pbx)
Fax: +90.232.433 25 93
info@ozimeks.com



**STAINLESS STEEL
EDELSTAHL
ACIER INOXYDABLE**



OZIMEKS INTERNATIONAL - ISTANBUL - MUNICH - NEW YORK - SHANGHAI

www.ozimeks.com



VISIT US

HALL 7.5

STAND 75A10

8 – 11 JUNE 2015



Making the Earth's arteries. Production systems for large pipes.

EFFICIENT, FLEXIBLE AND RELIABLE.

Schuler offers turn-key plants for future-orientated production of large pipes:

- Presses for longitudinal welded pipes
- Spiral pipe welding machines
- Replacements, modernization and optimization for LSAW/HSAW pipe mills
- World-wide service: over 900 service employees in our global service network are there for you 24/7.

With Schuler you have strong support in R&D, engineering, large-scale system construction, and project management.



www.schulergroup.com/large_pipe
For more information, simply scan the QR code with the camera of your smartphone or tablet.

Editor	Rory McBride
Features editor (USA)	Dorothy Fabian
Editorial assistant	Christian Bradley
Production	Lisa Wright
Sales & marketing	Catherine Sayers <i>English speaking sales</i> catherine@intras.co.uk
	Giuliana Benedetto <i>Vendite & Marketing (Italia)</i> giuliana@intras.co.uk
	Hendrike Morriss <i>Verkauf & Marketing</i> <i>(Deutschland, Osterreich, Schweiz)</i> hendrike@intras.co.uk
	Linda Li 中国大陆, 台湾, 香港以及远东地区销售代表 linda@intras.co.uk
Advertising co-ordinators	Liz Hughes Andrea McIntosh
Subscriptions	Julie Case
Accounts manager	Julie Case
Publisher	Caroline Sullens
Founder	John C Hogg

All rights reserved – © Intras Ltd
ISSN 0953-2366

Published by Intras Ltd
46 Holly Walk, Leamington Spa, CV32 4HY, UK
Tel: +44 1926 334137 • Fax: +44 1926 314755
Email: tpt@intras.co.uk • Website: www.read-tpt.com

Intras USA
Danbury Corporate Center, 107 Mill Plain Road,
Danbury CT 06811, USA
Tel: +1 203 794 0444 • Email: doug@intras.co.uk

This publication and its full contents of layout, text, images, and graphics is copyright protected. No part of this publication may be reproduced in any form or by any means, electronic or mechanical including photocopying, recording or any other storage or retrieval system without the publisher's written permission. The publisher, owners, agents, printers, editors and contributors cannot be held responsible for and hereby exclude all liability whatsoever for errors, omissions or the accuracy and claims printed or inferred in the editorial or advertisements published in this, previous or subsequent editions or for any damages, costs or losses caused thereby. **Tube & Pipe Technology** reserves the right to edit, reword and subedit all editorial submissions in accordance with editorial policy. **Tube & Pipe Technology** expressed graphically or by text is a registered name and style trademark of Intras Ltd, UK. All matters relating to this disclaimer are governed by the laws of England.

US Copies only: **Tube & Pipe Technology** (ISSN No: 0953-2366, USPS No: 023-507) is published bi-monthly by INTRAS Ltd and distributed in the USA by Asendia USA, 17B S Middlesex Ave, Monroe NJ 08831. Periodicals postage paid at New Brunswick, NJ and additional mailing offices. POSTMASTER: send address changes to **Tube & Pipe Technology**, 17B S Middlesex Ave, Monroe NJ 08831.

Tube & Pipe Technology magazine is available in print, online and CD-ROM. Go to www.read-tpt.com for more information.



PPA



CONTENTS

THE 16TH CHINA (GUANGZHOU) INTERNATIONAL TUBE & PIPE INDUSTRY EXHIBITION 16-18 JUNE 2015

62



Photo: bigstockphoto.com Photographer: Sean Pavone

TUBE SCARFING SYSTEMS & TOOLS

70



HANDLING, BUNDLING, PACKAGING & LOGISTICS

76

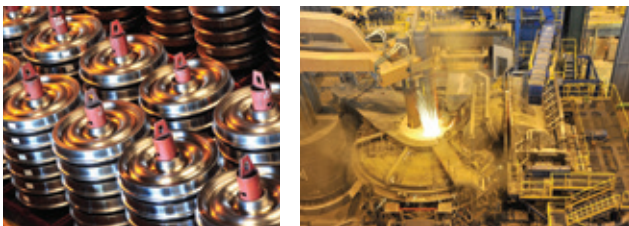


EDITORIAL INDEX	2
INDUSTRY NEWS	6
TECHNOLOGY NEWS	26
GLOBAL MARKETPLACE	64
中文综合	80
ADVERTISERS INDEX	88

ARTICLE: **84**

1.32mt/y greenfield turnkey plant for high quality steel grades at Interpipe

By Gennadiy Yesaulov and Andrea Michielan, Interpipe Steel, and Aurelio Mortoni, Colloredo Marco and Marco Rinaldi, Danieli Officine Meccaniche SpA



The May Issue



Rory McBride – Editor

Welcome to the latest issue of Tube & Pipe Technology magazine. This month we have features on handling, bundling, packaging & logistics and tube scarfing systems & tools. We also have a technical article on a greenfield turnkey plant for high quality steel grades from Interpipe.

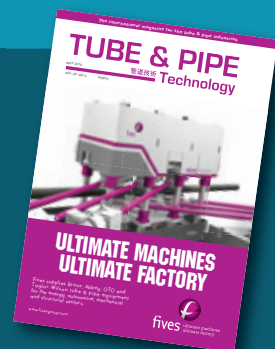
It has been great to read about some really big investments and deals being signed in this issue. Combilift has made a €40mn investment in new facilities, which will create more than 200 new jobs. Nakata has received the first order for its newly developed 30" orbital die forming pipe mill and Fives has completed giant projects in China for the Inner Mongolia Baotou Steel Union and Baosteel Zhanjiang. It is great to see these success stories in the industry.

Next issue we have features on software for design, production & management; OCTG & pipeline manufacturing; and straightening technology & equipment. We also take a first look at Tube Southeast Asia 2015, which is taking place in Bangkok, Thailand. Please do send me your articles and press releases if any of these features are of interest to your company. If I can help with anything please feel free to contact me at: rory@intras.co.uk

I hope that you enjoy the magazine.

On the cover . . .

As an industrial engineering group, Fives designs and supplies machines, process equipment and production lines for the world's largest industrials, including the aluminium, steel, glass, automotive, aerospace, logistics, cement, energy and sugar sectors.



Located in over 30 countries and with nearly 8,000 employees, Fives is known for its technological expertise and competence in executing international projects. Fives' multi-sector expertise gives it a global vision of the industry which provides a continuous source of innovation. The effectiveness of its R&D programmes enables Fives to design forward-thinking industrial solutions that anticipate clients' needs in terms of profitability, performance, safety and compliance with environmental standards.

Fives is a prominent supplier of Abbey and OTO mills, Taylor-Wilson finishing equipment, and Bronx straighteners, providing custom engineered products that offer a quality, fully integrated solution. This combination of resources and infrastructure utilises the most recent developments in technology, delivering reliable tube and pipe mill and finishing solutions for a wide range of seamless and welded products. Recognised for experience and superior technology by steel and non-ferrous manufacturers, thousands of installations are commercially present throughout the world such as OTO and Abbey mills that feature the best in ERW pipe mills, entry systems, tube and pipe cutoffs, and Abbey slitting lines and drawbenches. Fives' installations also include Bronx tube and pipe and long product straighteners, Taylor-Wilson hydrostatic pipe testing, collapse testing and leak testing machines and a complete line of end-facing and rotary cut-off equipment.

Zhejiang Kingland puts spiral pipe plant into operation

ZHEJIANG Kingland Pipe Industry, based in Huzhou City, Zhejiang Province, China, has successfully commissioned a spiral pipe plant supplied by PWS. With its use of 'PERFECT® arc', the plant meets Ecoplants criteria in terms of sustainability, and offers energy savings of up to 30 per cent, along with increased productivity.

The plant consists of a spiral pipe forming and tack-welding machine for forming and pre-welding hot rolled steel strip, and three downstream offline finish-welding stands. It has a capacity of 200,000 tons per year, but can be extended by a fourth finish-welding stand to increase capacity to 260,000 tons.

The newly developed Perfect arc welding current sources are used for the welding machinery. No transformers are required – the systems are operated using IGBT (insulated-gate bipolar transistor) power electronics, with the welding current completely digitally controlled.

As a result, the welding machines can attain an efficiency rate of over 90 per cent.

Another benefit is the reduced transfer of heat into the pipe. For this purpose, the process parameters are adapted for each individual welding wire, in order to prevent unnecessary heat being transferred into the pipe material. This is particularly important for high-strength steels.

Zhejiang Kingland uses its offline spiral pipe welding plant to produce pipes to API 5-L PS2 standard, with an outside diameter of 508 to 1,626mm (20" to 64"), wall thicknesses of 6.35 to 25.4mm (¼" to 1"), and lengths of 8 to 12.5m. The plant processes high-strength steels up to API grade X100.



Shaping and high-speed tack welding of a pipe

PWS GmbH – Germany
Fax: +49 751 29596 1010
Email: pws@sms-pws.com
Website: www.sms-pws.com

T&H Lemont appoints program and marketing manager

T&H LEMONT, an Inductotherm Group company, has appointed Gavin Chen as program and marketing manager, reporting to Walter Heller, vice president of pipe and tube mill technologies.

Mr Chen will be focusing his efforts on managing customer needs in Asian industrial markets, and will be based in Countryside, Illinois, USA. His responsibilities include support for sales and marketing in Asian markets, as well as assistance with negotiations and project management for T&H Lemont's portfolio of pipe and tube technologies.

T&H Lemont has several proprietary products it intends to introduce into the Asian pipe and tube industry, and Mr Chen's background makes him suited

to help with this strategic direction. "His background in project management and customer relationship management will be key elements for T&H Lemont's success in China and the adjacent Asian markets," said John Hillis, president of T&H Lemont.



Gavin Chen

Mr Chen earned a Masters Degree from Sun Yat-sen University in Guangzhou, China, and is an experienced project manager having successfully completed course work in the discipline of modern project management from the Johnson Control Program Manager University in Shanghai, China. He previously worked for Johnson Control Automotive Electronics managing projects related to the introduction of new products to the Chinese automotive industry.

T & H Lemont Inc – USA
Fax: +1 708 482 1802
Email: sales@thlemont.com
Website: www.thlemont.com

Russian API grade pipe producer selects Thermatool

A THERMATOOL three-stage (1,500kW) seam annealing system has been selected by a Russian producer of API grade pipe.

The latest Thermatool seam annealing technology will be delivered by Inductotherm Heating & Welding Ltd, with commissioning and service support provided locally by Inductotherm Group Russia engineers.

Hundreds of Thermatool seam annealers are used to produce API line pipe and casing products around the world.

The Russian producer is assured of no untempered martensite in the weld HAZ and optimised weld section Charpy impact results for demanding material applications.

The precision automated carriage positioning system allows all three heat stations to be quickly adjusted to position the inductors over the seam of the pipe, both laterally and orbitally, to ensure maximum yield and minimised scrap created after a mill stop.

Power is provided by Thermatool's Variable Inductance Power (VIP) power supply technology.

VIP induction power supplies provide optimised matching to thin and heavy wall API pipe, and each power supply can be independently controlled from a single central console.

Inductotherm Heating & Welding Ltd
– UK

Fax: +44 1256 467224

Email: info@inductothermhw.co.uk

Website: www.inductothermhw.com

Inductotherm Group Russia

Fax: +7 495 792 59 43

Email: info@inductotherm.ru

Website: www.inductotherm.ru

www.read-tpt.com

Diary of Tube Events

2015



20-22 May

Made In Steel (Milan, Italy)

International Exhibition

www.madeinsteel.it



8-11 June

Tube Russia (Moscow, Russia)

International Exhibition

www.metallurgy-tube-russia.com



16-18 June

Guangzhou Tube & Pipe Industry Exhibition

(China) International Exhibition

www.tubechina-gz.com



15-17 September

Tube SE Asia (Bangkok, Thailand)

International Exhibition

www.tube-southeastasia.com



5-10 October

EMO (Milan, Italy)

International Exhibition

www.emo-milano.com



6-8 October

Tubotech (São Paulo, Brazil)

International Exhibition

www.tubotech-online.com



9-12 November

Fabtech (Chicago, USA)

International Exhibition

www.fabtechexpo.com



17-19 November

Stainless Steel World (Maastricht, Netherlands)

International Exhibition

www.stainless-steel-world.net



17-20 November

TOLexpo (Paris, France)

International Exhibition

www.tolexpo.com

Combined expertise around steel tube production

FROM rollforming to testing and sawing to a smooth transport system and everything from one source. That was the aim for companies Dreistern, Trumpf, Sema Systemtechnik, Foerster, RSA, Wafios, Fehr, Scheffer and Kluthe at the Tube Innovation Days. Taking place at the RSA showroom in Kunshan, near Shanghai, China, customers and interested parties were able to ask for

comprehensive advice on the whole process chain of the manufacture and processing of tubes.

The steel tube industry is growing worldwide at a rapid rate and China, the world's largest steel tube producer, has a market share of more than 50 per cent with a high export share. In particular, the export to Western countries with the related standards calls for a high quality

of tubes. To meet these demands, efficient and competent partners are needed. Therefore, it was logical for all parties involved that the first Tube Innovation Days took place in China.

Nine high-tech German companies combined their expertise at the event and this specialist network guarantees the customer an optimum design of its production and processing processes. From the first to the last stage the customer benefits not only from the core competence of the individual companies but also from their close collaboration: individual processes and interfaces are coordinated for the entire production chain. This means that the customer gets a solution that is optimally tailored to its requirements throughout the entire process and as a result receives an increase in product quality.

Nine leading German companies took part in the Tube Innovation Day

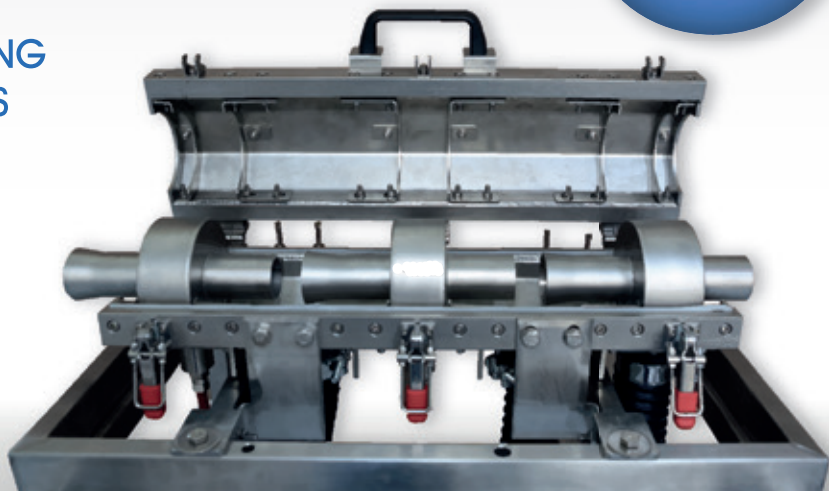


RSA – Germany
Website: www.rsa.de

DISCOVER THE POWER OF STEAM

innovation
in cleaning

CLEANING AND DRYING
LOW RUNNING COSTS
IN-LINE PROCESS
SPACE-SAVING
NO SOLVENTS
VERSATILITY



WEBSITE:
WWW.REASRL.EU

EMAIL:
INFO@REASRL.EU

TEL:
+39 0116804250

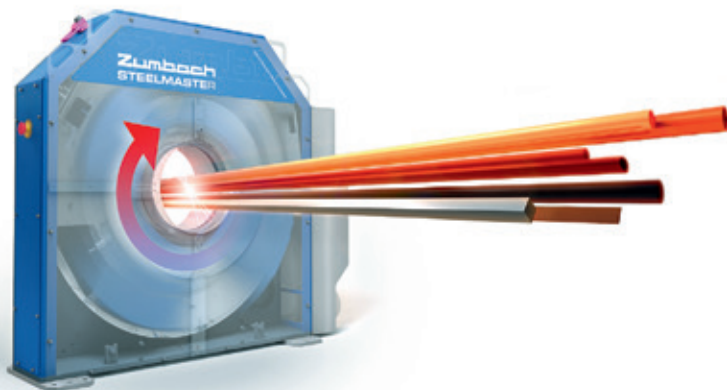
Revolutionary, rotating hot and cold steel measurement

All Eyes on Your Process 6000 Times Per Second



The STEELMASTER SMR laser rotation technology is destined to raise quality and save raw materials

- Up to 6000 measurements per second with 3 synchronously rotating measuring heads
- Measures a complete profile in only 1/10 second
- Unique, contact-free transmission of energy and signals
- Perfect performance at 2- and 3-roll blocks



Visit us at:



12 - 15 May, 2015
Moscow, Russia
Booth # 1540



16 - 20 June, 2015
Düsseldorf, Germany
Booth # 5F 22

Learn more about STEELMASTER SMR

Direct link to Brochure



Video



Zumbach
SWISS PRIME MEASURING SINCE 1957

ZUMBACH Electronics
sales@zumbach.ch | www.zumbach.com

Fives selected for automotive steel projects

FIVES, an international engineering group that designs and supplies process technologies to various industries, has been awarded five new processing line contracts for the automotive steel market.

Production of high value-added automotive steel



Three continuous galvanising lines (CGL), one continuous annealing line (CAL), and one vertical furnace for another CGL were awarded to Fives in 2014, all dedicated to the production of a wide range of high value-added automotive steels, including advanced high strength steels.

Two CGLs with an annual capacity of 840,000 tons in total will be built by Fives for Inner Mongolia Baotou Steel Union Co, a China-based iron and steel manufacturing company. Two other CGLs, with an annual capacity of 870,000 tons in total, will be installed for Guangxi Iron & Steel Group Co, part of WISCO group, for its new integrated plant in Fangchenggang, located in the fast-growing southern coastal region of China.

Another important contract was signed by Fives for the supply of a full new continuous annealing line with an annual capacity of 930,000 tons, also to be installed in the Fangchenggang plant of Guangxi Iron & Steel.

The contract for the CAL, as well as a cooperation agreement between Fives

and WISCO to set up a production joint venture in Wuhan, China, were part of the contracts signed at the Elysée Palace during the official visit to France of the Chinese President Xi Jinping.

The above contracts include Fives advanced technologies and process know-how, such as Stein Digiflex® vertical annealing furnaces, DMS Skin-pass 4Hi or 6Hi, pre-oxidation and Flash Cooling® technologies, allowing for the production of AHSS with lean compositions including the highest grades of DP and TRIP steels, based on KEODS process expertise.

The latest generation of AdvanTek® WRT 2.0 combustion systems reduce fuel consumption and NOx emissions, while operating with different available fuels on-site (natural gas, coke oven gas or mixed gas), especially in dual fuel mode with an automatic switchover from one gas to another.

Fives – France

Fax: +33 1 45 23 75 71

Email: contact@fivesgroup.com

Website: www.fivesgroup.com

Building a push/pull pickling line in Indiana

NELSON Steel's Consulting & Technology Group and Butech Bliss have been awarded a large-scale equipment upgrade at the Steel Dynamics (SDI) facility in Butler, Indiana, USA. The existing hot band finishing line at the facility will be upgraded.

The upgrade will enable the line to convert hot band to hot-rolled pickled and oiled coils in thicknesses up to $\frac{3}{8}$ " by widths up to 64" at speeds up to 600 fpm.

The line will also maintain its current capability to level and side trim hot band coils when required, by bypassing the pickling section.

Nelson Steel's Consulting & Technology Group will provide the design and on-site supervision of the processing sections of the line. Butech

Bliss will provide the exit end terminal equipment.

John Mrkonjic, corporate VP of engineering at Nelson Steel, stated, "This is an exciting collaboration for our companies. To work together on this massive project for one of America's largest steel companies will be an incredible achievement. Our Nelson Steel Consulting & Technology Group/Butech Bliss team will ensure that SDI's capabilities are more efficient in the future."

Engineering of the project commenced in January, and operation of the line is scheduled to be in start-up in late 2015.

Nelson Steel has provided steel pickling services to the metals industry for over 43 years. Its Consulting & Technology Group designs and builds

pickling line process sections for push/pull, semi-continuous and continuous systems, and also specialises in revamping existing pickling lines. Nelson Steel is a division of Samuel, Son & Co, Ltd, a family-owned metals distribution and processing company.

Butech Bliss provides engineering, manufacturing and field services to the metals industries from its 400,000ft² technology centre in Salem, Ohio, USA.

Nelson Steel – Canada

Email: sales@nelsonsteel.com

Website: www.nelsonsteel.com

Butech Bliss – USA

Fax: +1 330 337 0800

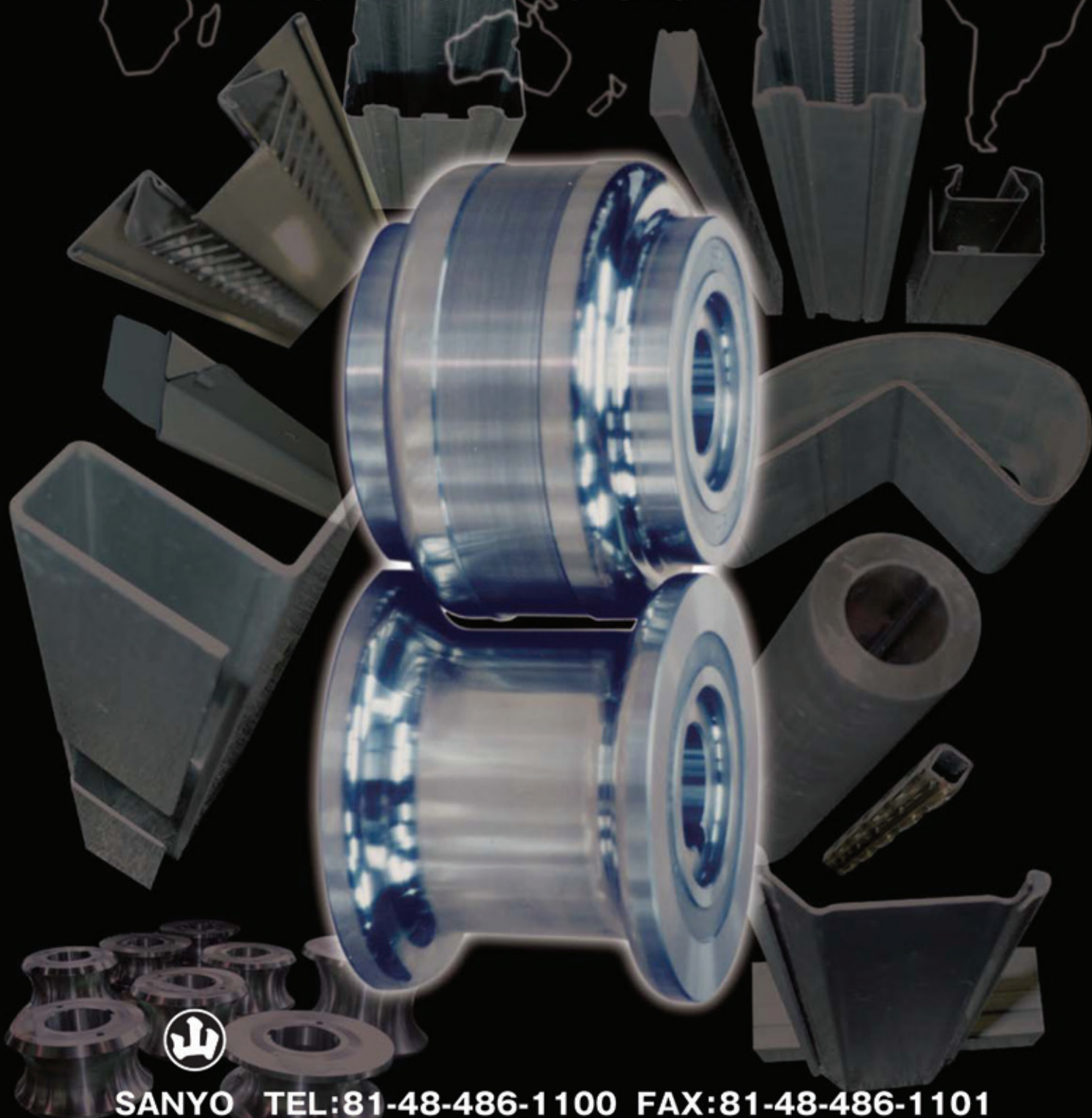
Email: sales@butech.com

Website: www.butechbliss.com

Sanyo Seiki Co., Ltd.

SST FORMING ROLL, INC,

“From here to the world”



SANYO
SST

TEL:81-48-486-1100 FAX:81-48-486-1101
TEL:1-847-215-6812 FAX:1-847-808-9598



www.sanyoseiki.co.jp/
info@sstformingroll.com

€40mn investment in new manufacturing facility

COMBILIFT Ltd, Ireland, is to invest €40mn over the next two years in a new manufacturing facility, which will also create 200 additional jobs over the next five years. The announcement was made by An Taoiseach Enda Kenny, along with the minister for jobs, enterprise and innovation Richard Bruton, on a visit to Combilift's current HQ.

The expansion will enable Combilift to proceed with its plan to double its current €150mn turnover over the next five years. The majority of the 200 new jobs to be created will be for skilled technicians and design engineers, and

a further 200 jobs will be created during the two-year construction period of the new facility.

Combilift purchased 40 hectares of industrial zoned land, where the purpose-built, 40,000m² greenfield manufacturing site will be built. This will include a dedicated research and development building and adjoining administrative offices, and will be more than double the size of both of the company's present manufacturing facilities.

Combilift is best known for its range of multi-directional forklifts, Aisle-

Master articulated forklifts, and material handling solutions such as the Combilift Straddle Carrier designed to handle large containers and over-sized loads. The company was set up by managing director Martin McVicar and technical director Robert Moffett in 1998, and has since produced in excess of 24,500 units.

Mr McVicar commented, "With this greenfield investment and sufficient land available on the new site for future expansion, Combilift is committed to continuing its organic growth in Monaghan for many years to come." He also stated that the company is the process of submitting an apprenticeship application to accredit its employees and those of other Irish engineering companies as 'Original Equipment Manufacturers (OEM) technicians'. This apprenticeship aims to educate technicians to be competent in hydraulics, electrics and troubleshooting diagnostics.

Welcoming the announcement, An Taoiseach Enda Kenny said, "It is growing and dynamic Irish companies like Combilift which are driving a recovery across Ireland's regions. Combilift's new €40mn facility in Monaghan will make a profound difference to the local economy and the national export economy."

Martin McVicar, An Taoiseach Enda Kenny and Robert Moffett



Combilift Ltd – Ireland
Fax: +353 47 80501
Email: info@combilift.com
Website: www.combilift.com

Newly designed HFI weld boxes

RAFTER Equipment Corporation has delivered three RT-2500S HFI weld squeeze boxes for a major North American mechanical tubing producer. The new boxes will replace the customer's existing three-roll 'scroll chuck' style boxes that were not strong enough for the heavier wall thicknesses and higher yield strength materials that needed to be produced. Because the boxes needed to be more robust but still occupy the same footprint, a new design was required.

The new design follows the company's push-on-centre weld box philosophy that

eliminates the cantilever forces on the roll tooling clevises (or yokes) that affect many other weld box designs. Heavy-duty Timken tapered roller bearings within the roll tools provide increased bearing life. The boxes can handle up to 76.2mm OD x 4.8mm wall (3" x 0.188") tube running HSLA material.

To better survive the typical tube mill environment, the worm-screw head roll adjusters are in a new sealed box design that should provide years of maintenance-free operation. The head roll adjustments are run through the back

of the unit's sealed frame and are brought to the operator's side for easy access. A gasketed internal guide tube is designed to keep mill coolant from flooding the interior of the box. Rafter manufactures tube mills, pipe mills, roll forming machines, cut-off machines and other related tube and pipe mill machinery. Additional services include rebuilding and upgrading mill equipment.

Rafter Equipment Corp – USA
Fax: +1 440 573 3703
Website: www.rafterequipment.com

Cleaning and de-burring die cast workpieces

AGTOS will be presenting at this year's GIFA trade fair a compact blast machine for aluminium parts. The machine requires a relatively small installation area, and has a low loading height. Both manual and fully automatic loading and unloading are possible. The machine is designed for companies treating products with aluminium or stainless steel shot.

The work pieces to be blasted – for finishing, cleaning or de-burring – are placed manually or by using a manipulator onto the wire mesh belt, which transports the workpieces through the machine. They pass through the inlet sluice, which seals the subsequently installed blast chamber towards the outside.

High-performance turbines installed in the blast chamber throw the shot onto the workpiece at high speed. The design of the wire mesh belt allows the workpiece

to be treated with shot from above and below at the same time. An automatic abrasive dosing device installed above the turbines ensures that blasting only takes place when there are workpieces in the blasting area. This minimises the wear of the shot blast plant.

At the end of the blasting process, a blower unit removes any shot remaining on the workpiece surface.

AGTOS focuses on all activities concerning turbine-wheel shot blast technology. Machines for roughening, cleaning, removing rust, descaling and shot peening are planned and designed by the company's employees, and are manufactured and programmed in its own factory.

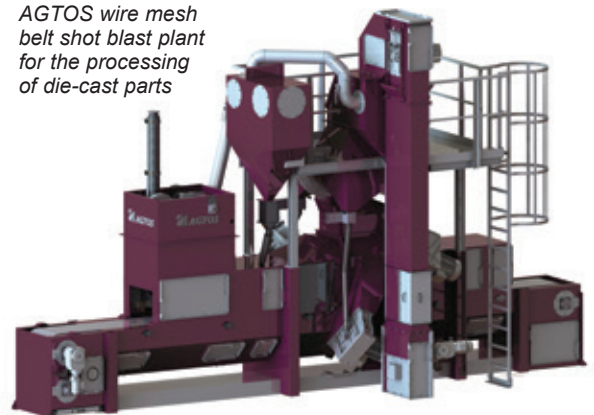
In addition to the provision of spare and wear parts for

AGTOS shot blast plants, matching components are provided for second-hand blast machines. Service, maintenance, repair and modernisation works can also be carried out for blast machines from other manufacturers.

The GIFA trade fair will take place from 16 to 20 June, in Düsseldorf, Germany. AGTOS will be exhibiting on stand A39 in hall 16.

AGTOS – Germany
 Fax: +49 2572 96026 111
 Email: info@agtos.de
 Website: www.agtos.de

AGTOS wire mesh belt shot blast plant for the processing of die-cast parts



SURAJ

India's Leading Manufacturer of
Stainless Steel Seamless Pipes,
Tubes and 'U' Tubes

www.surajgroup.com

Materials	: All Austenitic, Ferritic, Duplex & Super Duplex Stainless Steel
Specialization	: Heat Exchanger / Instrument Tubes Bright Annealed / Polished Tubes
Pipe Length	: Up to 12 Mtr. Long
Tube Length	: Up to 30 Mtr. Long
Testing Facilities	: All Required Testing Facility Available
Inspection	: We are supplying under all Customers & Third party Inspection Agencies.

SURAJ LIMITED

Serving World Wide Oil, Gas & Power Industries

REGD. OFFICE : 'SURAJ HOUSE',
OPP. USMANPURA GARDEN,
ASHRAM ROAD, AHMEDABAD-380 014,
GUJARAT (INDIA)
PH. : 0091-79-2754 0720, 2754 0721
FAX : 0091-79-2754 0722
E-mail : suraj@surajgroup.com

MUMBAI OFFICE:
KANJI MANSION, BLOCK NO. 3,
1ST FLOOR, 311 / 317, S.V.P. ROAD,
MUMBAI - 400 004, (INDIA)
PH. : 0091-22-2389 1649, 2389 1758, 6636 2534
FAX : 0091-22-2385 4979
E-mail : surajm@surajgroup.com

Progress is Life

MILLING

SAW BLADES

from Japan
guarantee
the best

www.tanitec.com/eng/

TANITEC

TANITEC CORPORATION Kyoto, Japan



ADDA FER
MECCANICA

ELECTRO-WELDED
TUBEMILL
TM10 A.P.I.



T U B E I N D U S T R Y S O L U T I O N S

ADDA FER MECCANICA **TM10 A.P.I.**
installed in Nizhny Tagil
Russia

Tube Diameter	101,0 - 254,0 mm.
Wall Thickness	3,0 - 8,0 mm.
Tube Length	6,0 - 12,0 mm.
Working Speed	0 - 50 m/min.

Kersten manufactures with Schwarze-Robitec



Schwarze-Robitec's PB3-18-10 plate bending machine

KERSTEN Europe now implements orders such as cones and cylinders for offshore projects, architectural structures and machine constructions, using the PB3-18-10 plate bending machine from Schwarze-Robitec. The PB3-18-10 provides the toll manufacturer with a high level of torque, a cone bending device and hardened rollers for bending stainless steel plates.

With an initial performance of 3,000 x 28/31mm and a round bending performance of 3,000 x 45mm, the PB3-18-10 is a solution for bending particularly thick plates as used, for example, in the offshore sector. This is enabled through the roller diameter of 460mm and the integrated lever arm system. The latter takes care of an available contouring force of up to 255 tons.

"The force and the boost of the plate bending machine have convinced us," said Hans Besseling, managing director

at Kersten Europe. The company is headquartered in Wanssum, Netherlands, and has three further bases in Dubai, Poland and Germany. After the delivery to the Polish subsidiary Kleszczów in October 2014, Schwarze-Robitec completed the acceptance tests and trained the Kersten employees. Commissioning took place in November.

In addition to the plate bending machine, Kersten Europe uses the Schwarze-Robitec SB3-140 section bending machine. Schwarze-Robitec brought both machine series to the market at the beginning of 2014.

As a bending specialist for tubes, Schwarze-Robitec has been working internationally since the 1950s. "We have successfully transferred our know-how, together with the sector experience of our development partner SweBend, to the area of plate and section bending," commented managing director Bert Zorn.

In addition to tube bending machines and bending tools, the Schwarze-Robitec product range includes tube perforating machines, measuring stations, and solutions in the area of special machinery construction.

Schwarze-Robitec GmbH – Germany
 Fax: +49 221 89008 9920
 Email: sales@schwarze-robitec.com
 Website: www.schwarze-robitec.com

Kersten Europe GmbH – Germany
 Fax: +49 7738 808111
 Email: de@kersteneurope.com
 Website: www.kersteneurope.com

Single and Double End **Stocking Distribution in the UK!**

Burrmaster Deburring

Deburring Brushes IN-STOCK for ALL Deburring Machines

Kent CORPORATION 9601 York Alpha Drive North Royalton, OH 44133 USA | sales@kenttesgo.com | +1-440-582-3400

Welding quality management system deployment

PEIKKO Group and Kemppi have agreed on deploying the Kemppi ARC System 3 quality management system for welding at Peikko production units in Finland, Lithuania and Slovakia. This is the first multi-site commissioning of the Kemppi system.

Kemppi ARC System is a comprehensive welding system for project planning, management and monitoring. It enables fully automated welding control and collection of documentation. The welders' qualifications, welding instructions, and information on NDT inspections are all available via a single service with reliable off-site storage.

The implementation at Peikko is being carried out this spring. In the first stage, all main users of the system will be trained at the Kemppi factory in Lahti, Finland. System installations will then be carried out at the Peikko production units that manufacture

composite structures in Lahti; in Kaunas, Lithuania; and in Kráľová nad Váhom, Slovakia.

Peikko's products are used in building frames that are subjected to heavy loads. This means that the products' capacity and resistance properties are important. Welding is a critical phase in the manufacturing process of a structural product.

"As product requirements and the various markets' quality demands grow stricter, we at Peikko want to ensure that we can meet these challenges and also predict future developments in the business," explained Peikko Group's CEO, Topi Paananen. "The introduction of Kemppi ARC System 3 guarantees our competitiveness in quality in this constantly changing and challenging business environment."

Peikko production director Tuomas Mantere added, "The real-time

monitoring of the welding process enables us to detect faults and quality deviations in our production. Correct and timely measures ensure consistent quality of welding output, improve our productivity, and enable us to assess the effects of the changes implemented. At the same time, we facilitate the work of welding coordinators by using system management tools in, for example, the maintenance of welding qualifications."

Kemppi ARC System 3 is a modular and scaleable system suitable for businesses of many types.

Kemppi Oy – Finland

Email: export@kemppi.com

Website: www.kemppi.com

Peikko Group Corp – Finland

Fax: +358 3 733 1138

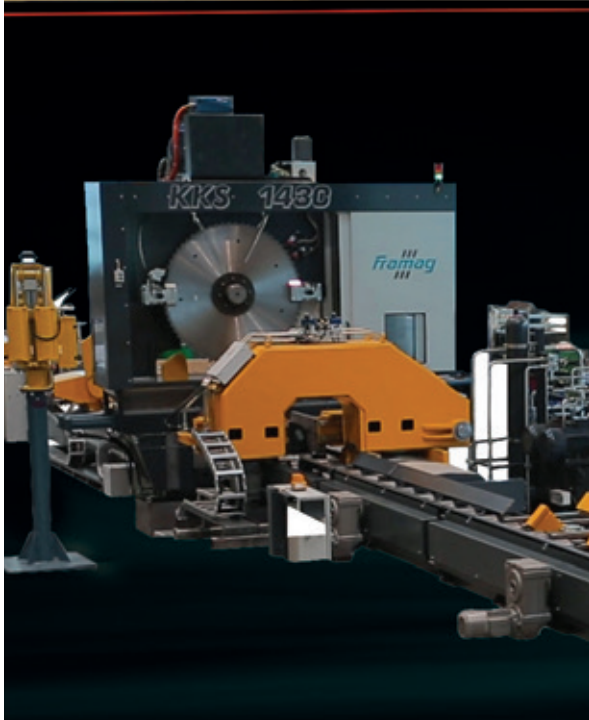
Email: peikko@peikko.com

Website: www.peikko.com

framag Industrieanlagenbau GmbH

Neukirchner Straße 9
A-4873 Frankenburg
Tel.: +43(0)7683/5040
Fax: +43(0)7683/5040-86
E-Mail: o.schwarze@framag.com
www.framag.com

framag
engineering for the best



framag BILLET SAWING

- perfect cutting quality and accuracy
- optimized saw blade life time
- lowest cutting costs
- unique vibration damping due to HYDROPOL® a specially patented compound material
- unique blade dampening and cooling features
- minimized maintenance expenditures

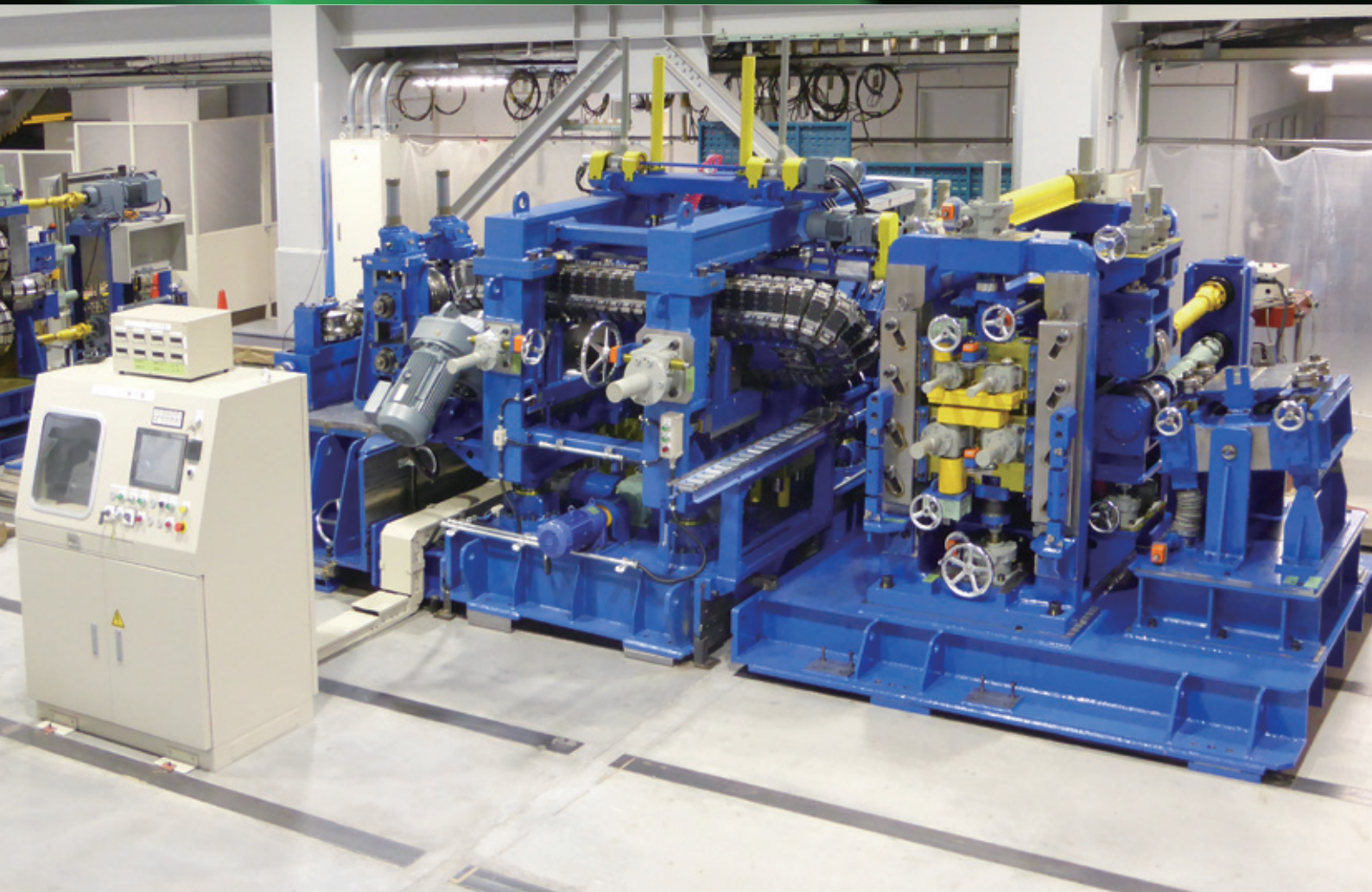
**Visit our booth at
Metec, Düsseldorf! Hall 5/E20**

Welded steel tube and pipe

FF3rd [ODF method]

Break the limit of roll forming method!

FF3rd has realized welded tube and pipe forming process of various material up to 56inch O.D. and 40mm wall thickness.



NAKATA MFG. CO., LTD.

3-7-6 Tagawa, Yodogawa-ku, Osaka, 532-0027, Japan tel. +81-6-6303-1900 fax. +81-6-6303-1905

<http://www.nakata-mfg.com>

'Full-supply' riser for North Sea customer

WELD overlay cladding specialist Arc Energy Resources has completed a contract for the supply of two riser joints for offshore solutions provider Aquaterra Energy.

The components are part of two low-pressure risers for an oil platform. The finished risers were destined for a set of twenty wells being drilled in the North Sea off the coast of Norway.

It is a new development for a low-pressure section of pipes to deal with any drill fluids and shallow gas that they may encounter while drilling the first top-hole section of a well.

Commenting for Arc Energy Resources, director Andrew Robinson said, "This project played well to our core strengths, a full supply contract for which we secured the material for both components (a flange and pipe for each), applied the weld overlay cladding, welded the flanges to the

pipes, organised the pressure testing, completed radiographic testing requirements and arranged final coating of both items, all within a very tight delivery schedule."

The project is a DNV class rig, designed to the DNV0SE101 code, and was signed off by Det Norske Veritas as suitably manufactured and designed for the task. Aquaterra Energy project engineer Matt Hugo commented, "DNV is one of the oil and gas industry's largest verification bodies, which confirms calculations that pipe wall thickness and flanges are sufficient for the pressure. For this project they also undertook a review of the overall design of this section of pipe."

The component acts as a conduit for drilling fluids and equipment during the top hole section and ensures that in the event of gas passing up through the well it can be contained and routed to the rig diverter, where it can be vented to atmosphere. The risers need to have a sealing ring groove in the end of the flange, which is inlaid with an extremely hard, corrosion-resistant Inconel 625 alloy.

As Aquaterra Energy has previously used Arc Energy Resources for specialist welding requirements, it approached the company again with a view to provide

full supply of materials, and to carry out all required welding, inlaying of the flange, testing and coating.

Arc Energy Resources sourced the machined flanges and clad with Inconel 625, before completing the welding requirements for the project using submerged arc welding to provide a high quality finish.

Once welded, the parts were pressure tested. Domed end caps were welded onto the straight pipe lengths, and both joints were sealed together through adjoining flange faces to form a complete vessel. For the first stage of pressure testing, the riser was filled with water to a test pressure of 750psi, which provided a safe 500psi working pressure. After being held at this pressure for five minutes it was pressured down and pumped back up, then held for a further 15 minutes before being drained down.

When the pressure test was complete, radiographic testing was carried out to confirm that the welds had not cracked or been damaged. The end caps were removed with pipe free ends being finish machined as required. The parts were then sent to be coated.

Following the riser's final check the unit was ready for use. It was delivered offshore and installed in position on time, where it has since operated successfully.

Arc Energy Resources – UK
Fax: +44 1453 823623
Email: sales@arcenergy.co.uk
Website: www.arcenergy.co.uk



RECOVERY OF COSTS IN A FEW MONTHS
- ULTIMATE SOLUTION TO CORROSION, BETTER QUALITY
- CERTIFICATION OF PROTECTION LEVEL OF FINAL PRODUCT

DieTronic
lubrication system

YOU KNOW CORROSION...
WE KNOW PROTECTION!

DieTronic S.r.l
Sant' Angelo Lodigiano (LC)
Italy
Tel. +39 0371 210 139
e-mail: info@dietrotronic.it
www.tubesurface.com

30" ODF mill line

NAKATA has received its first order for the newly developed ODF (orbital die forming) pipe mill from a Chinese pipe manufacturer. The pipe size is up to 762mm OD, and 25.4mm wall thickness, and most of the products are API line pipes up to X80 grade.

Differing from the conventional roll forming process, ODF is an innovative technology in which movable dies are combined to form a continuous tool surface and work like a huge roll or moving press machine. This concept makes the forming process very gentle and stable, resulting in adaptability to a wide range of product sizes and material properties, excellent surface quality and lower work hardening level in the material.

Both steel plates and coils can be used as raw materials in this production line, and the pipes can be produced in 'plate-by-plate' or 'coil-by-coil' style respectively.

This hybrid production process allows the user to have the flexibility in selecting raw materials corresponding to the size of lot or dimensions of product.

Nakata has a 4" ODF test machine in its shop, with which the customer can verify the performance of the forming process.

Nakata Mfg Co, Ltd – Japan
Fax: +81 6 6303 1905
Email: sales@nakata-mfg.co.jp
Website: www.nakata-mfg.co.jp

Standard version of the TETRA 4-roll plate bending machine:

- 7-axis CNC control included
- Working speed 8m/min
- Bearings SKF, FAG, INA
- Energy-efficient hydraulic system low operating costs



www.roll-meister.com

4-roll plate bending machine TETRA



LSAW pipe roll bending machine RMS

HAEUSLER

the forming factory

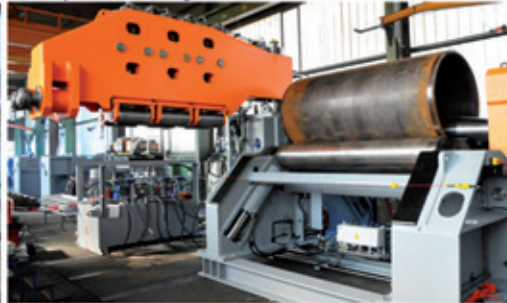


4-roll plate bending machine VRM

Wing edge roll bending machine FKB



3-roll plate bending machine HDR



4-roll section bending machine VPR



HAEUSLER AG Duggingen | Baselstrasse 21 | CH-4202 Duggingen | Switzerland
Phone:+41 61 755 22 22 | Fax:+41 61 755 22 00 | www.haeusler.com

taylor made on highest level



New press concept with reduced energy consumption

BEISTEEL Group from Haicheng, Liaoning Province, China, has placed an order with SMS Meer for the supply of a JCO® pipe forming press for its plant in Yingkou. With this machine, the company will be able to expand

its product spectrum to include longitudinally welded large-diameter pipes (LSAW) with a length of up to 18m. The annual capacity of the plant is approximately 250,000 tons.

The JCO pipe forming press produces the longitudinally welded pipes in wall thicknesses up to 65mm, and steel grades up to X100. The pipe diameters range from 16" to 64".

The new machine offers the advantage that the JCO forming process can be quickly changed to other pipe dimensions. The new modular frame design will be used on this press

for the first time, enabling overall height and foundation depth to be minimised and flexible press lengths to be created. The press is equipped with a variable-speed pump (VSP) control system that permits an efficient hydraulic system with pressures up to 450 bar. As a result, energy consumption is reduced by 30 per cent compared with a conventional hydraulic system.

The SHAPE automation system developed by SMS Meer performs the fully automatic control of the forming process, and enables consistent pipe production, despite differing starting material properties.

The press is scheduled to go into production in the fourth quarter of 2016.

SMS Meer GmbH – Germany
 Fax: +49 2161 350 1667
 Email: info@sms-meer.com
 Website: www.sms-meer.com

Beisteel's new JCO pipe forming press is equipped with a variable-speed pump control system



QUALITY KNIVES

WE'VE BEEN GIVING BUSINESSES LIKE YOURS THE EDGE FOR OVER 40 YEARS

- VERTICAL AND HORIZONTAL TUBE BLADES
- NEW KNIVES AND RESHARPENING
- BLADES TO CUSTOMER SPECIFICATIONS
- MANY COATINGS AVAILABLE
- PRECISION MACHINING



Randolph Tool Co. Inc.
 750 WALES DR. S.E. HARTVILLE, OH 44632 U.S.A.
 PH. (330) 877-4923 FX. (330) 877-4924
 Website: www.RandolphTool.com E-mail: info@RandolphTool.com

SEN FUNG FULLY AUTOMATIC CARBON STEEL PIPE ROLL FORMING MACHINE



- Uncoiler
- Hoop Cage
- Rollforming
- H.F. Welding
- Sizing
- Cut-off

50 years 1963 to 2013

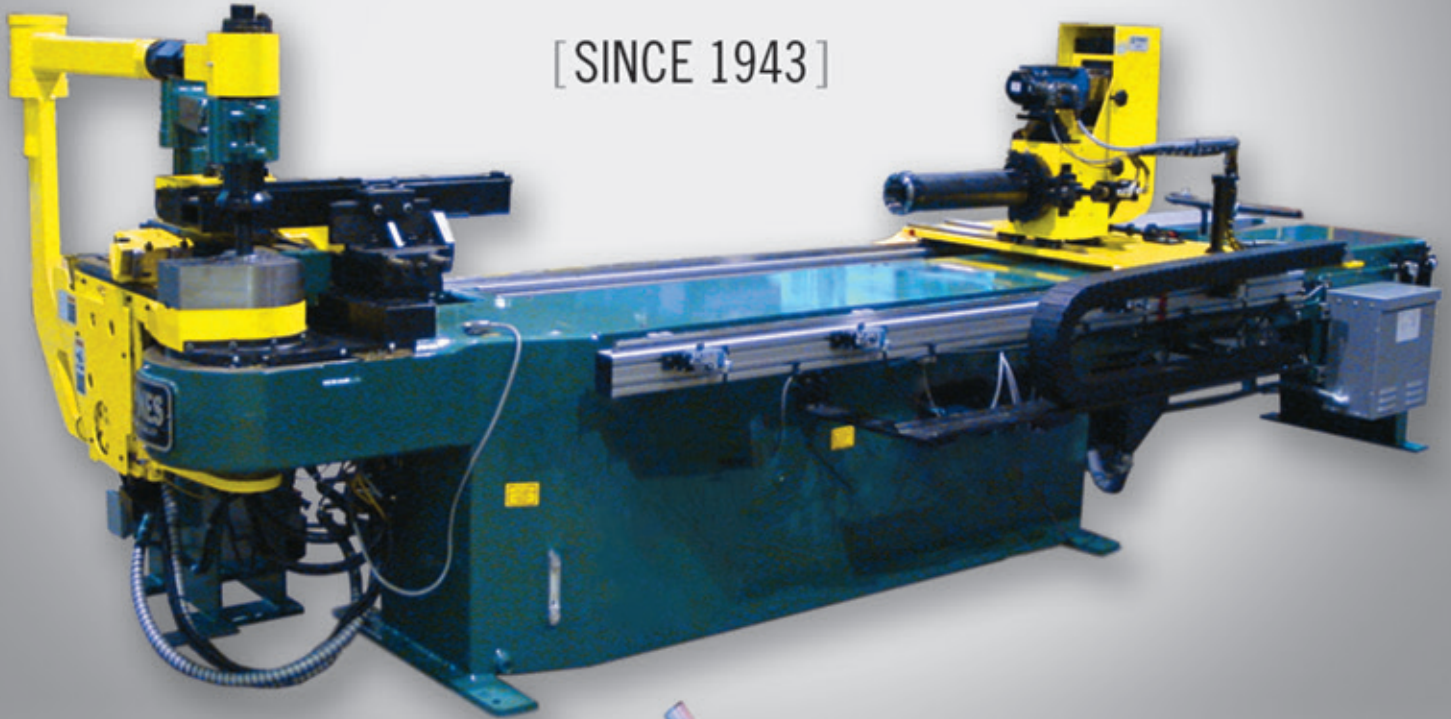
PROFESSIONAL MANUFACTURER OF COLD ROLL FORMING MACHINE

- Roofing Panel Line
- Roofing Tile Panel Line
- Pipe Making Line
- C & Z Purlin Line
- Ceiling T-Bar Line
- Partition Beam Line
- Racking & Shelving Line
- Highway Guardrail Line

三豐滾輪機械股份有限公司
SEN FUNG ROLLFORM MACHINERY CORPORATION
 Tel: +886-2-2622-0000 Fax: +886-2-2625-2086
 E-mail: service@senfung.com <http://www.senfung.com>

FIRST IN BENDING SOLUTIONS

[SINCE 1943]



- NC / CNC BENDERS
- TOOLING
- PARTS
- SERVICE
- REBUILD / UPGRADE
- CONTROLS



PINES

A PARK OHIO COMPANY

440.278.7200 • pines-eng.com

CLEVELAND, OHIO USA



 Ajax TECO

 PMC COLINET

 Ajax CECO

 PINES

Machining centre for steel window maker

CRITTALL Windows Ltd, a British manufacturer of steel windows and a major supplier to the USA, has purchased a new Mecal CNC machining centre from UK-based cutting and sawing technology specialist Addison Saws Ltd.

The machining centre – a Mecal MC 305 Gianos five-axis twin table model – was installed in January 2015, and will boost Crittall's production capabilities and efficiency. It will also provide flexibility to machining operations across the entire range of windows produced at the company's manufacturing centre.

"We had been looking into the benefits of investing in a CNC machining centre for quite some time," commented Steve Gaylor, Crittall's head of manufacturing. "However, as many CNC machines are designed specifically for the production of lightweight aluminium profiles, our

challenge was to find a model capable of working with steel components of up to 5mm in thickness."

To remove any need for machined components to be turned manually during the manufacturing process, Crittall required a multi-axis machining solution. Due to the specialised nature of its products – and to both accelerate and simplify new product development – the machining centre also had to be versatile, with multi-tooling capability.

"Although we spoke to a number of potential suppliers, it was Addison who seemed genuinely interested in meeting our requirements," said Mr Gaylor. "They provided detailed machine information, arranged manufacturing trials and assisted with cutting tool development."

Crittall selected the Mecal MC 305 Gianos for its capability to machine a

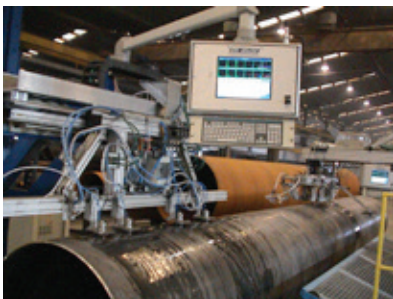
full range of hot rolled steel sections. Its five-axis operation will allow the company to machine multiple section faces without the need to manually turn components during the manufacturing cycle. Additionally, as the Mecal machine is equipped with two separate machining zones, it can be loaded and unloaded without halting the manufacturing process.

The Mecal MC 305 Gianos is equipped to automatically machine, drill, mill, slot and prep both aluminium and steel extrusion bars. It is also suited to new product development, while its high levels of accuracy and repeatability ensure minimal waste.

Addison Saws Ltd – UK

Email: sales@addisonsaws.co.uk

Website: www.addisonsaws.co.uk



ULTRASONIC TESTER UT MX ERW & SAW

Up to 32 Channels – Real Time Strip-Chart
Fully trace ability

Applied standard :

External defects	API5L – 2000
+ Internal defects	ARAMCO – SHELL
+ HAZ delamination	ISO 3183
and full body	alarms monitoring
+ couplant monitoring	defects marking
at each shot	high PRF capability

Perfectly adapted to Mill On-Line and Off-Line testing and monitoring, based on industrial PC with highly integrated components for high speed use.

Complete digitized channels per card.

Contact us, we also supply complete mechanical devices for ON-LINE and OFF-LINE testing.

Retrofit and old installations.
Process network link (Tracking System).
Connection to PLC for automatization.



SOFRATEST
53 rue des Fontanelles
Z.I. du Petit Parc
78920 Ecquevilly – France
Tel : + 33 1 34 75 50 00
Fax : + 33 1 34 75 53 41
E-mail : sales@sofratest.com
Website : <http://WWW.sofratest.com>

Representatives welcome

Processing line furnaces for Baosteel Zhanjiang

INTERNATIONAL engineering group Fives has been selected by automotive steel producer Baosteel for the design and supply of two Stein Digiflex® vertical annealing furnaces for its new 1,550mm cold rolling mill project in Zhanjiang, in the south-eastern Guangdong province of China.

One Stein Digiflex vertical annealing furnace is to be supplied for a 700,000 tons per annum continuous annealing line (CAL); the other is for a 270,000 tons per annum continuous galvanising line (CGL). The Stein Digiflex annealing furnaces have compact design features and advanced combustion and cooling technologies, including the latest generation of AdvantTek® WRT 2.0 combustion system. This combustion technology benefits from high recuperative energy efficiency, low NOx emissions and usage of the site-generated fuels. It will allow Baosteel Zhanjiang Steel Plant to reduce

operational expenses and minimise its environmental footprint.

A 10mn tons per annum steel project in Zhanjiang port with an estimated investment of \$11bn has been undergoing several stages of construction. Zhanjiang's first phase started in 2013 with a capacity of 2.2mn tons per annum from a 2,030mm cold mill. The second phase, launched in August 2014, encompasses a 1,550mm wide cold rolling mill with a pickling line, a pickling line-tandem mill, a continuous annealing line and a continuous hot-dip galvanising line to be progressively put into operation in 2016-2017. Output capacity is 2.55mn tons per annum of coils, mainly appliance and automotive sheet.

Fives – France

Fax: +33 1 45 23 75 71

Email: contact@fivesgroup.com

Website: www.fivesgroup.com

AUTO-CFS

AUTO-DNSA

Quick Change DNSA

Digital flexible CFS

Digital DNSA

Manual flexible CFS



1. High Speed tube mill: can reach 150m/min. At the same time, retain saw blade life and cutting quality.
2. Automatic Changeover tube mill: only need 30 mins to go from size to size, includes automatic adjustment. You only need input 4 parameters.
3. Automatic Size Change pipe mill: without change tooling, only need 10 mins to go from size to size. You only need input 4 parameters.

FD Machinery Co.,Ltd

Add: Jinma Street, Tiexi Development District, Pulandian, Dalian P.R. China 116200

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

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

New business engagement for NDT

THE 2014 report 'A landscape for the future of NDT in the UK economy' identifies the fundamental opportunities and challenges for the non-destructive testing community in the UK, and recommends key enabling actions in order to support economic growth and increase the public's awareness of and safety through NDT. These actions are listed in four primary sectors, and cover new business engagement, people, technology and R&D.

'New business engagement' is summarised in the report as the need to "demonstrate the value of NDT through the life of a facility or structure. Engage insurance companies and regulators to maximise the benefits of NDT."

Engaging with insurance and regulatory sectors will help to encourage better use of NDT. This is connected to the need to build closer links with the structural integrity community through

networks, businesses and professional bodies. Tony Dunhill, current president of the British Institute of Non-Destructive Testing (BINDT) and chair of the NDT working group, said, "Ideally, I would like us all to end up in a safer place; that is the be all and end all. I would like the breadth of the influence of the NDT industry to be appreciated, and I want people and companies to consider that whenever they are looking at the development of a new material or manufacturing process, they ought to be thinking 'Has this process generated any defects?'"

The links with the structural integrity community are not only required for the improvement of structural integrity management solutions but to also prevent acute failures – ensuring public safety – and to secure on-going cost-effective operation in the future. In order to achieve this, the preparation of a

series of case studies and demonstrator schemes covering technical feasibility are advised to help demonstrate how NDT can be used to increase safety. These case studies will also play a major role in endorsing NDT and showing how it can be used to secure business, as well as encouraging an increased take-up of new NDT technology and the use of existing technology in new applications.

By implementing a solid PR programme, these case studies can be used as promotional tools to target businesses that are not currently engaged in NDT, through seminars, business publications and other media channels.

The British Institute of Non-Destructive Testing – UK
Email: info@bindt.org
Website: www.bindt.org

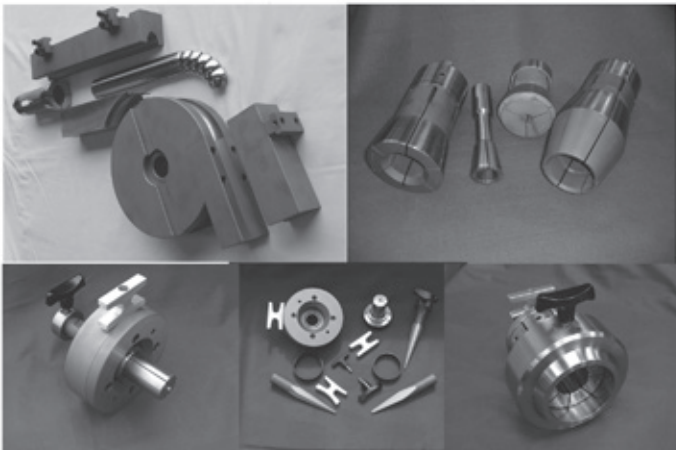
Unit 1 Milham Business Center,
Milham Road,
Off Cornford Road,
Blackpool, Lancs,
FY4 4QN.



Entech
Engineering Ltd.
Precision Engineering CAD/CAM

TUBE MANIPULATION TOOLING

Telephone: +44 (0) 1253696077
Facsimile: +44 (0) 1253769312
Email: info@entechengineering.co.uk
Web: www.entechengineering.co.uk



Entech specialise in the design & manufacture of bend tooling. Tube end-forming tools including end curl tools, expansion & reduction, I/O expanding & reducing, dimple tooling, inserted & standard wiper dies, cable & linked type mandrels. To suit any make and model of machine. Tools to suit mandrel bending, empty bending & crush bending. Large selection of tooling Ex-stock.

For more info contact us on
Tel: +44 (0)1253 696077 Fax: +44 (0)1253 769312

**SPECIALISED IN AUTOMATED
TUBE PUNCHING & DRILLING
MACHINES**



MAKINA SANAYI VE TICARET LTD. ŞTİ.



Tube Punching Machines



Tube Drilling Machines



Çallı Sanayi Bölgesi Karaali Mah. Geyveli Cd.
1. Sokak No:6 Nilüfer – Bursa / TURKEY
Tel: +90 224 482 27 17 Fax: +90 224 482 20 85
Email: acimak@acimak.com

www.acimak.com

IT'S TIME ...

...to book your advertising in our Düsseldorf show issues

These issues will be **FREELY** distributed from our stands

Tube[®]

Düsseldorf



4 - 8 April 2016

**Ad space
is filling up
fast!**

Be seen at the show

in the leading magazines for the tube industries

www.read-tpt.com / www.read-tpi.com



Contact our international advertising office:
Tel: +44 (0)1926 334137 - Emails: tpt@intras.co.uk / tpi@intras.co.uk

Welder upgrade improves THDI

EFD Induction has announced that its lower-power Weldac welders will feature an option for a 12-pulse diode rectifier.

Previously, lower power Weldacs featured a 6-pulse rectifier. The new option has been shown to help reduce typical total harmonic distortion in current (THDI) from 25-30 per cent to approximately 11 per cent.

The issue of harmonic distortion, or 'harmonics' as it is commonly called, is a growing cause of concern for power utilities and power systems managers. The proliferation of non-linear loads causes disturbances that impair equipment performance and affect total voltage supply.

The new 12-pulse diode rectifier is available up to 550kW. An autotransformer can be supplied if



EFD Induction's smaller solid-state Weldac welders now have the option of a 12-pulse diode rectifier

required, and an additional small external harmonic filter can also be installed in order to meet guidelines

set by the Institute of Electrical and Electronics Engineers.

EFD Induction solid-state Weldac welders offer high total efficiency measured from the mains inlet to the weld coil. This efficiency, together with the new 12-pulse diode rectifier, helps minimise power and cooling-water consumption.

The new 12-pulse diode rectifier is available in single cabinet Weldacs with power outputs up to 550kW. EFD Induction's high-power Weldac systems already offer the option of a 12-pulse rectifier.

EFD Induction AS – Norway

Fax: +47 3550 6010

Email: sales@no.efdgroup.net

Website: www.efd-induction.com

Combining the advantages of axial and roll forming

IN tube forming, time-consuming and expensive soldering and welding are often deployed, especially for tube connections. transfluid Maschinenbau is involved in finding a solution to the challenge of deploying more efficient methods.

Managing director Stefanie Flaeper explained the technical options: "Forming geometries are the answer to

most of the requirements here, offering distinct economic advantages. They may be produced with absolute reliability of processing and functionality. Especially forming geometries with O-rings are of particular significance in many products, as found in the automobile industry, for instance. Geometries which include a flange for fitment at a later stage are also often needed."

Forms of this type are ideally created using machines capable of both swaging and rolling. The specially developed transfluid combination systems automatically feed such external components during swaging as needed, accurately positioning and fastening them. This process also creates a pre-form, which may be required for any downstream rolling.

Rolling produces the final geometry, creating surfaces for optimal application. "The tolerances, incidentally, are quite comparable with tolerances produced during machining," explained Ms Flaeper. Since precision is required during rolling, the rolling head is CNC-



Ball heads swaged using transfluid forming technology

controlled and freely programmable in all axes of movement, even including overlap.

Combination machines allow reliable and effective processing, even for large-diameter tubes. For smaller tube sizes, transfluid units are energy-efficient and are accurately driven by servomotors. All types of material may be processed.

transfluid Maschinenbau GmbH – Germany

Fax: +49 2972 9715 11

Email: info@transfluid.de

Website: www.transfluid.de



The transfluid 't form' combination machine REB 645-5 SRM 622

Bonding of CRA lined pipes

CRA lined pipes or CRA clad pipes are corrosion-resistant pipes consisting of a corrosion-resistant inner pipe and a carbon steel outer pipe that can withstand internal and external pressure.

Potential applications for pipes with CRA material are subsea pipelines for sour gas and oil, water reinjection systems, saltwater pipelines, and process pipes in the chemical industry. CRA lined pipes are mainly used as flow-lines, riser pipelines, interfield pipelines and water injection pipelines.

There are two methods of bonding the CRA material to carbon steel: metallurgical bond (CRA clad pipes) and mechanical bond (CRA lined pipes).

The metallurgical bond between two different metals (bonding of plates) is achieved by hot rolling, co-extrusion, weld overlay or explosive bonding. A disadvantage is the limited number of suppliers due to the demanding and complex manufacturing process of metallurgical bonding the plates, which creates high costs. Mechanical bonding

between the backing steel pipe and the CRA pipe by use of spring back variation can be performed by means of hydroforming or by a full length pipe expander.

There is growing demand for CRA lined pipe due to the fact that corrosive conditions are expected to increase as produced fluids contain higher water cuts and greater concentrations of H₂S and CO₂. In addition, these increasingly corrosive products need to be transported over longer distances, with higher pressures, and in an environmentally friendly way.

Fontijne Grotnes has found a solution to bond the backing steel pipe and the

CRA pipe with the company's full length pipe expander, for which a patent is pending. The company has more than 40 years' experience in designing and manufacturing full length pipe expanders for the LSAW pipe industry.

A special expander head design is used to ensure uniform mechanical bonding of the inner and outer pipe over the complete contact area. The full length pipe expander is equipped with a linear transducer that accurately measures the position of the dies.

Fontijne Grotnes Group – Netherlands

Email: info@fontijnegrotnes.com

Website: www.fontijnegrotnes.com



Full length pipe expander for CRA lined pipes

Contamination detection in plastic pellets

THE purity of advanced materials, as they are used in medical technology, film extrusion, aerospace and automotive industry as well as the production of extra-high voltage cables, is a decisive characteristic for the quality of the final products. The production or use of entirely clean materials is essential.

With the Purity Scanner, Sikora provides a user-orientated system for 100 per cent online inspection and automatic sorting of plastic pellets before they get into the next production process.

The Purity Scanner combines X-ray inspection technology with a dual-axis optical inspection system. This allows the detection of metallic and organic impurities as small as 50µm inside the pellet and on its surface. Due to the specially developed X-ray technology, the Purity Scanner inspects even coloured pellets for impurities, and sorts them out automatically.

The Purity Scanner also features a unique system for transporting the pellets within the device. The feeding of the pellets is carried out via a stainless steel vibration feeder. The material does not come into contact with dust or other contaminants from the ambient air as the transport system is sealed and pressurised. This combination ensures that the system sorts out the contaminants without introducing new ones.

The transport system is integrated into an encapsulated housing and slightly over pressurised, in order to prevent contamination from entering the system.

In the event that cleaning of the system is required, the system can be quickly and easily opened. The cleaning



The Purity Scanner combines X-ray and optical techniques

concept was developed for customers who run different materials or colours, and want to clean the system when changing the material.

In addition to cleaning, it is possible to exchange the complete transport system with a cleaned, sealed system.

Sikora AG – Germany

Fax: +49 421 48900 90

Email: sales@sikora.net

Website: www.sikora.net

Plate edge milling

LINSINGER'S plate edge milling machine provides perfect profiles for welding, and handles metal sheets of up to 12m in length, 3m width and 150mm thickness, with even larger dimensions also available.

One application of Linsinger's PFM 45/500 CNC is in tank production for the oil and gas industry. The machine mills sheet metal edges with high accuracy as a prerequisite for optimal welding results.

Both dimensional accuracy and perfect preparation of the welding edges have a major impact on tank fabrication. The tolerances of the PFM 45/500 CNC are better than ± 1 mm width, and ± 2 mm length, easily surpassing relevant quality standards. The machine uses peripheral milling cutters designed for the HF milling process standard developed by Linsinger.

HF milling is free of adverse thermal effects, and therefore there is no change to the metallurgical structure

(ie no blue staining). This ensures consistent quality, free of thermal damage or weak points.

Once the sheet to be machined lies on the roller table and the data is read in, everything runs fully automatically. The sheet is aligned based on the input data, and hydraulically tensioned.

The disc-shaped cutter heads equipped with carbide tips then move into action. After milling the first longitudinal and transversal edges, the sheet is turned 180° by customer crane for final milling of the remaining two sides.

All profiles are machined in a single pass, independently of whether the same geometry or varying geometries are required for the four edges. Feed rates of up to 10m/min can be achieved consistently.

The profiled milling heads can be supplied in sandwich layers, which allow the cutter profile to be quickly reconfigured to any milling geometry

(eg X, Y, N or J) according to the particular job requirements. Special cutters are available for any edge geometry, including U-profiles. The range of tooling required for any job can be held in a magazine for fast changeover.

The fully automatic tool changing station detects the correct tool using a proximity ID-chip embedded in each milling head. This system requires no operator intervention.

The 'height copying' design of the Linsinger milling units resolves the potential issue of inconsistent edge profiles along undulations in heavy-duty plates. This design ensures a constant edge profile over the whole length of the sheet, even if it is not perfectly flat.

Linsinger Maschinenbau GmbH –

Austria

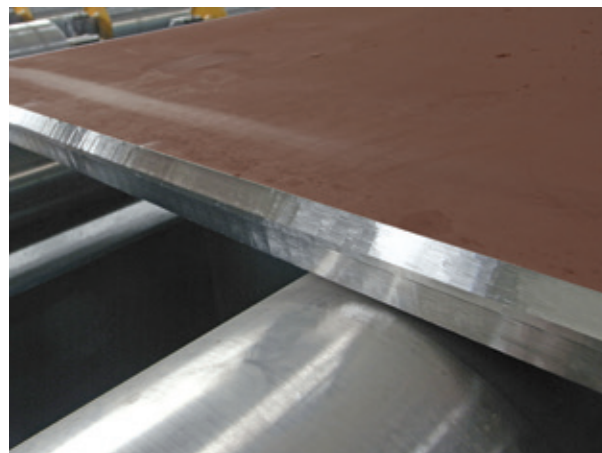
Fax: +43 7613 8840 951

Email: maschinenbau@linsinger.com

Website: www.linsinger.com



Linsinger plate edge milling machine



Milling edge

Inline quality assurance for metal pipe production

THE Machines produces metal pipe forming plants with efficient productivity and low power consumption. To use such machines, it is important to have an accurate testing system for the quality of the produced pipes.

With the THE forming and welding technique it is possible to form and

weld almost all known metals at high production rates. One of the essential parts of the system is the in-line quality check. A new system has been developed and introduced to check the welded product at speeds of up to 50m/min. A combination of eddy current testing and a visualised surface detection

allows analysis of the production in-line, with high accuracy.

THE Machines Yvonand SA –

Switzerland

Fax: +41 24 423 50 52

Email: info@the-machines.ch

Website: www.the-machines.ch

Inside Tube Scarfing

Others would probably call it pioneering work when you enjoy creating innovative solutions for the removal of welding beads in HF longitudinally welded tubes, and when you keep setting new benchmarks year after year. Ernst Blissenbach GmbH calls it their daily business.

As an international developer, manufacturer and market leader of trend-setting inside tube scarfing systems in premium quality we offer our customers the production security that pipe manufacturer and plant construction companies need for their demanding and complex processes.

BLISSart® special tools impress through a high degree of know-how, perfect precision, intelligent technology, impressive longevity, integrative broadening of potential, and an effective increase of production output resulting in a significant reduction in costs.

We consider the skills and the commitment of our highly qualified employees to be valuable assets, which is why we not only strengthen their competence, but also support their social stability.

Through this we safeguard our significant continued success – domestically as well as internationally. If you want to turn progress into something you can experience – if you want to remain one of the best in the industry: State of the BLISSart®



info@blissenbach.de
www.blissenbach.de

State of the

BLISSart.®

The Art of I.D.-Scarfing.



It has been said that artists are ahead of their time, that they anticipate what is to come.
Else Pannek (1932-2010), German Lyricist

Thermatool welding systems

TOSÇELİK Profile and Sheet Ind Co, a producer of precision steel pipe in Turkey, has initiated start-up of its new tube and pipe production mills in Dilovasi, using induction welding systems manufactured, delivered and installed by Thermatool.

Thermatool currently has 275 solid-state welders in Turkey, and Tosçelik now has a total of nearly forty pieces of Thermatool equipment in operation.

Thermatool's range of CFI and CFD induction welders were selected and installed at the Osmaniye plant with benefits applied from the HCT (Haz Control™ Technology) welder. The units supplied to Tosçelik utilise variable frequency and dual (induction and contact) functionality built into a number of systems.

Jon West, Thermatool sales manager, commented, "Variable frequency gives Tosçelik the ability to produce tube and pipe from several different materials, all on the same mill, wherever possible using existing weld rolls and the same basic mill set-up. We also recommended and specified two CFD dual induction/contact welders, which provide two welding processes in one system with quick change capability." Suhat Korkmaz of Tosçelik added, "In order to ensure our production quality we always prefer to use high technology equipment in our plants. We [have been] using various types of Thermatool heating and welding equipment in our existing tube mills for many years successfully."

Tosçelik manufactures a wide range of precision pipe specifications such

as API 5CT-5L pipes, galvanised or black water and gas pipes, natural gas pipes, heavy series mechanical tubes, industrial pipe, scaffolding pipe and normalised, polyethylene, polyurethane, epoxy, primer coated or galvanised square, rectangular, shaped and circular hollow sections.

Inductotherm Heating & Welding Ltd
– UK

Fax: +44 1256 467224

Email: info@inductothermhw.co.uk

Website: www.inductothermhw.com

Tosçelik Profile and Sheet Ind Co – Turkey

Fax: +90 328 826 80 09

Email: info@tosyaliholding.com.tr

Website: www.toscelik.com.tr

CNC metal pipe machining

COPIER Pipe Machinery (formerly known as Copier Bevelmachines) engineers, purchases and constructs machinery for metal pipe finishing, including pipe bevelling, cutting, sawing, bending and grooving.

The latest technology is CNC-controlled pipe bevel machinery, where pipes are machined by mechanically cutting away material. The machine has radial and axial feeding. With this feeding system all common angles can be made without adjusting the tooling set by hand. Another advantage is that the wall thickness that can be handled is unlimited.

All common bevells can be pre-set in the machine and can be easily repeated by the operator, who only has to enter some parameters of the steel pipe before starting bevelling or machining. The machine can perform internal, external bevel, facing, J-bevels and many more angles.

Recent projects include a stationary pipe bevel machine for bevelling of metal pipe elbows, and a 24" CNC-controlled machine for straight pipes.

The machines are often used in combination with one of the company's pipe roller benches, which support the

pipe in front of the bevel machine.

They are electrically height adjustable, in order to align the pipe with the clamping system.

As well as stand-alone bevel machines, Copier offers fully automatic production lines for pipe machining of metal pipe bundles (mostly in pipe mills). This means that both ends of the pipe are automatically machined by CNC-controlled bevel machines.

Copier Pipe Machinery – Netherlands

Fax: +31 183 44 8028

Email: info@copierbv.com

Website: www.copierbv.com

Coolant for pipe threading

FOR some pipe manufacturers, annual threading tool costs can be ten times more than the annual costs of the coolant. Quaker Chemical Corporation has addressed this issue with Quakercool® 750 TP.

Optimal for the threading process, this metalworking coolant fluid is a mineral oil-free micro-emulsion. Benefits include lubrication, short-term corrosion protection, clean rinsing, and a wide water-quality tolerance. The coolant effectively resists microbiological growth and does not contain chlorinated

compounds, formaldehyde release agents, boron, monoethanolamine or secondary amines.

A major OCTG pipe producer wished to lower its operating costs while at the same time improving its threading quality and cutting insert wear.

Quaker worked closely with the customer to gain efficiencies on the tooling costs, which are often the most expensive part of the threading operation. After incorporating the Quakercool 750 TP metalworking coolant fluid into the threading process,

the results were up to 30 per cent increased tool insert life used for the pipe threading operations; decreased downtime due to longer tool use; and a reduction in cost per joint.

Quaker offers metalworking process fluids and coatings for each stage of the tube and pipe manufacturing process, designing fluid solutions to work with 'front-to-back' compatibility in mind.

Quaker Chemical Corp – USA

Email: info@quakerchem.com

Website: www.quakerchem.com

USM



UTENSILI SPECIALI MONZA

1980 - 2015

35th ANNIVERSARY



USM STILL PROVIDE THE WORLD'S LARGEST RANGE OF CONSUMABLES FOR TUBE INDUSTRY



USM MAZZUCHELLI Srl - Via Melacca , 13/13 A - 20835 - Muggiò (MB) - ITALY

Phone + 39 - 039 - 387282 - 2301687 - Fax + 39 - 039 - 387633

e-mail : international.sale@usm.it - www.usm.it

A new approach to lubrication

LUBRICATION is the key element for the efficient operation of machinery according to BBLubricants of the Czech Republic. It is a unique component of a complex process where every element is designed to reduce friction while achieving the best results.

Based on many years of experience and the latest trends in the field of friction, polymer-based lubricants have

been developed which are better for the health of the operator and offer outstanding performance and economy of production.

The market is also being driven by ecological concerns and a political mandate to minimise the impact of products used in industry. Mineral oil products are no longer the future, and the use of clean alternative products is to be

developed. BBLubricants sro produces and manufactures polymer-based lubricants to meet the latest demands and trends of environmental and clean production. Products are designed for a wide range of metalworking operations: tube bending, deep drawing, stamping, punching and metal-forming. It produces three types of lubricant: liquid (Core), gel (NiroI) and paste (Medelan) with the aim of keeping things as simple and easy to use as possible.

According to the Society of Tribologists and lubrication engineers (www.stle.org) between a third and a half of all power production is consumed by friction.

Coefficient of friction has been introduced to measure and evaluate this. Not only does friction cause power loss in the form of heat, but studies show that this coefficient also has a major impact on pitting and micro-pitting on the material surface. By cutting the friction coefficient in half, the micro-pitting load capacity could be increased by 1.7 times. Therefore, lower pitting has direct relation to tool life and drag on material.

The Reichert test was performed in The Institute of Chemical Technology in Prague, Czech Republic, where mineral oil was tested against the BBL Core liquid product, and the tests confirmed the synthetic lubrication abilities. While the reference sample worked in measure of weight loss of 0.3mg on the testing device, BBL Core did 0.7mg. This test shows more than 133 per cent better performance.

The chemical structure of synthetic fluids is designed to maintain the lubricating stability over a range of temperatures. Compared to petroleum, synthetics survive higher temperatures, last longer, and are not likely to form carbon deposits which create drag and wear. Mineral oil is for general use and plays its part in numerous industries, but in lowering friction, synthetics can work well due to their similar molecule size. Whereas conventional oils contain molecules of varying sizes, the molecular structures in synthetics are consistent in mass and shape. This uniformity means those molecules create less friction as they collide, and less friction means less heat.

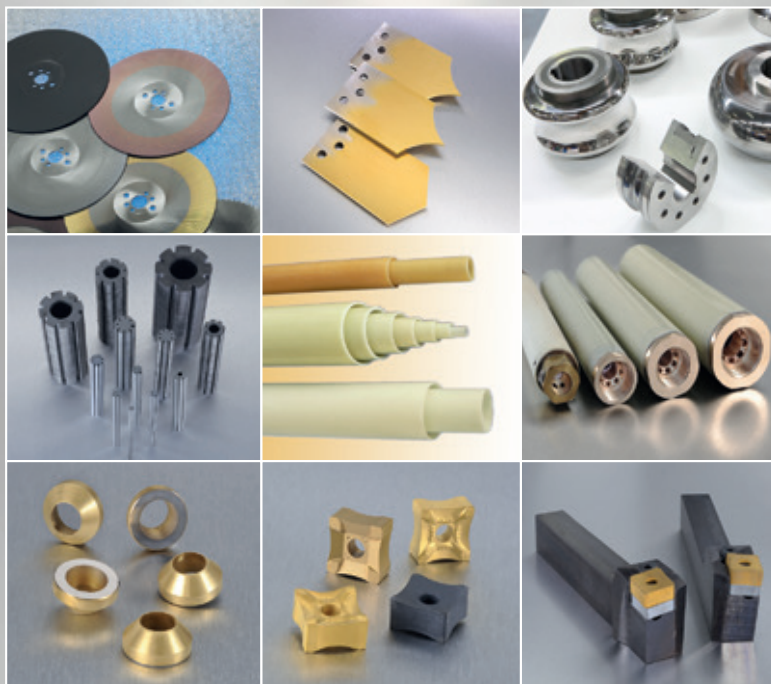
BBLubricants – Czech Republic
Email: info@bblubricants.cz
Website: www.bblubricants.cz

CONTRAST

info@contrastsale.com
Tel. ++39 0421 271699

Via Umbria, 15
30026 Portogruaro - VE - Italy

www.contrastsale.com
Fax ++39 0421 770571



- HSS blades
- Fiction circular saw blades
- Knives for guillotine cut-off
- Tools for slitting lines
- Impeder cores
- Fiberglass tubes
- Complete impiders
- Copper inductors
- Hard metal inserts
- Carbide base plates
- Tool holders
- Cutting rings

INSIDE SCARFING TOOLS

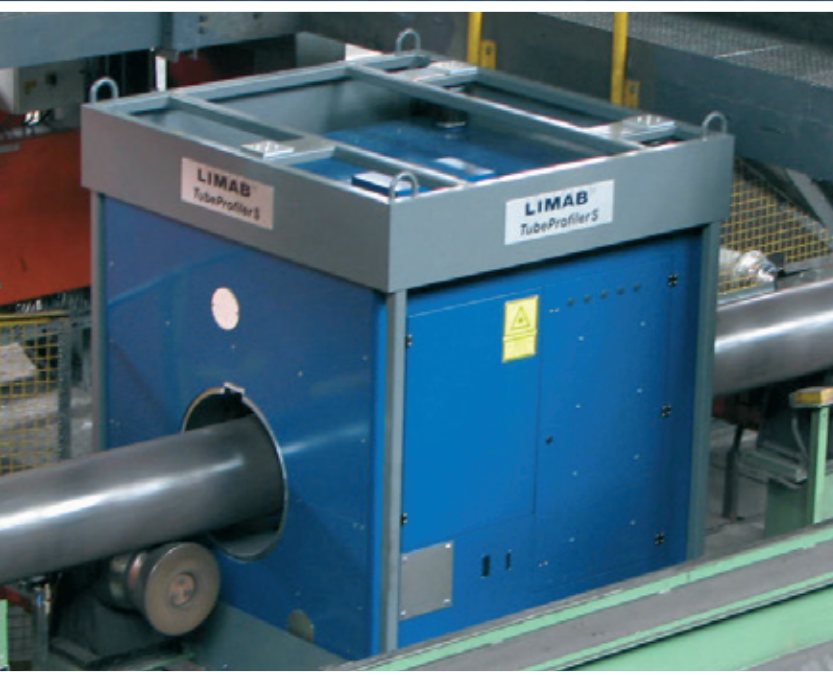
- Rolls for tubes
- Capacitors for H.F. welders
- Tube's cleaners

We measure your way to perfection

TubeProfiler™

Diameter, ovality and length measurement

LIMAB's well proven measurement system for seamless and welded tubes. We measure full cross section shape with no blind spots. Our system provides real time profile measurement which results in a faster mill set up.



TubeProfiler S™

Straightness Measurement

LIMAB's latest technology is unique in measuring tubes' straightness.

A compact measurement system capable of measuring local, end and total straightness, in addition to diameter, ovality and length.

Welcome to visit us at:



16-20 June
Hall 3A Stand 34
Düsseldorf
Germany



4-6 May
Booth: 1285
Cleveland, OH
USA

LIMAB®
CONTROL BY MEASUREMENT
www.limab.com

Testing high quality tube for automotive manufacturers

AS the automotive industry continues to raise the bar for quality, tube manufacturers are turning to technologically advanced testing equipment. To meet this demand, Magnetic Analysis Corp (MAC) has supplied Tube Products of India, a precision steel tube manufacturer, with a comprehensive Multi-Test system for its new mill in Thiruthani, India.

The recently commissioned plant manufactures large diameter, high wall, cold drawn and welded tubes, primarily for the hydraulic cylinder tubing market. The Multi-Test system incorporates both ultrasonic and eddy current inspection technologies, to ensure 100 per cent coverage and accurate detection of ID, OD and internal longitudinal and transverse defects as well as areas of reduced wall thickness. Taking advantage of the test characteristics of both ultrasonic and eddy current technologies provides a more accurate inspection result.

The system includes MAC's Echomac[®] FD-5 ultrasonic instrumentation with 16 channels, a 180mm ultrasonic rotary,



The Echomac ultrasonic rotary tester is part of the MAC Multi-Test system

and a MultiMac[®] eddy current tester. The ultrasonic inspection scans 100 per cent of the tube surface using eight transducers for longitudinal defect detection and eight for transverse. Four additional transducers provide the wall thickness measurement.

The eddy current encircling coil test is suited to finding short defects that can sometimes be missed by ultrasonic technology. The result is a test that gives comprehensive defect detection.

Additional components in the system include automated controls and inspection reports to confirm indicated defect areas and their positions; five dual pinches that help to accurately guide, centre and transfer the tube through the tests at 60m/min; and a water circulation system to provide coupling for the ultrasonic test.

Magnetic Analysis Corp – USA
Email: info@mac-ndt.com
Website: www.mac-ndt.com

Cutting, de-burring and drilling

BEWO Cutting Systems, a supplier of automating cutting lines for tubes, has installed a combination of machines, together with a drilling machine manufacturer from Germany.

The combination consists of a Bewo automatic circular cutting machine, coupled to two Bewo de-burring machines and two drilling machines.

Bewo and the drilling machine manufacturer provided the machines for a German company that supplies products to the agricultural sector. The machine combination will be used for processing profiles with a high tensile strength.

The cutting machine, de-burring machines and drilling machines work

together at high speed and deliver a high output. The Bewo cutting machine processes input with different lengths, so a minimum of rest pieces remain.

After the profiles have been cut, they pass the two Bewo machines for de-burring, and then move to the drilling machines. Finally, the profiles are automatically transferred to a cleaning machine, where the dirt and chips are removed. The Bewo cutting lines have short changeover times – an important aspect for the customer, which processes many different kinds of profiles. Because all settings are made automatically, changing over a Bewo cutting line takes only one minute.

The Bewo cutting machine replaces four semi-manual cutting machines.

Bewo Cutting Systems BV – Netherlands
Email: info@bewo.nl
Website: www.bewo.nl



Bewo automatic cutting line

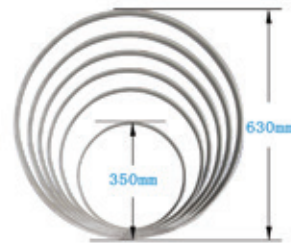


**WINNER STAINLESS
STEEL TUBE CO., LTD**

Specialized in Manufacturing Welded Stainless Steel Tube and Pipe

ASTM, ASME, EN, DIN
ISO9001, ISO14001
PED, ADW2000, approved by TUV

ADD: 23rd Hongmian Road, Xinhua Industrial
Park, Huadu District, Guangzhou City
510800, P. R. C. CHINA
TEL: +86-20-36873666, FAX: +86-20-36873669
E-mail: export@winner-steel.com
www.winner-steel.com



INDUSTRIAL PIPES



ORNAMENTAL TUBING



BOILERS,
HEAT EXCHANGERS TUBE



SANITARY TUBE



LIGHT GAUGE PIPE
FOR ORDINARY PIPING

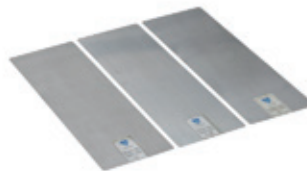


PLATE
POLISHED SHEET



COIL



JANG WUEL STEEL MACHINERY CO., LTD.

No. 186, Leou Chy Dong Rd., Pu Shing Hsiang, Chang Hwa Hsien, Taiwan, R.O.C.

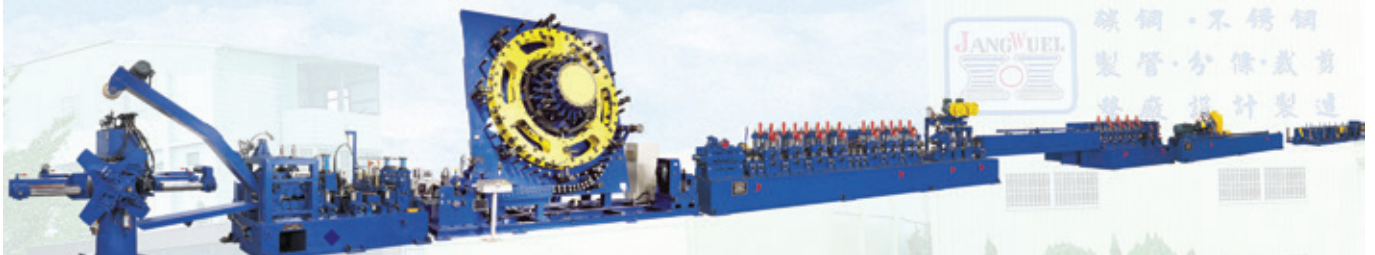
Tel: +886-4-829-1101/3, 829-8140/1 Fax: +886-4-829-6551

E-mail: jang.wuel@msa.hinet.net

www.jangwuel.com

Over 23 Years and 1000 Sets
of Experience in Tube Mill

Design | Manufacture | Export for Full-Set of
Plant Equipment & Technological Guidance



碳鋼·不銹鋼
製管·分條·裁剪
機廠設計製造

尚偉鋼鐵機械股份有限公司
JANG WUEL STEEL MACHINERY CO., LTD.

R&D and 90% Self Processing

- ◆ Steel Coil Slitting Line
- ◆ Tube Sizing Machine
- ◆ Tube Hydrostatic Testing Machine
- ◆ Tube Cold Drawing Machine
- ◆ Flat Bar / Angle Shaping Machine
- ◆ Forming rollers
- ◆ Carbon Steel Welded Tube Mill
- ◆ Stainless Steel Welded Tube Mill
- ◆ Round Tube Polishing Machine
- ◆ Square & Rec. Tube Polishing Machine
- ◆ Round Tube Straightening Machine
- ◆ End Facing & Cutting Machine



750° gas-fired vertical conveyor oven

No. 917 is a gas-heated, 750°F vertical conveyor oven from Grieve, currently used for sintering Teflon tubes.

Workspace dimensions are 24"W x 26"D x 53"H, while the secondary cooling zone on the oven measures 24"W x 26"D x 54"H. 350,000 BTU/hr are installed in a modulating natural gas burner, while a 2,000 CFM, 2 HP recirculating blower provides horizontal airflow to the workload.

29 trays, each 18" x 5", rise vertically through the load/unload zone, pass up through the oven heat and then down into the cooling zone below the oven.

A ½ HP motor drive, variable from 0.05" to 9" per minute, moves the trays through the unit.

This Grieve vertical conveyor oven features an aluminised steel exterior and interior, plus 6" thick insulated walls. Two 12" diameter tubeaxial fans, each driven by a ¼ HP motor, push/pull air through the cooling zone.

All safety devices required by IRI, FM and NFPA Standard 86 for gas-heated equipment are on board this Grieve oven, including a 325 CFM, ⅓ HP powered forced exhauster. No. 917 also features a digital indicating temperature controller and 10" diameter circular chart recorder.

Grieve Corp – USA
Fax: +1 847 546 9210
Email: sales@grievcorp.com
Website: www.grievcorp.com



No. 917 from Grieve Corp

Continuous in-line steam cleaning of tubes, pipes and profiles

IN the tube and pipe industry, cleaning and degreasing are often required prior to surface treatment or painting, or simply to provide customers with a perfect, clean product.

REA Steam Cleaning, a specialist based in Turin, Italy, has launched its new concept of continuous in-line cleaning of tubes and profiles, using the degreasing and cleaning properties of saturated steam.

Claimed advantages of the system include continuous cleaning, with no

interruption of the production flow; higher degreasing levels (up to a superficial tension of 38mN/m); no need for drying; speeds up to 60m/min; low water consumption; and a very low level of waste water produced.

The compact system generally requires less than one metre on the production line. The steam generator and vacuum unit can be placed out of the production line. The system provides an environmentally friendly alternative to solvents and lower water treatment costs,

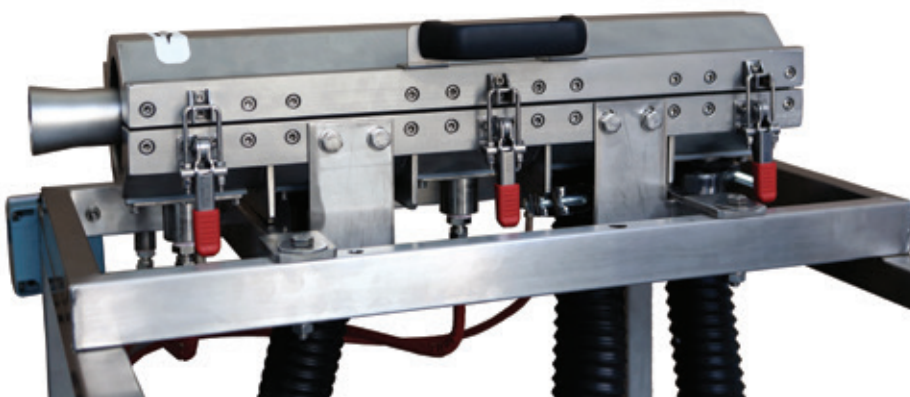
while being designed for heavy-duty, three-shift operation. Interchangeable cleaning chambers allow the treatment of parts of different shapes and diameters, with an equipping time of less than five minutes.

The higher degreasing levels are an intrinsic feature of steam cleaning due to the high temperature of the steam, which hits the part to be cleaned at a temperature of 150°. Tubes and profiles are dry after the process because of the combined effect of vacuum and evaporation.

One of the distinctive features of steam cleaning systems is the low amount of waste water produced, which consists mainly of the dirt removed and the water from the condensed steam. If necessary, detergent is recycled so that effective consumption is less than 0.5 litres/hr. Specific detergent that combines cleaning with passivation or phosphating can be used, especially before painting.

REA Steam Cleaning Srl – Italy
Email: info@reasrl.eu
Website: www.reasrl.eu

Interchangeable chambers for steam cleaning pipes and profiles



Benefits of reconditioned machinery

IN 1985, Universal Tube & Rollform opened its doors with a commitment of being the number one supplier of used tube, pipe and rollform machinery in the world. Located in Perrysburg, Ohio, USA, the company's warehouse contains one of the largest inventories of used tube mills and rollformers available for inspection.

When buying a used or reconditioned machine, lead times are shorter because the customer does not have to wait for the machine to be built. The average lead time for a reconditioned machine is 12 to 14 weeks. Universal Tube & Rollform has many machines in stock that are in running condition, 'ready to go' without any updates needed. Customers have the option to choose what they need and have it updated to their specifications, or to buy in 'as-is' condition.

Universal Tube & Rollform and Universal Controls Group work together to build new drive systems, die accelerators, drives and other accessories to retrofit existing machinery in almost any industrial

environment, and can offer a complete turnkey system, from initial design to start-up.

The company specialises in complete machine reconditioning, from single machines to complete lines, and can assess the current condition of machinery and offer expert advice for upgrades. Its experienced staff can clean, paint, recondition and install, and can also

provide staff training. Universal Tube & Rollform offers a 30-day return privilege if a machine needs to be repaired or returned.

**Universal Tube & Rollform
Equipment Corp – USA**

Fax: +1 419 874 2825

Email: sales@utubeonline.com

Website: www.utubeonline.com

Clamshell pipe cutter

DWT has enlarged the product range of its pipe cold cutter up to 72". The clamshell pipe cold cutter has been developed for high metal removal rate, a large adjustment range and an easy setup in-situ. The portable clamshell pipe cold cutter machine for pipe cutting and bevelling avoids heat-affected zone (HAZ) in the pipe cutting process.

Designed for heavy wall pipes in heavy-duty applications, the high working speed and quick set up provide fast operation on-site. The DLW-HD clamshell cutter is able to operate safely and precisely in most critical applications. A rigid frame construction in combination with high quality steel pinion gear and bearings provide a rugged combination for challenging work.

DWT GmbH – Germany
Email: info@dwt-gmbh.de
Website: www.dwt-gmbh.de



GEM
TOOL CORPORATION

I.D. & O.D. SCARFING TOOL SPECIALISTS

- PROUDLY MANUFACTURED IN THE USA
- MOST ITEMS IN STOCK FOR IMMEDIATE DELIVERY
- DISTRIBUTOR INQUIRIES WELCOME

1 125 W NORTHBRANCH DRIVE
OAK CREEK, WI 53154 USA

WWW.GEMTOOLCORP.COM
SALES@GEMTOOLCORP.COM
800-228-4366

Integrated processing line for automotive air bag tubing

TODAY'S manufacturing environment calls for leaner operations, including the technical resources available for product and process development.

Engineers do not have the time to piecemeal projects together with several suppliers. Instead, they look for suppliers that can offer turnkey design and manufacturing.

As an example, an air bag inflator company wanted to reduce costs by bringing its tube cut-to-length and finishing operation in-house. Haven worked with the company from conceptual layout and process design to plant installation and start-up.

Each entity had a project lead person who coordinated all communications related to process requirements, machine specifications, safety specifications and quality assurance. The resulting integrated processing line includes a bundle unloader, with part separation and pusher assembly that advances the tube into an OD polishing unit; a polisher that removes the black

oxide coating on the tube; and an exit conveyor that transfers the polished tube to the cut-off section.

A cut-off loading system accumulates tubes from the polisher and indexes them into the cut-off machine – a Model 620 Kleencut supported shear cut-off suitable for cutting high yield strength air bag tubing with no material loss from the cut.

Also included in the line are a Model 939 double end-finisher with ID and OD chamfer and end-facing to

a tight tolerance; 100 per cent length inspection that checks every tube to a pre-programmed tolerance range; and transfer to the parts washer, with automatic indexing and transfer onto washer belt spindles. All of these operations are tied together with various material handling systems for continuous product flow.

Haven Manufacturing – USA
Fax: +1 912 264 9001
Website: www.havencut.com



Laser welder for coil end welding on thin strip

NEW laser welding technology from Guild International makes coil end welding on strip as thin as 0.003" possible.

Current technology employing TIG welders allows for welding strips no thinner than 0.008", and requires start and stop tabs. Guild's new machine, named the LHMA Laser Welder, creates complete edge-to-edge welds without the need for start and stop tabs, on strip as thin as 0.003".

The machine uses a fibre laser to deliver the necessary energy for welding via a fibre optic cable connected to a focusing head. The focusing head concentrates the energy to a very fine spot to achieve weld results on steel, stainless steel, copper and brass alloys, and aluminium.

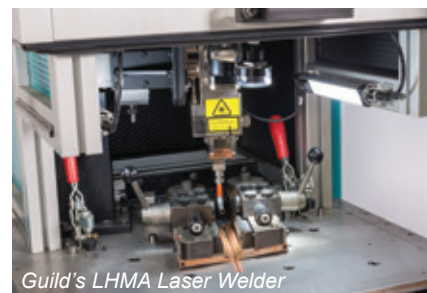
The machine includes a camera and large HMI touchscreen, allowing the

operator to view the strip fit-up prior to welding. The process of shearing, aligning and welding the two coil ends is completed in just two minutes.

Weld schedules can be stored for quick retrieval, and the parameters are easily set with the HMI touchscreen. An interlocked safety enclosure provides the required safety for the operator.

For customers interested in this technology, Guild International maintains a fully operational LHMA Laser Welder at its facility, to offer sample welds on customer-specified material.

The company offers a complete line of coil end welders for almost any application, including laser welding machines for a full range of strip thicknesses and widths. The patented product line includes Zipwelders™, resistance welders, semi-automatic shear welders, and strip accumulators



including Supercoils® and Superloops™.

Guild also produces a full line of rotary and crop shears, along with uncoilers, speed funnels and flatteners. The company's team of engineers can help determine customers' needs and ensure proper equipment design and compatibility with existing equipment.

Guild International – USA
Website: www.guidint.com

HSS & HSS-E metal cutting
circular saw blades

Solide carbide
circular saw blades (VHM)

Tungsten carbide
tipped saw blades (TCT)

Circular Knives
& Friction saw blades

 **Made in Germany**

Re-Bo

TOP-PERFORMANCE CIRCULAR SAW BLADES

For more than 65 years, Re-Bo is manufacturing precision circular saw blades with highest performance and tool life.

Our extensive know-how is integrated in each saw blade that we develop and produce. In this process, we have only one goal in mind – to create the most productive and precise tool for you and to ultimately lower the cost per cut.

We support you with expert advice throughout the whole cutting process, and we are also able to develop custom manufactured saw blades tailored to your cutting application.

Please visit Re-Bo.com for more Information and contact details.

Re-Bo REBER GmbH

Specialized Manufacturer of Metal Cutting
Circular Saw Blades

Ellwanger Strasse 97
73441 Bopfingen, Germany

Phone: +49 73 62 / 96 04 - 0
Fax: +49 73 62 / 96 04 - 295

eMail: info@re-bo.com

www.re-bo.com

NC punching line

APOLLO Ltd's Twin Classic punching line featuring numerical control is equipped with ALX bar-feeders with brushless motorisation, capable of a bar-feeding speed of up to 1m/sec.

The line has a double motorisation on the central hydraulic power unit – one per cylinder, and the choice of three punching speeds per punch. Either cylinder can be excluded depending on the punching requirements, or two different programs can be carried out simultaneously.

It is suited to medium and large production, and on request may be fitted with a third vertical head to punch a bar on three or four sides.

The machine is fast and accurate, and can punch one or more tubes at the same time. The version with a bar loading/unloading storage magazine allows the machine to work without operator and to punch semi-oval or rectangular pipes without blisters. It can carry out a working cycle in approximately 50" on a bar 2m long.

Apollo also produces a range of universal horizontal presses, which

have tools that may be simply changed to bend, punch or shear any shape of material. The presses are hydraulic machines controlled by a gearbox supplying pressure to a cylinder.

The four different models – P170, P320, P400 and P620 for 17, 32, 40 and 62 tons respectively – can be optionally equipped with CNC systems and programmable, motor-driven side stops.

The self-lubricating cylinder is located on the same axes as the working arm and allows full use of the hydraulic strength emitted. The equipment can be changed by using three helical hooking pins, allowing an operator to act within a

few tenths of a second, while keeping the machine running. According to the type of tool used, the length of the stroke of the working slide may be changed and idle running times may be cancelled.

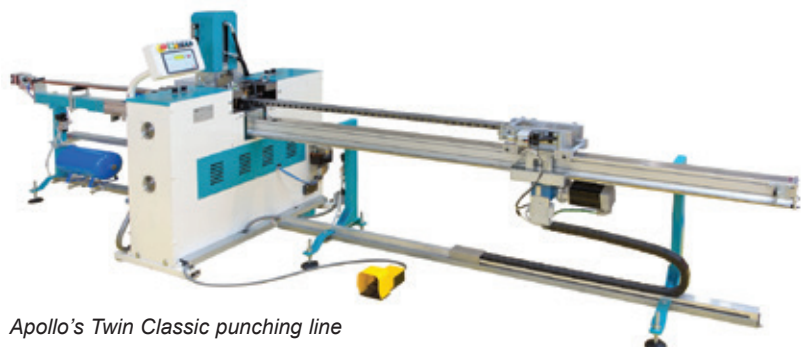
The presses can be adapted for use in automated processes. They may be connected to an automatic NC layer-on for mass punching and shearing operations, after entering the related programming data on the keyboard.

Apollo Srl – Italy

Fax: +39 0536 851273

Email: info@apollosrl.com

Website: www.apollosrl.com



Apollo's Twin Classic punching line

Professional welding tables

STRONG Hand Tools is the manufacturer of BuildPro welding tables and Strong



Siegmund Professional Extreme 750 welding table

Hand Tools welding clamps, as well as being the North American distributor of German-made Siegmund high-precision welding tables.

The company has introduced the new Siegmund Professional Extreme 750 welding tables, designed to be hard, durable and very flat. Constructed from premium through hardened steel, the Professional Extreme 750 welding tables are finished with a plasma nitride treatment, resulting in a double-hardened table that the company claims will last a lifetime.

This hardening process results in a deep, hard case that prolongs the life of the table surface, protects against stroke impact, and provides a more wear- and corrosion-resistant surface with a glossy black shine. The tables have a surface hardness of 750 HV (~60 HRC), and are available in System 16 and System 28 versions, with 16mm and 28mm boreholes respectively.

Strong Hand Tools – USA
Email: sales@stronghandtools.com
Website: www.stronghandtools.com

Belt grinding of heavy bars and tubes

GRIND Master offers a trolley type machine for belt grinding and finishing of large diameter and heavy bars and tubes.

The machine has heavy-duty roller supports to take up the tube/bar to be ground. It also provides

the rotational drive to the job being ground. The floating belt grinding heads are specially designed to take care of bend and ovality in tubes. These heads are mounted on a long trolley, which is rigid in construction. The machine has very easy settings

to ensure quick changeover from one job size to another. Tubes from 6 to 300mm diameter can be ground.

Grind Master – India
Email: sales@grindmaster.co.in
Website: www.grindmaster.co.in

New cutting ring system

VOSS Fluid has developed a new patented cutting ring system. The VOSSRing[®] with VOSSRing pre-assembly stud provides leakage protection and effectively prevents installation errors on pipe connections

in hydraulic systems, while reducing the required physical effort.

Suitable for cuts on all steel and stainless steel pipes, the ring's material, geometry and technical characteristics are designed for maximum pressure and dynamic load capacity up to 800 bar. Other benefits include prevention of flange damage and pipe slippage.

Voss has also developed an installation solution that provides process reliability even with high staff turnover: the VOSSRing pre-assembly stud makes installation simple yet accurate.

The tool blocks further travel with a dead stop as soon as the ring has travelled the ideal pre-assembly distance.

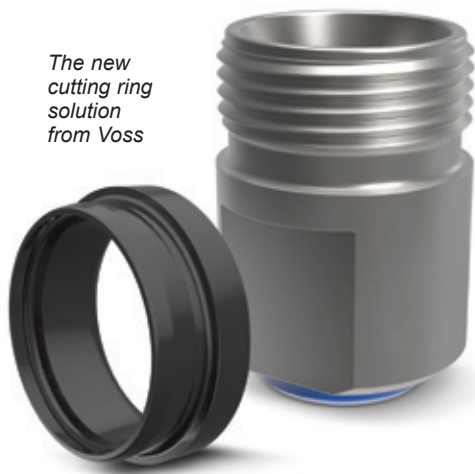
The increase in force tells the installer that the end location of the pre-assembly has been reached, and unintended excess installation is therefore not possible. In addition to the dead stop

functionality, the solution provides enough clearance to perform a finish cut on the ring during final installation. Leakage-proof and process-reliable repetitive installations are the result. At the same time, the VOSSRing pre-assembly stud simplifies the work of installers: the final installation travel is reduced from 90° to 30°, reducing the required clearance during installation and cutting the physical effort approximately in half.

VOSS Fluid is a supplier of hydraulic connection technology. The company's product portfolio includes pipe connections for stationary and mobile hydraulics, including cutting ring screw unions, tube and pipe forming systems and flanged connections.

Voss Fluid GmbH – Germany
Fax: +49 2267 63 9653
Website: www.voss-fluid.de

The new cutting ring solution from Voss



Synergy for turnkey tube manufacturing

FASPAR, a specialist in coil processing equipment, and Olimpia 80, an expert in systems and equipment for welded tubes, have shared their experience and core business to ensure the quality of strip products at the entry of tube mills. This operation can be underestimated, but it is important in order to fully exploit the capacity of the tube mill.

Faspar has been a producer of turnkey equipment for the processing of metal coils since 1966. Its main product range includes slitting lines; levelling, straightening and cut-to-length lines (with feeder, rotary shear or flying shear); surface finishing lines; feeding and pressing/punching/bending lines; and tension/stretch levelling lines.

Olimpia 80 Srl specialises in the engineering and manufacture of systems and equipment for welded tubes. Its main product range consists of complete tube mills and components.

Faspar and Olimpia 80 recently put into operation one slitting line and two tube mills, positioned side by side, in a Ukrainian plant of one of the world's largest titanium producers. The final use of these titanium tubes is in the energy field (nuclear) and heat exchangers.

The Faspar slitting lines can process grade 1 and 2 coils, VT1-0 up to 10 tons, at line speeds up to 200m/min, and in thickness from 0.4 to 2.5mm, in order to produce strips with width from 35 to 200mm, suitable for the tube mill lines and final output tube diameter.

Olimpia 80 tube mills lines can process tubes with outside diameters from 12 to 60.3mm, and thickness from 0.4 to 2.5mm, welded with a TIG system. The final tube length is from 4 to 26m.



Faspar and Olimpia lines and final products

Faspar SpA – Italy
 Fax: +39 02 9471611
 Email: faspar@faspar.it
 Website: www.faspar.it

Olimpia 80 Srl – Italy
 Fax: +39 0523 864584
 Email: olimpia@olimpia80.com
 Website: www.olimpia80.com

NEW PRODUCT

>>> Tube Max Scarf >>>

Flying cut-off (single and twin cut off)

● **Longer service life achieved by lower damage rate**

Features

- Optimized tooth shape, tooth grade, and advanced coating achieve longer service life.
- The embedded tooth and optimized gullet shape achieve longer service life on cutting welding bead smoothly.



KANEFUSA CORPORATION
 Head Office
 1-1, Nakaoguchi, Ohguchi-cho,
 Niwa-gun, Aichi, 480-0192, Japan
 Tel: +81 587 95 7221 Fax: +81 587 95 7226
 E-mail: sales-ex@kanefusa.co.jp

KANEFUSA EUROPE B.V.
 Tel +31 40 290 0901
 Fax +31 40 290 0908
info@kanefusa.nl

KANEFUSA USA, INC.
 Tel +1 859 283 1450
 Toll Free +1 877 283 1450
 Fax +1 859 283 5256
sales@kanefusa-na.com



<http://www.kanefusa.net>



NEW MTM 30 AL

Officine MTM, the leading manufacturer of innovative tube production equipment, would like to introduce the MTM 30AL, a brand new machine to keep its leadership in the aluminum field

experience your innovation



Officine MTM SpA
via Palladio, 36 | 30038 Spinea Venezia, Italy
tel +39 041 508 9611 | fax +39 041 999 611
www.mtrtubemills.com | sales@mtrtubemills.com

EVOHMI
discover the new evolution of
the human-machine interface

ATOMAT
STEEL & TUNGSTEN CARBIDE ROLLS
www.atomat.com | info@atomat.com

Advanced video extensometer launched at JEC Europe

INSTRON, a provider of testing equipment designed to evaluate the mechanical properties of materials and components, exhibited the new AVE2 advanced video extensometer at the JEC 2015 event in Paris, France, in March.

Conforming to the rigorous composite standards ISO 527 and ASTM D638, the AVE2 is a fully integrated device that adjusts to the normal fluctuations of environmental conditions in the lab, and is easily adapted to any testing machine that uses a $\pm 10V$ analogue input.

Designed to reduce errors from thermal and lighting variations that are common in most labs, the AVE2 uses the real-time 490Hz data rate while achieving a 1-micron accuracy.

Visitors to JEC were also able to see Instron's new TestProfiler. Featured in Bluehill® 3 software, TestProfiler offers flexibility in setting up automated product

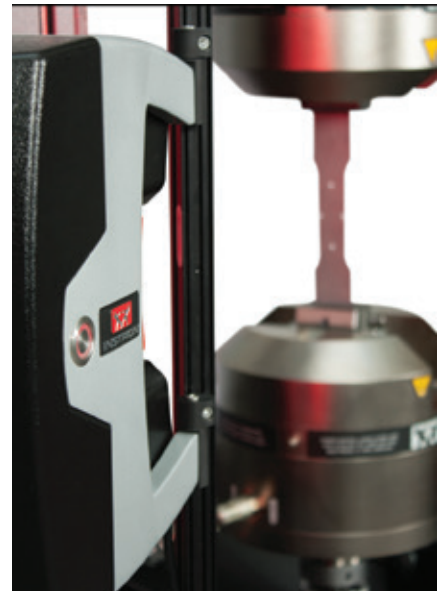
reliability tests that mimic the functional use of the product being tested. It allows for easy setup of tests that require repetitive cycles for component quality testing commonly used with customers testing foam and spring, or performing proof-loading tests. Step-by-step loading patterns mimic functional use of medical devices and consumer electronics products.

For dynamic and fatigue testing of composites, Instron demonstrated the ElectroPuls™ E3000 all-electric test instrument with a nominal force capacity up to $\pm 3kN$, designed for both static testing at low speeds and high-frequency dynamic testing at several hundred hertz.

Instron UK

Email: info_news@instron.com

Website: www.instron.com



Instron's AVE2 advanced video extensometer

Cage forming for square sections

THE latest generation of linear cage forming technologies has been put into operation in North Europe, at a manufacturer of high quality stainless steel tubes.

The complete, fully automatic tube mill, including surface finishing, tube end facing, unloading and packaging sections, can produce square tubes from 40 x 40mm to 120 x 120mm, and rectangular tubes from 50 x 40mm to 180 x 60mm, in a thickness range from 2 to 8mm in stainless steel austenitic, ferritic and Duplex grades. The maximum mill speed is 80m/min. The mill can produce all square and rectangular tubes within the size range, without change of any rolls in forming, welding, sizing, straightening and clamp jaws in cut off.

The main advantages of the technology include facility and rapidity in changing the profile dimensions; simple maintenance; and simplicity in software utilisation.

The mill makes it easy to produce both square and rectangular tubes by means of computerised control, where data is stored in order to produce all the tube sizes in the range. The PLC records all the utilised data, and it is possible to create particular 'shapes' with different angles. From the PC it is possible to see the 'tube flower' to be produced. The average time for changing tube set-up is around ten minutes.

Olimpia 80 Srl – Italy

Email: olimpia@olimpia80.com

Website: www.olimpia80.com

TUBE END FORMING AV65

**SIDE LOADING FOR FAST TOOL
CHANGE AND NO LIFTING REQUIRED**



- Infinitely adjustable expansion & reduction
- High production capability
- Up to $\varnothing 152mm$
- No tube clamping required
- End form on or near bends
- High quality build with practical platforms
- Full 12 month warranty.
- Twin Head Machines also available

AVA-MATIC

Unit 24, Padgets Lane, South Moons Moat,
Redditch, Worcestershire B98 0RB, England.
T: +44 (0)1527 518520 E: info@avamatic.co.uk
W: www.avamatic.co.uk

Germany: Tel: 02150 2500
Netherlands/Belgium: Tel: (04756) 6888 USA: Tel: 708 272 7880

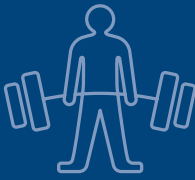
Bending to perfection.



Boiler & Power



High Performance



Heavy Duty

3 Good Ways ...

... to improve your business – learn more about the new technologies of Schwarze-Robitec®. Reliable Quality „Made in Germany“.

► Next Generation of Control System

Synchronous control of all axes for our Tube Cold Bending Machines

► Versatile: Multi-Stack CNC Machines

Equipped for a wide range of complex tasks – combined with our new Control System for a faster production

► Rapid Clamping System "Quick Tool Unlock"

Enables fast and uncomplicated tool change

Meet our specialists at

► Metalloobrabotka in Moscow

Hall 2.2 Booth D13 • May 25 - 29, 2015

► OGA in Kuala Lumpur

Booth 10066 • June 02 - 04, 2015



www.schwarze-robitec.com
sales@schwarze-robitec.com

PE and PE pipe extrusion

THE Zephyr extruders from Tecnomatic are the evolution of the Zeus gearless extruders and Vega 37 L/D series used in the extrusion of pipes. A year since they were first presented at the K-show in Germany, several extruders have been sold and tested in production with excellent results.

The new extruder series L/D 40 offers a number of innovative solutions, with the key guideline of the new project being to increase the output rate at lower melt temperatures and power consumption.

This result has been achieved thanks to the adoption of a spiral grooved feed bush and further improvements in screw design. The new feed bush ensures minor friction, which is commonly generated by raw material transport, with the subsequent increasing of the specific and total throughput. The further development in screw design, with optimisation and enhancement of torque and shearing elements, has improved the output but has also led to the ability to process the material at lower melt temperatures.

To complete the configuration and to meet the requirements for production efficiency the machines are equipped with torque or water-cooled motors (in this case with one or two step gearboxes) and compact water-cooled inverters. These solutions combined with the mechanical features ensure outstanding power consumption levels (eg lower than 170wh/kg for Zephyr 60.40 at 800kg/h) but also low noise operation (<74Db), reduced workload for maintenance, higher efficiency within wide speed and load ranges, and faster dynamic response. The equipment also includes modules for constant monitoring of power consumption and production cost calculation.

The result on the ground shows the evolution trend for pipe extrusion, which is the reduction of the extruder size, with increased screw length and smaller motors, to ensure the same output with a better energy efficiency. A comparison between a gearless extruder in size 60.37 and the new Zephyr 60.40 clearly shows the advantages.

Tecnomatic Srl – Italy

Website: www.tecnomaticsrl.net



Tube mill & finishing line capable of producing **API 3" to 12" OD x 18t & API 8" to 24" OD x 20t** pipes, developed with advanced technology and verified through continuous R&D based on extensive field experience accumulated **over 40 years in the tube mill & finishing line sector.**



i-Special Forming System uses an edge forming method which gives an advantage over conventional forming facilities. As the strip edges contact each other in an "I" shape on the squeeze stand, it secures excellent welding quality, and it is capable of forming various sizes without changing the roll. In particular, it is excellent for the forming of heavy wall high-strength pipe.

Available size :
8"-20" x 16t & 12"-24" x 20t, API X70



V-Shear & Welder connects the ends of two coils.

As it connects the two ends on an improved 40° groove by bevel cutting, this results in excellent strength of the joint, maintaining the welded surface beautifully as the ends are welded. It also boasts a short welding cycle time, and a longer life of the Z-shape cutting blade.

Available size :
3"-12" x 16t & 8"-24" x 20t

Milling Cutter boasts a precise control system, excellent design, optimum cycle time, a high quality cutting face, and long life of the cutting blade.

Available size :
3"-12" x 16t & 8"-24" x 20t



End Facer & Hydrostatic Tester

2"~6" x 500bar Four Head
4"~12" x 700bar Double Head
8"~24" x 500bar Single Head
16"~62" x 350bar Single Head



GLOBAL PATENT

- i - SPECIAL FORMING SYSTEM (2014)
- CASSETTE TYPE ROLL CHANGING BOX (2012)
- INSIDE BEAD REMOVING E/Q (2012)
- BEVELLING CUT IN SHEAR & WELDER (2011)
- ROLL CHANGING METHOD IN TUBE MILL (1996)

Cassette Type Quick Changing System

enables fast and easy replacement of the roll by pre-assembling the roll before replacing it on the Cassette Box.

Available size :
3"-12" x 16t & 8"-24" x 20t



MAJOR SUPPLY LIST

- Supplied 20" i-Special Forming Stand to AJU Besteel Co., Ltd. (2014)
- Exported 20" API OCTG Pipe Threading Line to SAUDI Steel Pipe Co., Ltd. (2013)
- Supplied 8" Heavy wall Tube Mill Line to HUSTEEL Co., Ltd. (2012)
- Supplied 8" Milling Cut-Off M/C and Shear & Welder to HUSTEEL Co., Ltd. (2011)
- Supplied 60" Hydrostatic Tester(Max. 500kg/m²) and End facing to HUSTEEL CO., Ltd. (2009) & GLOBAL PIPE (2010)
- Exported API 20" Tube Mill Line to SAUDI Steel Pipe Co., Ltd. (2009)
- Exported 18" Tube Mill Line to NAKATA Mfg. Co., Ltd. in Japan. (2005)
- Supplied 12" tube mill line and finishing equipments on full turn-key to HUSTEEL. (2004)
- Exported 24" end facing to NKK (JFE) in Japan. (2002)

We provide API, high-strength and high-end tube mill line and an advanced finishing line alongside the latest technology on a turnkey basis.

- Tube Mill Line Capable of Manufacturing up to 24"
- 6-Roll, 7-Roll, and 10-Roll Straightening Line
- Max. 2-Head Automatic End Facing & Beveling M/C
- Max. 5-Head, 700bar Hydrostatic Tester
- Automatic and Semi-automatic Bundling M/C
- Related Equipment and Facilities to Comply with API Standard

Large-diameter machine for close-quarter fusions

MCELROY'S In-Ditch 48 brings fusion capability to confined work settings using large-diameter pipe. It features a top-loading heater and facer, providing flexibility in tight spaces, with minimal site excavation required.

"With the popularity and success of our smaller In-Ditch fusion machines, we are excited to offer the In-Ditch 48 for large-diameter pipe," said

McElroy president Chip McElroy. "Our innovations are part of a continual effort to help build infrastructures more efficiently and productively so that they can be relied on for decades."

The In-Ditch 48 provides 3,000 psi maximum pressure to serve various in-ditch applications for 450 to 1,200mm OD pipe (16" to 48" OD).

Removable jaws and clamp cylinders

make it easier to load, and the four-jaw carriage converts to a three-jaw configuration making it possible to fuse short pipe stubs, providing maximum versatility in close quarters.

The In-Ditch 48 provides ease of mobility with multiple lifting points, a carriage spreader bar and skidded carriage. The power pack and heater/facer caddy each have a single, central lifting point and forklift pockets. Roll bars protect the carriage and hydraulic components as the machine is eased into the ditch.

It is compatible with the McElroy DataLogger®, which provides joint recording ability and added job site accountability.

McElroy's In-Ditch 48



McElroy – USA
Fax: +1 918 831 9256
Email: fusion@mcelroy.com
Website: www.mcelroy.com

Milling Technology One step ahead since 70 years

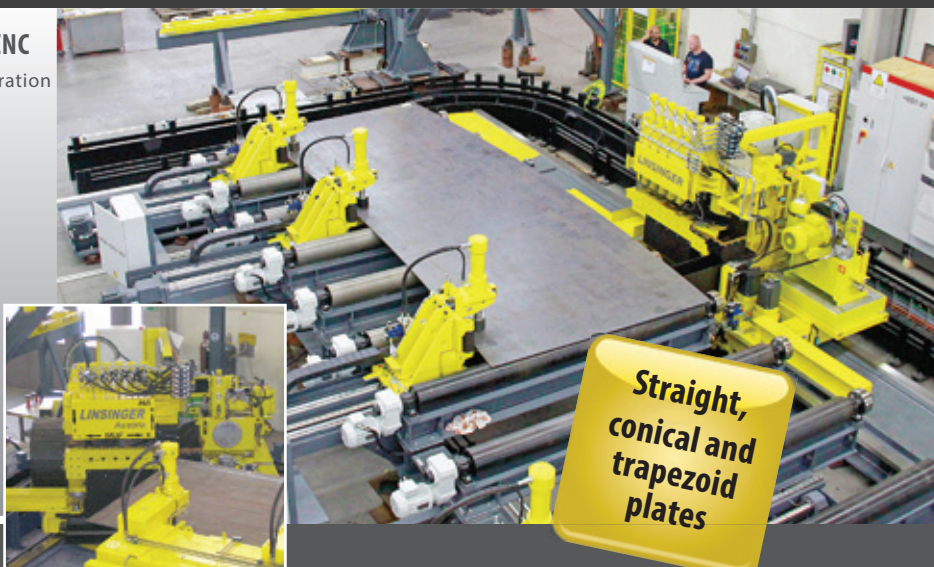
LINSINGER
Austria

Plate Edge Milling Machine PFM LQ CNC

for cross & longitudinal welding edge preparation with highest accuracy

Advantages:

- Best solution for straight, conical and trapezoid plates
- Short processing times through special milling concepts
- No clamping portal, free crane access
- Wide variety of solutions for every application



LINSINGER Maschinenbau GmbH
Dr. Linsinger-Str. 24, A-4662 Steyrermuehl, AUSTRIA
Tel. +43 7613 88 40, Fax +43 7613 88 40-951
E-Mail: maschinenbau@linsinger.com

www.linsinger.com

SECO/WARWICK GROUP



Good Reasons for buying a **SECO/WARWICK** Roller Hearth

1. Fully automated charge and discharge systems.
2. Lights out control system with remote functions.
3. Ready to integrate with your production line.
4. High efficiency heating systems.
5. Your choice of gas fired, or electric resistance heating.
6. Built to meet your local requirements.
7. Air, protective atmosphere, or vacuum: various process options to assure highest quality of your product.
8. Custom engineered systems available for specialty applications.
9. Robust rollers design for long service life.
10. Proprietary air-cooled outboard bearings provide longer service life and easy change out.
11. 30+ years of experience.
12. Process support from the SECO/WARWICK R&D center.
13. We can heat treat both in-process and finished tubes in ferrous, non-ferrous and stainless steel materials.

➤ **Global Manufacturing, Local Support**
Poland • USA • Brazil • China • India



www.secowarwick.com
tube@secowarwick.com



NDT solutions for flaws detection

CONTRÔLE Mesure Systèmes (CMS) is a specialist in non-destructive testing. With a complete range of NDT products using eddy current and ultrasonic methods, the company can supply solutions for most industrial applications.

CMS's product line is designed to meet inspection, testing and quality control on both ferrous and non-ferrous products, including steel, copper, alloys, carbon steel, stainless steel and aluminium.

Applications in tube, bar, pipe and wire inspection include surface flaw

detection by RotoETscan eddy current rotating head; internal and dimensional flaw detection by RotoUTscan ultrasonic rotating head; tube inspection with product in rotation; full body and/or weld of welded tube inspection; full body and/or ends of non-welded tube inspection; and heat treatment, hardness, coating verification and measurement.

Systems are also available for automotive parts inspection (including inspection of pistons, tie rods, brake discs, wheels, gears and cylindrical parts), and for specific parts inspection, plates and sheets, and composite parts (such as junction tube inspection, defect detection on double wall tubes, conductivity measurement on plate, and thread and tapping inspection).

All systems (on-line and/or off-line) meet quality standards such as API, ASTM and DIN.

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

Complete titanium tube inspection by ultrasonic and eddy current testing



TENRYU

since 1910

MADE IN JAPAN

... ASK TENRYU!

- EXCELLENT QUALITY
- INNOVATION
- EXPERIENCE FOR MORE THAN 100 YEARS
- GLOBAL NETWORK
- FOR THE BEST RESULTS IN CUTTING
- ANY SIZE OF BLADE FOR ALL MACHINES

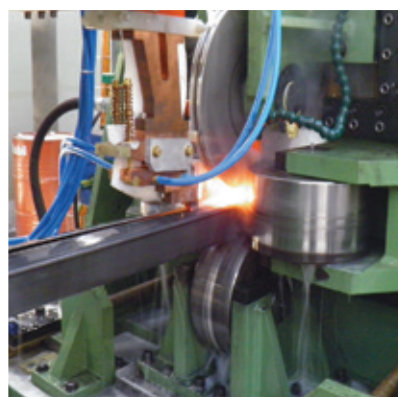
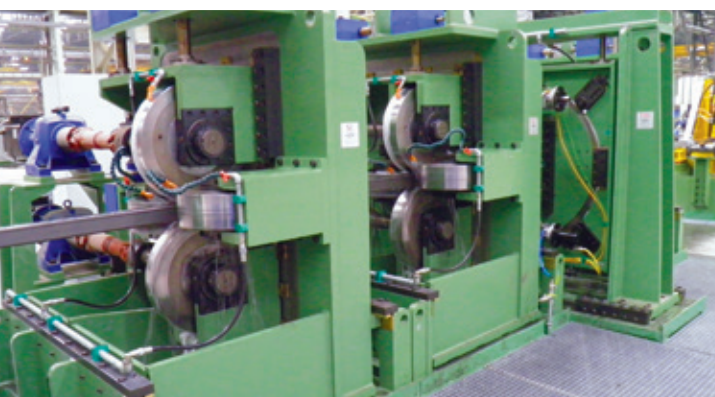
TCT-CIRCULAR SAW BLADES FOR CUTTING BAR/TUBE/PIPE

TENRYU SAW MFG. CO., LTD. | Japan, Fukuroi, www.tenryu-saw.com
 TENRYU EUROPE GMBH | Germany, Aalen, www.tenryu.de
 TENRYU AMERICA INC. | USA, Hebron KY, www.tenryu.com
 TENRYU SAW DE MEXICO, S.A. DE C.V. | México, Silao, Guanajuato, www.tenryu.mx
 TENRYU (CHINA) SAW MFG. CO., LTD. | P.R. of China, Langfang, Hebei, www.tenryu.cn
 TENRYU SAW (THAILAND) CO., LTD. | Thail., Amiphur P., Rayong, www.tenryu-saw.com
 TENRYU SAW INDIA PVT. LTD. | India, Neemrama, Rajasthan, www.tenryu-saw.com



olimpia80

TUBE MILLS



OLIMPIA 80 s.r.l.
ZONA INDUSTRIALE: Ca' Verde
29011 BORGONOVO V.T. (PC) - ITALY
Tel. +39 0523 86.26.14 - 86.28.80 - Fax +39 0523 86.45.84
olimpia@olimpia80.com
www.olimpia80.com



Cold rolling mill produces first coil at Tangshan

A COLD rolling mill supplied by Primetals Technologies to Tangshan Iron and Steel Group Co Ltd, a Chinese steel producer, has been brought into production and the first coil rolled.

The new rolling mill consists of a coupled pickling line – tandem cold mill (PLTCM), a continuous annealing line and a galvanising line. It was constructed at the Tangshan site in Hebei Province, China.

The rolling mill has an annual capacity of 1.8 million metric tons of high-strength

cold strip, and will produce high-quality steels for the Chinese automotive industry, with which Tangshan intends to enter this demanding market.

Primetals Technologies designed and supplied the mechanical, electrical and process equipment for the cold rolling mill. The PLTCM mill consists of five six-high rolling stands, enabling extremely high-strength steels to be rolled within tight tolerances. SmartCrown rolls and special actuators and control systems ensure that the finished products

have the required flatness. The entry thickness of the strip ranges from 1.5 to 6mm, and this is rolled down to a final thickness of between 0.2 and 2.5mm. The line rolls strips with widths ranging from 700 to 1,600mm.

The furnaces for the continuous annealing line were provided by Selas Andritz, France, and the welding machines were supplied by Hugo Miebach GmbH, Germany.

The PLTCM, annealing and galvanising lines have a common integrated automation system, comprising basic (level 1) and process automation (level 2), as well as process models developed specifically for cold rolling mills. This enables all the plant units to be coordinated precisely with one another, which ensures high availability and output, while maintaining consistent product quality. Primetals Technologies was also responsible for supervising the installation and commissioning of the cold rolling mill.

Primetals Technologies offers a complete technology, product and service portfolio that includes integrated electrics, automation and environmental solutions. This covers every step of the iron and steel production chain that extends from raw materials to the finished product, in addition to the latest rolling solutions for the non-ferrous metals sector.

Primetals Technologies Ltd – UK
Website: www.primetals.com

Cold rolling mill from Primetals Technologies at Tangshan Iron and Steel Group



BEHRINGER



Behringer GmbH · 74912 Kirchartd
Phone (0 72 66) 207-0
info@behringer.net
www.behringer.net



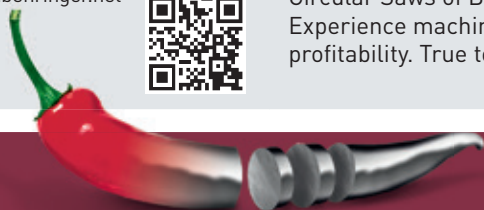
HBE DYNAMIC

The dynamic way of sawing

The HBE Dynamic series by BEHRINGER provides performance, ease of use and energy efficiency.

Use the potential of innovative High-Performance Band- and Circular Saws of BEHRINGER and BEHRINGER EISELE. Experience machines and solutions for high precision and profitability. True to the motto „RED HOT EFFICIENCY“.

Visit us at our Inhouse-
Show in Kirchartd,
Germany, from 16. - 18.
June 2015



PRODIM

Tube Check

CHECK DIMENSIONS FAST AND ACCURATE



MEASURE ONSITE

The Proliner is portable and measures each section of a tube to calculate the center lines. Data can be exported as a DFX-file for CAD or Quality control.

CHECK DATA

TubeCheck inspects and generates instant length, rotation and angle (LRA) data and XYZ coordinates. This data can be exported to CVS data to program a bender machine.

INSPECT DATA

Compare master and measured data. Define data as "pass" or "fail". The software will pinpoint any problems or errors. Adjust the bender machine for correct manufacturing.

For more information and demo movies, visit our website: www.prodim-systems.com



Prodim International BV Phone: +31 492 579050
Lagedijk 26, 5705 BZ Helmond, The Netherlands
Prodim USA Phone: 888-229-3328
7454 Commercial Cir. Fort Pierce, FL 34951, United States
info@prodim-systems.com / www.prodim-systems.com



Producing zero-colour, non-oxidised weld roots

PURGEXTRA™ is the latest weld purging product range from Huntingdon Fusion Techniques (HFT) for the weld purging of tubes and pipes from 1" to 24" diameter. The range complements the PurgElite® series, but in addition has extra purge gas inlets and corresponding exhaust ports.

Designed for the weld purging of titanium in particular, as well as ultra high purity stainless steel joints, corrosion-resistant alloy welding and Duplex steel

joints, the PurgExtra series allows the operator to purge normally at first, and then, when conditions are correct, to introduce additional gas at high flow rates to create a faster purge and a more efficient removal of unwanted gases.

One of the key reasons to use a PurgExtra system is for the operator to achieve zero-colour welds.

The extra gas flow possible with PurgExtra models purges additional gases that are expelled by outgassing that occurs as the metal is being heated.

The extra gas flow will prevent these expelled gases from combining with the hot metal and oxidising them, which causes the metal to discolour.

PurgExtra comprises two inflatable dams connected by a heat-resistant, highly flexible gas hose that has the IntaCal®II gas release system integrated.

The IntaCal®II allows the dams to be inflated correctly and then releases the inert gas

to safely purge the space between the dams.

IntaCal replaces the complicated valves that might sometimes fail and cause the dams to burst.

The highly flexible hose allows the PurgExtra systems to be pulled or pushed easily around bends and elbows.

A strip of RootGlo® material, located in the centre of the hoses between the dams, allows the welder to see clearly when the PurgExtra system has reached the correct position in the pipe. RootGlo can be charged by leaving it in daylight for 30 minutes, after which it will provide up to 24 hours of bright illumination inside the pipe.

As an option, the PurgeGate accessory may be fitted to the PurgExtra systems to protect the inflatable dams from accidental or faulty opening of gas supply valves significantly above the recommended flow rate, giving further protection to the dams against bursting.

Huntingdon Fusion Techniques – UK

Fax: +44 1554 836 837

Email: hft@huntingdonfusion.com

Website: www.huntingdonfusion.com



PurgExtra's dams are connected by a highly flexible gas hose

Spark protection for welding fume extraction units

EXTRACTABILITY, a division of Weldability-Sif, is a UK-based 'one-stop source' for welding fume extraction solutions. The company has introduced ProtectoSpark, a new product for the UK market, designed to prolong the life of filters.

Ready to use within minutes, ProtectoSpark consists of two components – a baffle plate and a collecting tray – and provides spark protection for the ProtectoXtract welding fume extraction unit. It can also be retrofitted.

Using the ProtectoXtract welding fume extraction unit, the polluted air is sucked in via extraction elements and

taken inside the filter unit via the air intake. There, the air hits the baffle plate and is led along the baffle plate towards the collecting tray.

At this point, air deflects by 180°, into the particle filter. Induced by the deflection, larger particles such as extinct spark particles fall into the collecting tray and stay there.

Removal of dust is carried out simply by opening the maintenance door on the front and taking out the collecting tray.

Without the ProtectoSpark, much of the welding fumes would have hit the filter directly and greatly reduced its lifespan. Instead, the particles can be

disposed of easily and simply according to their risk classification.

The ProtectoSpark is available from stock for next-day delivery.

Extractability operates from purpose-built facilities in Letchworth Garden City, Hertfordshire, UK, supplying portable, mobile and fixed welding fume extraction installations, including custom-designed solutions, to the UK distributor market and exporting to a number of countries around the world.

Extractability – UK

Fax: +44 8009 707757

Email: sales@extractability.eu

Website: www.extractability.eu

Tube straightening

VIOLI Srl, a specialist in the design and production of industrial machinery for the manufacturing of tubes and wires, has developed a line of straightening machines for metal profiles, both circular and complex, that includes the MRT, MRP and MRF series.

The MRT series for tubes and bars is equipped with straightening groups consisting of hyperbolic pairs of rollers obliquely mounted with an inclination opposed to each pair. The orientation of the axes, combined with the hyperbolic geometry of the rollers, allows the profile to rotate forward.

All the rollers are mounted on motorised and independent supports, flowing within bushings that allow the operator to modify the height and the angle of the system. Acting on the vertical axis is possible to adapt the straightening machine to different diameters, and to correct the line of the advancement of the profile in order to create a process of metal stressing and to get products perfectly straight.

The MRT series includes three models: MRT5 for tubes and bars with diameters from 3 to 11mm; MRT5M for diameters from 10 to 30mm; and MRT5M50 for 25 to 50mm.

The MRP series products are designed to straighten square, rectangular or complex profiles, hot or cold drawn. The devices consist of single or double straightening groups of motorised rollers, adjustable in height with a decimal display system.

Acting on the vertical axis is possible to correct the line of the advancement of the profile, in order to achieve perfectly straight products. Simply replacing the traction rollers allows processing of almost all the profiles included in the working range. The MRF series devices are managed by PLC, and are designed to straighten tubes and bars made of steel or other materials.

Violi Srl – Italy
 Email: sales@violimacchine.it
 Website: www.violimacchine.it

Fusion machines

THERMOPLASTIC fusion machines expert McElroy has opened an office and demonstration facility in Bangalore, India, devoted to sales, rentals and technical service.

“We see a tremendous need in India for better infrastructure to help grow its economy and improve its citizens’ daily lives,” said Peggy Tanner, executive vice president of international market development at McElroy. McElroy’s fusion machines are used to join polyethylene pipe in potable water, sewer, chemical, compressed gases and low-pressure natural gas applications. The company also manufactures machines to fuse polypropylene pipe, which is used in a variety of indoor plumbing systems.

McElroy – USA
 Email: fusion@mcelroy.com
 Website: www.mcelroy.com



PIPE EQUIPMENT SPECIALISTS LTD

INTRODUCING...

THE TAG E-Z FAB

PIPE CUTTING & BEVELLING MACHINE

A New, Unique, Self-centering, Heavy Duty dedicated Pipe Cutting & Beveling machine. Operated via a Touch-Screen Delta Control, a Heavy Duty 1.75 kW Servo Motor, gives the E-Z Fab unrivalled power & torque, for accurate repeatable process cuts & bevels on almost any material and wall thickness application.

7 Models covering 0.5" to 30"

Unrivalled wall thickness capabilities

Capable of cutting all materials.

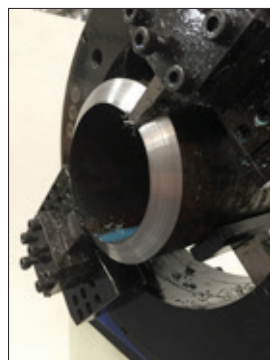
Rapid Self Centering Jaw System

Touch screen control with preset cutting speeds

Unrivalled cutting speeds and times.

Pipe cutting has changed...

Join the revolution!



**6" Carbon Steel
 22mm Wall Thickness
 Setup, Cut, AND Bevelled...
 6 mins 34 seconds!!!**



sales@TAG-PIPE.com

www.TAG-PIPE.COM

0044 (0)1869 324144

Weld bead removal for stainless steel tubes

WITH more than 500 machines sold around the world, Bossi Srl – Macchine Finitura Metalli has establishing itself as a major producer of belt grinders for the removal of stainless steel tube weld beads. The system is installed on tube-mills with TIG and laser welding systems. Bossi “STP” bead grinders are the result of technological innovation and experience gained over many years in this field.

These machines can work tubes with outside diameters from 6 to 410mm. Their main features are ruggedness and low maintenance demand. They also have adjustable working pressure, adjustable number of oscillations and the abrasive belt speed is adjustable

by inverter, and oscillation amplitude is adjustable. It also has an automatic centralised greasing system.

The bead grinder can also be supplied with a double control panel allowing the possibility of installing it on any type of tube-mill in both tube feeding directions.

Bossi can also supply brushing machines for round, square and rectangular tubes for any size and for all the speeds in TIG, laser and HF welding systems.

Bossi Srl – Macchine Finitura Metalli
– Italy

Fax: +39 02 9466265

Email: info@bossi-srl.com

Website: www.bossi-srl.com



Bossi's STP grinding machine

Non-contact temperature measurement

OVERHEATING of plastic materials during the extrusion process involves the risk of forming stains and scorches. The surface temperature measurement is for that reason of significant importance.

Wire-Temp 6000 for precise temperature measurement



Originally developed for applications in the cable industry, Sikora's Wire-Temp 6000 is also available as an independent online measuring device for hose and tube applications for surface temperature measurement of any plastic materials on a non-contact basis.

Designed for round products from 0.3 to 5mm, alternatively designed from 3 to 50mm, the system is laid-out for product temperatures up to 150°C, optionally up to 250°C.

The non-contact measurement of the temperature is independent from the diameter values, material and surface

structure of the product. Sikora is a manufacturer and supplier of measuring and control technology for the wire and cable, hose and tube and optical fibre and plastic industry.

With 200 employees worldwide, 13 offices and more than 30 regional representatives all over the world, the company provides customers with innovative product solutions and individual service.

Sikora AG –
Germany

Email: sales@sikora.net

Website: www.sikora.net

Coating inspection test equipment

ELCOMETER Ltd, a manufacturer and supplier of coating and concrete inspection equipment, has released its 2015 Inspection Equipment Catalogue.

The 328-page colour catalogue is formatted into sections covering software, coatings inspection, appearance,

physical test (laboratory equipment), concrete inspection and metal detection, allowing users to easily search for products most relevant to their inspection requirements. The new catalogue has 22 product group sections that include new photographs, helpful inspection

tips, updated national and international standards and comprehensive product group introductions.

Elcometer Ltd – UK

Email: sales@elcometer.com

Website: www.elcometer.com

Fluid analysis service to eliminate premature machine failure

EXOL Lubricants, an independent manufacturer and supplier of lubricant products, has launched a new fluid analysis service that will help to eliminate the risk of machines failing prematurely.

Fluid Check allows machine operators to regularly monitor the condition of the lubricating fluid they are using, in a bid to detect the type of contaminants and wear issues that can cause early machine failure.

Operators simply draw a sample of fluid from their machine and then send it to Exol for comprehensive testing. The results are posted to a secure web-based portal that operators can access to download the test data. If the fluid needs to be changed, the data will tell the operator and they can schedule maintenance before a failure occurs.

Steve Dunn, Exol Lubricant's sales director, said, "Operators often don't

check the quality of the lubricant in their machine at regular intervals but that's mainly because there isn't an easy, no-hassle system in place to facilitate that. Our Fluid Check service aims to overcome that problem by making it really easy for operators to get a rapid and clear picture of the quality of the fluid they're using. If there is a deterioration in fluid quality that's likely to cause a failure, Fluid Check will identify the problem and flag it up so that the necessary maintenance can be completed in good time."

Each customer using Exol's Fluid Check service is given a pack that contains all of the equipment required to draw off fluid samples safely and cleanly.


Exol Lubricants Ltd – UK

Fax: +44 121 568 6720


Website: www.exol-lubricants.com





Exol's new Fluid Check pack



**PIPE BEVELLING MACHINE
PIPE CUTTING MACHINE - PIPE FACING MACHINE**



Easy Cut & Bevel

www.cofim.fr - info@cofim.fr

<p>COFIM INDUSTRIE France Tél : +33 4 76 65 63 89 info@cofim.fr</p>	<p>COFIM LIMITED UK Tel : +44 79 30 19 92 01 paul@cofim.co.uk</p>	<p>COFIM TOOLS Poland Tel : +49 39 73 22 97 office@cofim-tools.com</p>
--	---	--

Pipe bends & Couplings



highly wear-resistant stainless steel pipe bends

- **stainless steel pipe bends** in all common pipe dimensions from **38.0 x 1.5 mm** till **204.0 x 2.0 mm**; radius: 75, 250, **500, 800, 1000, 1200 and 1500 mm** (AISI 304)
- **aluminium couplings** suitable for **vacuum and pressure conveyors** for diameter from **33.7** till **204.0 mm**
- **highly wear-resistant pipe bends: glass pipe bends and HVA-Niro® stainless steel pipe bends**

- immediately, from stock -

hs-Umformtechnik GmbH
D-97947 Grünsfeld **Germany**
Phone +49 (0) 93 46 / 92 99-0
Fax +49 (0) 93 46 / 92 99-200
www.hs-umformtechnik.de



Hydroforming press system with precision control

INTERLAKEN Technology offers hydroforming press systems for use in production or materials research applications. They are computer-controlled hydraulic press systems with data acquisition that uses a high-pressure liquid to hydroform materials.

Interlaken's hydroforming press system



The systems are designed for both tube and sheet hydroforming applications.

Interlaken Technology, which manufactures production press equipment for hydroforming, elevated temperature forming, and hot stamping systems, offers newly improved four-column hydroforming press systems for running high-volume production while reducing cycle time. These new hydroforming press systems are available in clamp forces from 250 to 5,000 tons. The hydroforming press systems are equipped with Interlaken's UniPress control system for reliable and precise control over the hydroforming process. Easy-to-use Windows-compatible interface software enables users to build motion and force profiles designed to fit specific forming needs. The multi-channel closed loop control system is easily programmed to handle event and time dependencies. The

control system offers dynamic mode switching, which enables the user to switch between a variety of feedbacks such as force, position, internal pressure and other system variables.

Hydroformed parts are stronger and weigh less due to structural integrity and fewer welds or add-on pieces. They also eliminate secondary operations, reduce scrap, lower material and manufacturing costs, and increase design flexibility.

The dual operation mode provides flexibility; the Learning/Research Mode determines tool and die specifications, measures and optimises processes, and programs forces and motions; and the Production Mode runs the optimised profile while monitoring and recording process variables.

Interlaken Technology – USA

Fax: +1 952 856 4221

Website: www.interlaken.com

www.kraussmaffeiberstorff.com

Top performer in pipe extrusion
First class machinery and integrated production systems from a single source

Engineering Value

KraussMaffei
Berstorff

Tools for maximising capacity

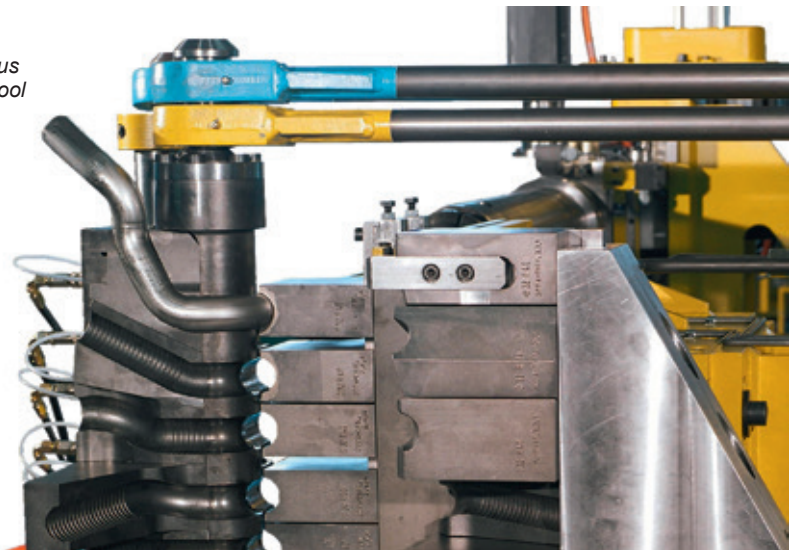
MANY tube and pipe processing companies exclusively use custom-made bending machines to achieve maximum precision and productivity. However, full machine capacity is often only possible in combination with a high-quality tool solution.

Market requirements rise continuously, whether through global competition, more complex tube geometries, or more exotic materials. The requirements placed on production processes and production machines also change. High-quality tool solutions contribute to faster throughput times, reduced non-productive times, and improved total productivity.

“Those making false economies usually invest double – in the form of time and money,” commented Hartmut Stöhr, managing director of pipe and tube bending machine company Schwarze-Robitec. Tube bending machines are high-tech products, which offer constant high quality only with the corresponding tool outfit.

Questions regarding the geometry of the tubes to be processed, their material and their output quantity determine the dimensioning of machine and tools. A lack of know-how can then quickly take its toll in the form of high reject rates, lack of quality, and complaints. “Those who don’t buy the tools from the bending specialist should check carefully whether the initially lower investment

Multi-radius bending tool



costs can actually be maintained across the complete production cycle,” advises Mr Stöhr. “I recommend users to play it safe in this sensitive area and to benefit from the advice and experience of the machine manufacturer.”

For this reason, Schwarze-Robitec does not sell any ready-made tool series products. Instead, the company offers a modular-configurable accessories programme that is adapted flexibly to the specific project requirements. This comprises single-stack tools and multiple-radius bending tools both for series and high-volume production.

Schwarze-Robitec designs material equipment especially for the respective

user industries. Specialised know-how has been available for decades for the automobile, boiler and power plant industries, plant and shipbuilding, as well as the offshore industry. Common to all material solutions are the use of high-quality materials and special hardening processes, which optimise the precision, wear resistance, dimensional stability and endurance of the tools. High repeat accuracy is also ensured.

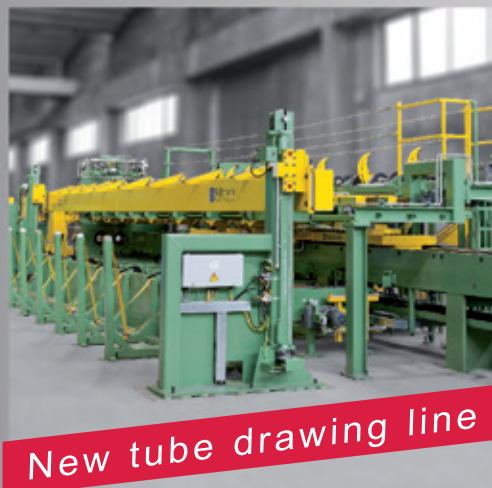
Schwarze-Robitec GmbH – Germany
 Fax: +49 221 89008 9920
 Email: sales@schwarze-robitec.com
 Website: www.schwarze-robitec.com



Manufacturing program:

Production lines for processing tubes, bars and profiles of all metals

- Peeling equipment
- Drawing equipment
- Straightening equipment
- Pointing equipment
- Cutting equipment
- Chamfering equipment
- Packing equipment
- Testing equipment
- Magnetic billet heaters



New tube drawing line



Bültmann
 Partners in know-how

Bültmann GmbH
 Hönnestr. 31
 58809 Neuenrade Germany
 Phone: +49 2394 180
 Fax: +49 2394 18171
 E-Mail: info@bueltmann.com
 www.bueltmann.com

Improving pipe cutting and bevelling

THE E-Z FAB is a new HD cutting and bevelling machine from TAG Pipe Equipment Specialists.

The workshop-based semi-portable, self centring, semi-automated cutting and bevelling system offers improved pipe cutting and bevelling speed, range and capacity. Seven models enable the TAG E-Z Fab to cover a pipe range between 1/2" and 30".

TAG's split frame toolboxes are bolted to a rotating ring on the E-Z Fab machine. Due to the rigidity of the frame and the strength of the ring these toolboxes, which are fitted with TAG HS HD tooling, can be rotated around the contour of the pipe at high speeds (up to 35rpm) and are fed into the cut on every rotation by a striker system, feeding the tooling down a thread, via a unique gear controlled transmission slide, which regulates the tool feed as required.

It is effectively a clamshell cutting and bevelling machine in a solid frame that, due to its rigidity, can cut and bevel at high speed. When cutting 6" carbon steel

with a thickness of 22mm setup, cutting and bevelling takes places in six minutes and 34 seconds. Pipe is loaded into the machine and clamped in seconds via the rapid self-centring jaw system.

Power is delivered from a new single-phase 1.75kW NC-controlled servo motor. The servo motor delivers excellent power and torque, even under heavy load, and enables uninterrupted cutting and bevelling at high speeds.

It also features TAG's new programmable Delta touch screen control with pre-set application settings. It will also store its previous settings.

The Delta NC control delivers a signal to the servo motor, according to the operator's touchscreen instructions.

The E-Z Fab can be converted into an orbital pipe saw configuration. The HD toolboxes are removed and a Metabo motor fitted to the ring. This motor houses a high-speed rotating saw blade designed for process cutting of thinner wall pipes and tubes. Rotation is performed either manually or automatically via the touch



The E-Z Fab

screen control to cut and bevel thin-to-medium wall (up to 12mm) carbon, stainless and other ferrous and non-ferrous pipe and tube.

TAG Pipe Equipment Specialists – UK
Email: sales@tag-pipe.com
Website: www.tag-pipe.com

HIGH QUALITY PIPELINE BRUSHES

Special brushes for the professional use on U- and V-welds in the tube and pipeline industry. Pipeline brushes are especially narrow and therefore they are the perfect tool for cleaning all welds at tube connections. The remarkable feature of the high quality LESSMANN brushes are the long lifetime and the quietness of running.

Product range of LESSMANN pipeline brushes:

- Standard pipeline brushes
- Pipeline brushes, right-left knotted
- Pipeline brushes with rose bud
- Encapsulated pipeline brushes



 QUALITY MADE IN GERMANY

LESSMANN[®]
THE GERMAN BRUSH COMPANY

Lessmann GmbH
Lucas-Schultes-Str. 2
86732 Oettingen
Germany

Tel.: +49 9082 707-0
info@lessmann.com



www.lessmann.com


Moreschi[®] SRL
IL NOME GIUSTO PER DARCI UN TAGLIO



WE INVEST IN THE FUTURE!

TCT blades with coating, cold cutting **HSS**, **FRICITION** & hot, **SEGMENTAL**, **BANDSAW** blades
FOR STEEL, NON FERROUS METAL AND ALLOYS

Diameter 80÷2200 mm - Kerf 1,2 ÷ 14 mm - Pitch 6 ÷ 180 mm

100% **MADE IN ITALY**

VILMINORE DI SCALVE (BG) ITALY - TEL. +39 0346.51341 - WWW.MORESCHI.EU - INFO@MORESCHI.EU

10TH INTERNATIONAL TUBE & PIPE TRADE FAIR
FOR SOUTHEAST ASIA

16 – 18 SEPT
2015

BITEC | BANGKOK

www.tube-southeastasia.com



VISION INNOVATION TECHNOLOGY



Industry Partner:



Officially Supported by:



Messe Düsseldorf / Organizer of:



Supporting Organisations:

- Design & Engineering Consulting Service Center (DECC)
- Thai Foundry Association
- Thai Stainless Steel Development Association (TSSDA)
- Materials Innovation Center - Kasetsart University
- Thailand Iron and Steel Industry Club
- Electrical and Electronic Products Testing Center (PTEC)
- Electrical and Electronics Institute (EEI)
- Thai Subcontracting Promotion Association (ThaiSubcon)
- Electrical Engineering Academic Association (Thailand)
- Electrical Electronics & Allied Industry Club
- Thai Electrical, Electronics and Telecommunication Industries Association
- Association of Thai Steel Industries

Messe Düsseldorf Asia Pte Ltd
3 HarbourFront Place
#09-02 HarbourFront Tower Two
Singapore 099254
Tel (65) 6332 9620 _ Fax (65) 6337 4633
tube@mda.com.sg



Radtube drives Nukon Rex pipe cutters

A NEW pipe-cutting attachment for Nukon's Rex fibre laser machines is being driven by Radan Software's specialist Radtube module.

The pipe-cutting function increases the flexibility of Rex machines. Nukon development manager Alper Tarkan commented, "The new attachment provides an economical method of providing full pipe cutting functionality, increasing opportunities for manufacturers who incorporate it into their production."

Radan, from Vero Software, already provided a full CAD/CAM solution for standard Rex machines, and worked closely with Nukon engineers to create an integrated package that efficiently drives the new pipe cutting function.

Paul Monte, Radan business development manager, said, "Having developed the functionality and post processor to drive this innovative solution on the Nukon machine, it not only provides the CNC code, but also gives full simulation of the processes, to eliminate error on screen, before any metal is cut."

The innovation was unveiled at the Brno exhibition in the Czech Republic, and was also demonstrated at Maktek, Istanbul, and EuroBLECH in Hanover. The pipe-cutting function is suitable for cutting and engraving a variety of metal pipes and tubes, for sectors such as advertising, crafts, decoration, lighting and other metal processing industries.

Radtube is a laser CAD/CAM system for rotary and multi-axis cutting machines, developed specifically for tube cutting and manipulation. The intuitive programming system allows tubes or sections to be parametrically defined from a library of standard shapes, allowing cutting apertures and profiles to be defined.

Radtube supplies a library of parametric tube shapes that simplify the creation of the tube material to be cut. If a suitable section does not exist, the Freeform option is used to create the special shape section. Freeform shape tubes can even be created from one of the libraries of Radtube parametric shapes. If none of these standard shapes are suitable, the user simply draws the section centre line profile or outside/inside shape using the integrated CAD tools. Modelling in Radtube is done entirely in 3D.

Vero Software designs, develops and supplies CAD/CAM/CAE software, under brands that include Alphacam, Cabinet Vision, Edgcam, Machining Strategist, PEPS, Radan, SMIRT, Surfcam, WorkNC and VISI, along with the production control MRP system Javelin.

Vero Software – UK

Website: www.verosoftware.com

Nukon – Turkey

Fax: +90 224 241 3939

Email: info@nukon.com.tr

Website: www.nukon.com.tr

Sustainable bending technology from Germany

TO design tube processing to be resource conserving and efficient, Schwarze-Robitec has developed a series of sustainable solutions. These include integrated residual length optimisation for tube bending machines for automobile industry suppliers, which reduce residual tube lengths to a minimum, making material savings.

Trials by customers have shown that the material input, depending on the respective tube system, can be reduced by up to 20 per cent.

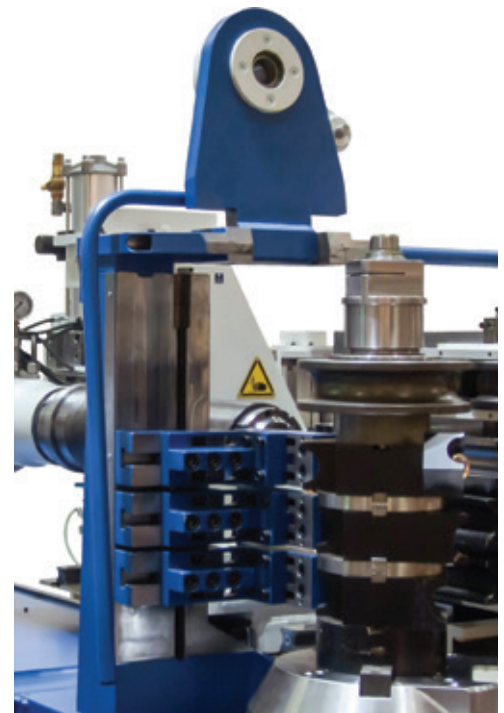
The Terminal-End-Bender is used for the manufacture of tube systems in power plant construction.

With this additional bending machine, bends in both directions are conducted subsequently at the rear end of the produced tube coil without having to interrupt the fully automatic manufacturing process.

A further new development is the Quick Tool Unlock rapid clamping system for bending tools in series and mass production, which enables fast and easy tool change, reducing unproductive set-up times.

Cost savings can be achieved with the separating system integrated in the bending system. Here, several individual tubes are coupled to one bending program and are separated after bending with maximum speed by means of the separator. As clamping and support lengths are not required, there is less material loss and scrap.

Schwarze-Robitec GmbH – Germany
 Fax: +49 221 89008 9920
 Email: sales@schwarze-robitec.com
 Website: www.schwarze-robitec.com



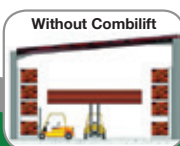
ifting Innovation

Customised 4-Way Handling

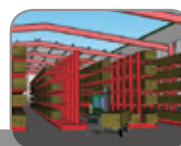
www.combilift.com



- Space saving, safe and productive handling
- Robust and versatile
- Indoor/outdoor capabilities
- Capacities from 1.5 – 25 tonnes
- Diesel / LPG / AC Electric



Contact us for:
FREE warehouse design service
FREE DVD



Combilift Ltd Gallinagh Co. Monaghan Ireland Tel: +353 47 80500 UK: 07870 976 758 E-mail: info@combilift.com



The 16th China (Guangzhou) Int'l Tube & Pipe Industry Exhibition



16-18 June 2015



Guangzhou, China



Shangxiajiu Street, Guangzhou, China

Photo: bigstockphoto.com Photographer: Sean Pavone

Over the past 15 years Guangzhou International Tube and Pipe Industry Exhibition has become a major meeting place for those involved in the production of tube and pipe materials, products, equipment and technology.

It has gained the support of major enterprises such as BaoSteel, Anshan Iron and Steel Group Corporation, Shougang Group, Wuhan Iron and Steel (Group) Corporation, TISCO, Benxi Steel, HBIS, Valin Group, Hubei Xinyegang Steel, Danieli Metallurgical Equipment, SPCO, EMSS, Tenova, Nippon Steel Corporation, Marcegaglia, TPCO, North Advanced Science and Technology (Tianjin) Industrial, Tsingshan Holding Group, Jiuli Group, Panyu Chu Kong Steel Pipe Company, Inductotherm Group China, Dongbei Special Steel Group, Chengde Wanlitong Group, YHI Group, China National Offshore Oil Corporation, Northern Heavy Industries Group, TYHI, CNPC, Hebei Longma Steel Pipe Manufacturing Inc, Kingland Pipeline, BSW Petro-Pipe, Liaoyang Steel Tube Company, Jiangsu Sandeli Group, Jiangsu Wujin Stainless Steel Pipe Group, Winner Stainless Steel Tube, Tianda Group, TBCC, Shanghai Mingheng Pipe Fittings Machinery, Xinxing Ductile Iron Pipes, Dabohai Pipe Fitting, Haihao High Pressure & Pipe Fitting Group, Huanli Pipe Fitting, JNDIA, Dongnan Pipe Made Co, Haida pipe fittings group, HYMCO, Shanghai Sanqing Industrial Development and Feiting Pipe Co.

VENUE

China Import and Export Fair Pazhou Complex
Ground Floor, B Area
Address: No 380, Yuejiang Road, Guangzhou, China

ORGANISER

Guangzhou Julang Exhibition Design Co Ltd
Email: meiwen@julang.com.cn
Website: www.julang.com.cn

OPENING TIMES

Tuesday, June 16: 8.30am – 5.00pm
Wednesday-Thursday, June 17-18: 9.00am – 5.00pm

'Not just an LA problem'

Water main leaks in Los Angeles signal what lies ahead for other American cities as corroded pipes near the end of their service life

"I love Venice. But it's old and falling apart, and these things need to be taken care of."

This Venice is in California – not Italy: but Doug Fischer, the resident quoted, knows something of water-related problems. On a day in 2013 a pipe beneath his street split open, disrupting the water supply to some 60 houses in the beachfront neighbourhood in western Los Angeles.

As reported by the *Los Angeles Times*, the records show that workers pumped out standing water, ripped out and tossed aside chunks of asphalt, then dug a chest-deep hole measuring 12 feet square. In the end, crews had removed and replaced seven feet of faulty pipe.

The *LA Times* observed that the water main break that flooded Mr Fischer's street fits an increasingly common pattern for the waterworks serving the area. The pipe that sprayed water a foot in the air through a hole in the buckled asphalt was more than 80 years old. It was rusted out. And it was buried in corrosive soil.

The *Times's* assistant data editor, Ben Poston, and Metro reporter Matt Stevens noted that about one-fifth of the city's water pipes were installed before 1931 and nearly all will reach the end of their useful lives in the next 15 years. They are responsible for close to half of all water main leaks, and replacing them is a looming problem for the city's Department of Water and Power. ("Aging Water Mains a \$1-Billion Headache for DWP," 17 February)

As pipes continue to deteriorate and leak, millions of gallons of water are spewed onto city streets amid one of California's worst droughts on record; and costs to repair and maintain the ageing system mount, totalling more than \$250 million over the last eight fiscal years.

"We must do something about our infrastructure and we must make the necessary investment," H David Nahai, a former head of the DWP, told the *Times*. "If we don't act now, we'll simply pay more later."

In fact, the DWP has a \$1.3-billion plan to replace 435 miles of deteriorating pipe by 2025. To reach that goal, the department would need to more than double the number of pipe miles it replaces annually and more than triple the average amount it spends on pipe replacement each year.

Water officials said the department has already budgeted \$78 million for water main replacement in the current fiscal year, a significant increase from its annual average. But future progress on the plan for the ageing infrastructure will require answers to difficult questions of funding and of inconvenience to commuters, among others.


CONCRETE LINING DETERS RUST


But this is a civic project, after all – a category of endeavour long associated with cross-purposes and delay. Of greater interest to TPT readers are the pipes central to the story. These are some highlights from the section to which the *Times* writers gave the title "Los Angeles and Its Pipes":

- More than a quarter of a million pipes make up the 6,730-mile DWP water main network. Since 2006, work crews have responded to about 13,000 leaks – about four a day across the city
- Over the last eight fiscal years, the DWP spent an average of \$44 million annually to replace about 21 miles of pipe per year

Even so, water officials estimate that about 8 billion gallons of water are lost each year to leaky pipes, firefighting, evaporation, theft and other causes. The lost water could supply almost 50,000 households for a year


- One small pipe leaked more than half a million gallons of water over the course of the year it took the DWP to find and fix it – a task complicated by the effect of ambient noise on sound equipment
- In addition to the age of the pipe, factors contributing to leaky water mains include soil quality, water pressure, and leak history. All are weighed by DWP engineers in prioritising pipes for replacement
- Each water main receives a letter grade based on its likelihood of failure and the potential consequences of a break. About 6 per cent of the system earned grades of D and F. Officials believe that they can replace all the pipes now ranked D and F (40 per cent of which were installed in 1930 or earlier) over the next ten years.

 DWP officials said that cast iron mains installed before the 1930s often rusted from the inside out, causing leaks. According to the *LA Times*, in the mid-1930s the DWP began lining new pipes with concrete. That change corresponds with a steep decline in leaks, the reporters found.

 Infrastructure experts, many of whom commend the Los Angeles DWP for addressing the issue, note that other US cities – including San Francisco, Seattle, and Portland, Oregon – are also seeing old pipes coming to the end of their service life.

Colin Chung is an asset management consultant based in the small city of Irvine, 40 miles southeast of Los Angeles. As he told Messrs Poston and Stevens of the *Times*, "This is not just an LA problem."

Steel

 Tata Steel will supply steel rail for the Crossrail project for improving infrastructure and railway commuter travel in the environs of London. The steel, manufactured at the Indian producer's Scunthorpe mill in the north of England, will be rolled at the company's Hayange site in northern France.

As reported on 20 February by Rakhi Mazumdar in the *Economic Times* (Kolkata), Tata said it had already commenced deliveries under the Crossrail contract and will ultimately supply the project with more than 35 miles of rail: 7,000 metric tons in total.

The Crossrail route will serve 40 stations and cover more than 62 miles, from Reading and Heathrow in the west through new twin-bore 13-mile tunnels below central London to Shenfield and Abbey Wood in the east.

The Tata Steel system moves the rail through an electromagnetic field in an induction furnace which heats it to 950°C. It is then rapidly cooled by compressed air. The company claims that the method imparts exceptional wear resistance.

▶ When, in 2011, BlueScope Steel CEO Paul O'Malley announced the closure of the No. 6 blast furnace at Port Kembla, the move came with the loss of some 1,000 jobs, \$500 million of one-off costs, and BlueScope's pullback from the export market. The future of Australian steelmaking seemed uncertain. Now, Mr O'Malley told Tim Binsted of the *Sydney Morning Herald* (22 February), as the weaker Australian dollar begins to attract manufacturers back to Australia the prospects for the steel industry look brighter.

"It is in its embryonic stages, but we are already seeing window manufacturers and door manufacturers saying, this is easier for us to do [in Australia] again," Mr O'Malley said.

A boom in new residential housing in Australia is also boosting domestic demand for BlueScope's steel products, giving the Melbourne-based provider to the building industry its best results since the global financial crisis.

The company reported a 62 per cent jump in half-year profit (through December 2014) to A\$79.6 million, and a 9 per cent rise in sales to A\$4.35 billion.

"Australian steel products knocked it out of the park," Mr O'Malley told the *Herald*.

▶ Serbia's sole steel mill will remain in government hands after the collapse on 17 February of the sale of the Zelezara Smederevo plant to US steelmaker Esmark. According to Prime Minister Aleksandar Vucic, it had proved impossible to secure a guarantee from Esmark that the plant, which employs 5,000 people, would not be closed once the raw material in stock is used up. But Mr Vucic said that the failure of the sale would not jeopardise an impending loan from the International Monetary Fund (IMF), considered vital to the future operation of the plant.

Reporting from Belgrade for Reuters, Ivana Sekularac noted that experts have long questioned the long-term viability of Zelezara Smederevo. Even so, Mr Vucic said Serbia would seek to install new management promptly, with the aim of increasing production from some 340,000 metric tons of steel last year to over a million mt in 2015.

Any plans must be approved by the European Commission, as the stability of its steel sector is a major consideration in Serbia's application to join the European Union.

Oil and gas

Keystone XL is halted by presidential veto – but not for want of contributions to friends of the pipeline in the US Congress

On 11 February, the US House of Representatives passed a bill that would allow TransCanada to go ahead on its Keystone XL oil pipeline without a presidential permit or additional environmental review. The Senate had already passed the bill, in January. President Barack Obama on 24 February vetoed the legislation. Congressional proponents of the project vowed to fight on but probably do not have the votes to override the veto.

Keystone XL would transport oil from Canada's oil sands to refineries on the US Gulf Coast. Supporters say it is essential infrastructure that would provide Americans with long-term energy independence, jobs and an economic boost. Opponents say it would have serious environmental impacts and increase the country's dependence on fossil fuels.

MapLight, based in Berkeley, California, is a non-profit, non-partisan research organisation that tracks the influence of money on politics. As reported by Amanda Andrade on the Los Angeles-based website *opposingviews.com*, MapLight on 11 February disclosed that the 207 members of the House who supported the pipeline bill received an average \$45,218 apiece in campaign donations from lobbyists for oil and gas special interest groups. ("Oil And Gas Industry Offers Huge Payouts to Politicians," 12 February)

According to the Microsoft web portal MSN, cited by MapLight, individual contributions ranged as high as \$327,000 and cut across party lines. The 29 House Democrats who voted for Keystone XL received an average of 13 times more from the oil and gas industry than those who voted against it. The highest-scoring recipient among Mr Obama's fellow-Democrats took in more than \$112,000.

By comparison, a House member of either party who voted against the pipeline received an average \$3,559 from the industry.

MSN said that senators who voted for the pipeline bill fared even better than their House counterparts, receiving about \$250,000 per backer of the pipeline.

Only four countries are currently producing either shale gas or tight oil in commercial volumes

Shale gas commands so much news coverage that it can come as a surprise how few players are in fact active in the field. As indicated by data compiled by energy economist Fawzi Aloulou of the US Energy Information Administration (EIA), only the US, Canada, China and Argentina are appreciable

producers of either natural gas from shale formations (shale gas) or crude oil from tight formations (tight oil); only the US and Canada produce both.

China produces some small amounts of shale gas, while Argentina produces some small amounts of tight oil. Although hydraulic fracturing ("fracking") techniques have been used to produce natural gas and tight oil in Australia and Russia, the volumes produced did not come from low-permeability shale formations.

Also according to the EIA, the four countries producing commercial volumes of shale gas and tight oil all raised their output in 2014. In all four, natural gas and crude oil production from shale and tight formations grew at a faster rate last year than production from non-shale and non-tight formations.

What Mr Aloulou characterises as "notable shale resource exploration efforts" are under way in several countries, including Algeria, Australia, Colombia, Mexico and Russia. However, he wrote, commercial shale development of the type seen in the US requires the ability to rapidly drill and complete a large number of wells in a single productive geologic formation.

The logistics and infrastructure necessary to support this level of activity – including the drilling and completion processes, the manufacture of drilling equipment, and the distribution of the final product to market – are not yet evident other than in the US, Canada, China and, to some extent, Argentina.

The EIA noted that other above-the-ground factors – such as ownership of mineral rights, taxation regimes and social acceptance – also play a role in decisions regarding the development of shales and other tight resources.

Elsewhere in oil and gas . . .

▶ The US government is predicting that trains hauling crude oil or ethanol will derail an average of ten times a year over the next two decades, causing more than \$4 billion in damage and possible fatalities in densely populated areas. The projection, from a Department of Transportation analysis, reviewed the risks of moving vast quantities of both fuels across the nation and through major cities. Based on past accident trends, anticipated shipping volumes and known ethanol and crude rail routes, the analysis predicted about 15 derailments in 2015, declining to about five a year by 2034.

The study was completed in July 2014 but drew attention on 16 February when a train loaded with crude derailed in West Virginia. The fiery accident was the latest in a series, and senior federal officials said it emphasises the need for stronger tank cars and more effective braking systems, among other safety improvements. The volume of flammable liquids transported by rail in the US has risen dramatically over the last decade, driven mainly by the oil shale boom in North Dakota and Montana. This year, nearly 900,000 loads of oil and ethanol are expected to move by rail in tank cars, each holding 30,000 gallons of fuel.

- Tube ID Scarfing Systems
- OD Scarfing Inserts
- Tube Cutoff blades
- Cutting Rings
- OD Scarf Chopper
- Impeders
- Impeder Ferrites & Casings

alpha Metall

ISO 9001:2008 CERTIFIED

NO MORE DANGEROUS CHIP WINDING

WITH THE ALPHA METALL OD SCARF CHOPPER

Tube ID Scarfing Systems
9,5-620mm
3/8"-24"

Member of the **ITA**
International Tube Association

The Tube ID Scarfing Company

Serving the Tube Industry since 1983

Alpha Metall GmbH & Co. KG • Matthias-Erzberger-Str. 13 • 66806 Ens Dorf • Germany
info@alpha-metall.de • www.alpha-metall.de

Made in Germany 100% Made in Germany



TUBE & PIPE

管道技術 Technology

WE NEVER MISS A SHOW!

Tube & Pipe Technology magazine exhibits at all the **major tube and pipe trade fairs worldwide** giving you maximum global exposure for your advertising.

www.read-tpt.com

Magazine for the tube & pipe industries

& PIPE

Technology



SEE US AT...



Energy

The 'shale gas revolution' is dimming revival prospects for the nuclear power industry in the United States


Not much notice has been taken of the dampening effect that the cheaper natural gas made possible by the fracking method is having on American nuclear power companies. But industry experts consulted by the *Detroit Free Press* say that today's low natural gas prices, together with slower growth in demand for electricity and recent expansions in renewable energy generation, make it less appealing to build new nuclear plants – or even to keep older plants running if they need expensive repairs.

Free Press business desk reporter JC Reindl recently presented a case in point: Fermi 3, Michigan's first new nuclear power reactor in more than a quarter of a century, now close to gaining a combined construction and operating licence from federal regulators. But according to Mr Reindl it is an open question whether the plant will ever be built. ("*Cheaper Natural Gas Prices Could Shelve Plans for Fermi 3,*" 23 February)

Fermi 3 would neighbour DTE Energy's currently operating Fermi 2 nuclear plant on Lake Erie about 30 miles south of Detroit. It also adjoins the former site of Fermi 1, an old experimental reactor which experienced an emergency shutdown in 1966. DTE has been seeking permission for Fermi 3 since September 2008.

Local anti-nuclear groups fervently opposed to Fermi 3 would like to see the \$10 billion estimated cost of the project go instead toward wind turbines, solar panels and other low-carbon energy systems. But it is the fading financial allure of nuclear power that will deliver even short-term victory to the opposition.

As noted by Mr Reindl, financial reasons were cited in the shutdown ahead of schedule of four nuclear power plants – in California, Florida, Vermont and Wisconsin – over the past two years. He wrote, "Back when DTE proposed its new Fermi reactor, the energy market had not yet been reshaped by the shale gas revolution."

 Michiganders, like Americans in general, are using less electricity, which means less demand for the power sold by utilities. Energy Information Administration (EIA) data shows that total power use in the US declined nearly 1 per cent between 2008 and 2013. In Michigan, over the same period, electricity sales fell 2.5 per cent as wind turbines, solar panels and biomass generation sites proliferated across the state.

Michigan has mandated that utilities generate 10 per cent of their electric sales by 2015 from renewable energy sources. DTE Energy, the owner of Fermi 3, says it will reach that mark.

Also, later this year the federal Environmental Protection Agency (EPA) could finalise rules to cut carbon dioxide

emissions from plants by 30 per cent from 2005 levels by 2030. But Jeremiah Johnson, assistant professor at the University of Michigan's School of Natural Resources & Environment, told the *Free Press* that utilities likely will not need to resort to nuclear to meet that goal.

PROGRESS POST-FUKUSHIMA

An irony of the uncertain prospects for nuclear power in the US is that safety concerns, although not allayed altogether, would seem to have been addressed. In a section entitled "Fermi Facts", Mr Reindl noted that:

- Fermi 2, currently in operation near Detroit, is of similar design to the Fukushima reactor implicated in the meltdowns in Japan in 2011. But it has better safety features, including backup diesel generators within a concrete bunker situated well above the floodplain.
- Fermi 3 would be an Economic Simplified Boiling-Water Reactor. Considered a third-generation reactor, it is designed to be able to cool itself for a week in an instance of complete power loss. The builder is GE-Hitachi (Wilmington, North Carolina), a global nuclear alliance known in Japan as Hitachi-GE Nuclear Energy, Ltd.

Automotive

A hypothesis for a lagging industry: electric cars are losing out to a new/old fuel-saving technology – the turbocharger

"It's really a mini jet engine in your car."

Michael Stoller, a spokesman for Honeywell Transportation Systems, was referring to the turbocharger – which Honeywell supplies in quantity to automakers around the globe.

The forced-induction device, which reuses hot exhaust gases to increase engine power in a smaller space, was once the almost exclusive equipage of expensive sports and luxury cars. But now it is turning up in vehicles from budget subcompacts to pickup trucks and plug-in hybrids.

As explained by Lawrence Ulrich, the chief auto critic of the *New York Times*, in turbocharger technology the hot exhaust spins a turbine wheel at up to 250,000rpm, which compresses air and stuffs it into engine cylinders, allowing more fuel to be burned in a same-size engine.

An automaker is thus able to use six cylinders instead of eight, or four instead of six, and still achieve the power of a larger engine.

The downsized engines also best their traditional counterparts in low-end torque, for easier acceleration. The result, Mr Ulrich says, is 10 to 30 per cent better fuel economy, often in conjunction with direct fuel injection, which enhances

efficiency by means of computer-managed sprays of atomised fuel. ("Carmakers Find That Turbos Are a Powerful Path to Fuel Efficiency," 26 February)

While this information is useful, a premise advanced by Mr Ulrich is more interesting. He suggests that the turbocharger – with its advantages of bountiful power and savings at the pump – may be the reason why electric vehicles are so slow to find favour with consumers.

Statistics supplied by the *Times* support Mr Ulrich's assertion that "by any industry standard the pace of the turbocharger revolution has been breathtaking." In 2011, less than 7 per cent of new cars and trucks in the US were sold with turbochargers. In just four years that percentage tripled to 21 per cent.

The consumer auto website *Edmunds.com* says that 49.7 per cent of the 350 car and truck models sold in the US offer a turbocharged engine, up from 30 per cent in 2010. Honeywell (Morristown, New Jersey) forecasts that nearly four in ten new cars and trucks sold in the US will be turbo-powered by 2019. Turbocharged engines are expected to be found in a staggering 80 per cent of new cars by 2025.

EUROPE THE LEADER IN TURBOS

The proliferation of turbochargers is by no means an American phenomenon. Japanese automakers have been somewhat slow to adopt them, focusing more on hybrid

technology. But in Europe, which took to small engines early and earnestly, 67 per cent of showroom cars are turbos, including virtually every diesel.

Germany's Audi, which helped pioneer turbos in the US decades ago, offers them up and down its lineup. Other carmakers eager for luxury buyers – Mercedes Benz, BMW, Porsche, Ferrari, Aston Martin and, in the US, Cadillac – are revamping their lineups with turbos of 400, 500, even 600 horsepower.

Mr Ulrich also noted that Aston Martin – famed for its "silken yet gas-guzzling" V12 engines – recently sold Mercedes a 5 per cent company stake in exchange for components including Benz's downsized bi-turbo V8 engines.

Mr Stoller, of Honeywell, told the *Times* that the full-spectrum appeal of turbocharging was being driven by its ability to complement other fuel-saving technologies; and, in the US, by regulatory pressures. As automakers strive to lift their average fuel economy to 54.5 miles per gallon by 2025 – the target set by the Environmental Protection Agency – turbochargers provide a key to higher mileage at no sacrifice of the performance demanded by consumers.

In the process, Mr Ulrich wrote, "Analysts say the efficiency [of turbochargers] has had the unintended effect of helping slow the broader adoption of alternative-fuel vehicles."

Dorothy Fabian, Features Editor (USA)

from
START TO FINISH WITH
MOJ



THE START

- The well proven, cost-effective solution
- Range covers; manual, semi-automatic, fully automatic & inline operation
- Capacity: - 6mm ø to 250mm ø x 25mm to 12m lengths
- High accuracy & production rates

THE FINISH

- Tube or Bar
- Any material
- Simultaneously chamfer the outside, inside & end face
- Wide variety of end finish applications possible

www.mojmachines.co.uk



For further details contact: MOJ MACHINES LTD.
 UNIT 6, BEVERLEY TRADING ESTATE, 190 - 192 GARTH RD,
 MORDEN, SURREY, SM4 4LU - UK
 TEL: 0044 (0) 1252 878984 • Mobile: 07748 305702
 email: sales@mojmachines.co.uk

Manchester Tool and Die M71 Servo Flag Stop



Our servo positioning flag stop system helps to quickly adjust tube out through the machine's H.M.I. (human machine interface). It provides consistent adjustments for quicker setup up times.

- 12.5 times faster than standard trunnion flag system when making tube out of jaw adjustments
- On average, it takes two minutes to make a 1.5" adjustment on a manual trunnion flag, the Servo Flag takes only 7 seconds
- Average time savings is 12.5 minutes per shift
- Pays itself back in less than three months at one shift/day*
- Payback is less than one month running three shifts/day*
- Retro fits of older machines are also available — contact MTD for more information

* Values based on five setups per shift
* Values are estimates, actual payback may vary



Contact MTD for more information:
 Call 260-982-8524 or email at sales@mtdbkb.com

www.mtdtube.com

Tube scarfing systems & tools



Photo: Ernst Blissenbach GmbH (see page 74)

The process reviewed here goes by two names – scarfing and deburring – and has a commensurably large and various kit of tools: mounting units; towbars with impellers, notching carriers and cutting rings; holders, cassettes, blades and inserts; chip deflectors; and bead chopper units.

Together with others for special-dimension applications, these tools are employed in one of three processes – mechanical, hydraulic or mechanical-hydraulic – to polish to perfection both the inside and outside surfaces of tube and pipe.

It is a challenging remit; and, given the strong association of scarfing/deburring with welding, one that must be reliably discharged every time.

Imperfectly scarfed weld beads could cause a faultless production run of high-frequency longitudinally welded tube or pipe to fail inspection.

The companies reviewed here are in the business of ensuring that such a thing is not only unthinkable but also impossible.

Edge scarfing equipment

DURATRIM edge scarfing equipment for welded tube mills, from STE (Superior Technologies Europe), enables the manufacturer to trim and clean the steel coil's edges as it enters the tube mill prior to the forming station.

Commercially slit coils can suffer from as much as 35 per cent of their edges not being cut cleanly, whether due to bad practices, poor quality material or worn tooling.

The result is that edge presentation at the welding point will be poor, and welding heat has to be increased to melt more material. Excessive 'squeeze pressure' also has to be applied to avoid defects.

These issues will increase material and energy costs, as well as creating an excessively large inside/outside welding flash that then has to be removed.

The Duratrim edge scarfing system is designed to remove these problems, and trims the strip edges at the required rate, ensuring clean and parallel faces meet at the welding station.

Claimed benefits of this process include reduced welding energy; consistent homogeneous weld integrity; reduced strip width/costs; ability to weld more challenging materials; and less OD/ID welding flash (bead). A consistent strip width leads to fewer rejects. The unit runs dry, without emulsion.

The 'floating' design of the scarfing assemblies allows the unit to follow the path of the steel strip while maintaining positive contact pressure on the scarfing inserts.

The system uses four sets of special scarfing inserts, which remove material from the strip edges, top and bottom. The inserts are supported and kept in position by eight pneumatic cylinders, the pressure of which is adjustable, enabling different amounts of material to be removed.



The Duratrim edge scarfing equipment increases yield and weld quality

All sets of inserts are mounted on a floating mechanism, ensuring constant material removal even with movements in the strip.

STE also offers a comprehensive range of welding consumables, including ferrite cores, impellers, induction coils and OD/ID scarfing inserts.

Superior Technologies Europe Ltd – UK

Fax: +44 1256 47 99 33

Email: sales@st-europe.co.uk

Website: www.st-europe.co.uk

Tube ID scarfing systems – ready for Industry 4.0

ALPHA Metall is among the few manufacturers of machinery who supply PLC-controlled production units for Industry 4.0 tube mills for communicating with main PLC tube mill boards.

During recent years Alpha Metall has installed several PLC-controlled tube ID scarfing systems as turnkey projects at well-known tube manufacturers around the world.

The tube ID scarfing systems are state-of-the-art and aim to provide the best tube ID scarfing results.

They can be installed in all tube mills and consist of standard items such

as ID scarfing mandrels, impellers, mounting units and custom-made parts as a set of tow bars for adapting to various tube mill distances.

Alpha Metall manufactures all of the items in its factory in Germany. Commissioning in the customer's factory is also possible with engineers sharing Alpha Metall's know-how during commissioning for excellent tube ID scarfing results.

Alpha Metall GmbH & Co KG – Germany

Fax: +49 6831 506958

Email: info@alpha-metall.de

Website: www.alpha-metall.de

ID scarfing

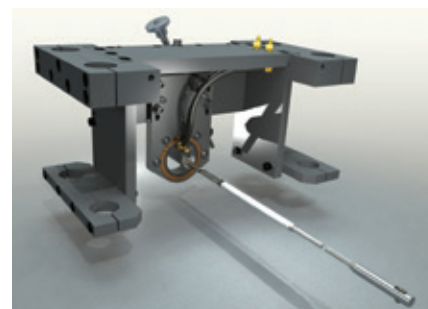
GEM Tool Corp designs, engineers and manufactures ID scarf and bead rolling systems. The systems' design can be incorporated into most existing tube mills. The company can also custom design systems for size ranges down to 12mm ID. In addition to the scarf systems, Gem Tool manufactures solid carbide cutting tools and forming rolls.

Gem Tool Corp – USA

Fax: +1 414 762 0615

Email: sales@gemtoolcorp.com

Website: www.gemtoolcorp.com



ID scarfing with less power consumption

ELECTRONIC Heating Equipment's (EHE) Canticut ID scarfing system is designed to enable the impeder to be fully integrated into the ID mandrel. It is claimed that this can reduce weld power consumption by up to 30 per cent compared with other ID scarfing methods.

Supporting the scarfing tool on a cantilever removes the need for internal rolls. This key feature ensures that the mandrel covers a wide range of tube sizes and eliminates the problem of rolling weld spume or other debris into the tube wall. A Canticut unit can ID scarf pipe sizes ranging from 4.5" to 26" OD using only two mandrels.

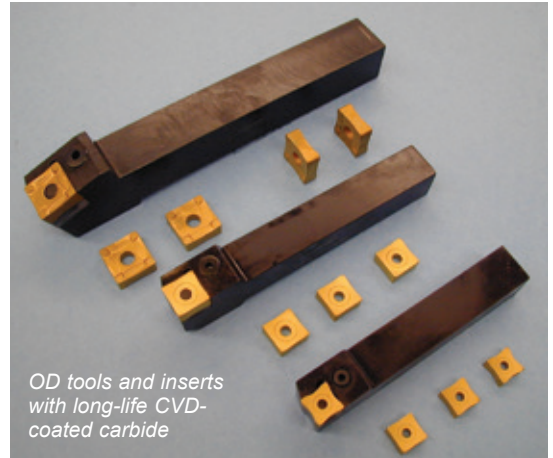
Recent improvements include a hydraulically actuated bead chopper to cut the stinger into manageable lengths for easy removal from the pipe. The use of newer high-strength alloys results in mandrels with increased rigidity and

strength, while reducing weight and allowing more space to be used for impeder.

The heavily fabricated mounting stand is now available with position sensors, including outputs to PLC/HDMI for precise repeatability, and to efficiently optimise set up time. Interchangeable tool holders and bead chopping heads can reduce mill down-time and allow the use of a wide variety of cutting tool styles to suit different grades of material and user preferences.

In addition to the Canticut scarfing systems, EHE supplies impeder and impeder clusters for induction welders; premium-quality ferrite that is specially manufactured to high standards; and a wide range of off-the-shelf and custom-built coils. EHE manufactures and stocks impeder ranging in size from 5 to over 200mm in diameter, and in lengths up to 1,500mm.

Impeder are available with several types of outer casings, including high temperature epoxy/glass, Silglass™ and Ferroglass™. The range includes through-flow impeder, return-flow impeder, impeder support systems, integral mandrel impeder, hollow impeder, rectangular impeder for large mills, impeder clusters and custom impeder for special applications. Good



coil design is important in achieving the high efficiency offered by solid-state welders. EHE coils are available to suit all types of induction welding equipment. The coils are fabricated from 99.9 per cent pure, oxygen-free, high-conductivity copper, with silver brazed joints and advanced cooling systems. Some larger coils use spray cooling, which reduces the risk of 'hot spots'.

Ferrite is a critical component in an impeder. EHE ferrite is specially made to the company's stringent specifications, and offers claimed advantages that include lower losses, higher saturation flux density, and higher Curie temperature. EHE ferrite needs less than half the cooling time of other types, which means the impeder operates at a lower temperature, increasing its working life. This in turn means fewer impeder changes and less mill downtime.

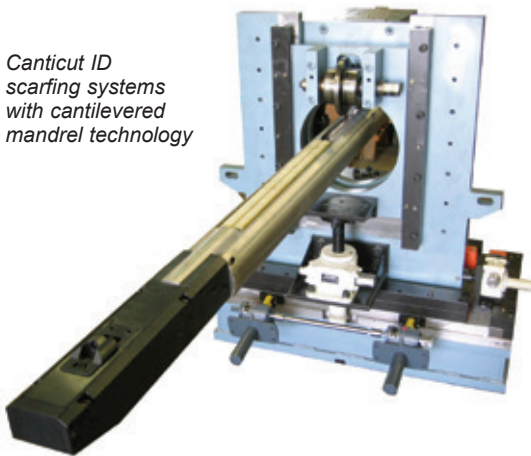
Electronic Heating Equipment Inc – USA

Fax: +1 360 829 0170

Email: sales@impeder.com

Website: www.impeder.com

Canticut ID scarfing systems with cantilevered mandrel technology



Modular tube ID scarfing systems

MANY tube mills need flexible production to meet the requirements of their customers. Alpha Metall provides a modular mechanical tube ID scarfing system that offers technical solutions for common tube ID 10-100mm. For tube ID 26-620mm the hydraulic tube ID scarfing technology it offers is state-of-the-art. Both technologies have been approved in the market for more than 30 years. The

operation and training involved in the mechanical tube ID scarfing systems are easy, investment costs are competitive and the basic mechanical spare parts are available from Alpha Metall stock. Alpha Metall commissioning includes staff training and fine adjustment for perfect tube ID results. Customers can request an Alpha Metall tube ID scarfing system with a list of all the tube OD with

corresponding wall thicknesses and steel grades. Inquiries on non-standard customised tube ID scarfing systems are also welcome.

Alpha Metall GmbH & Co KG – Germany

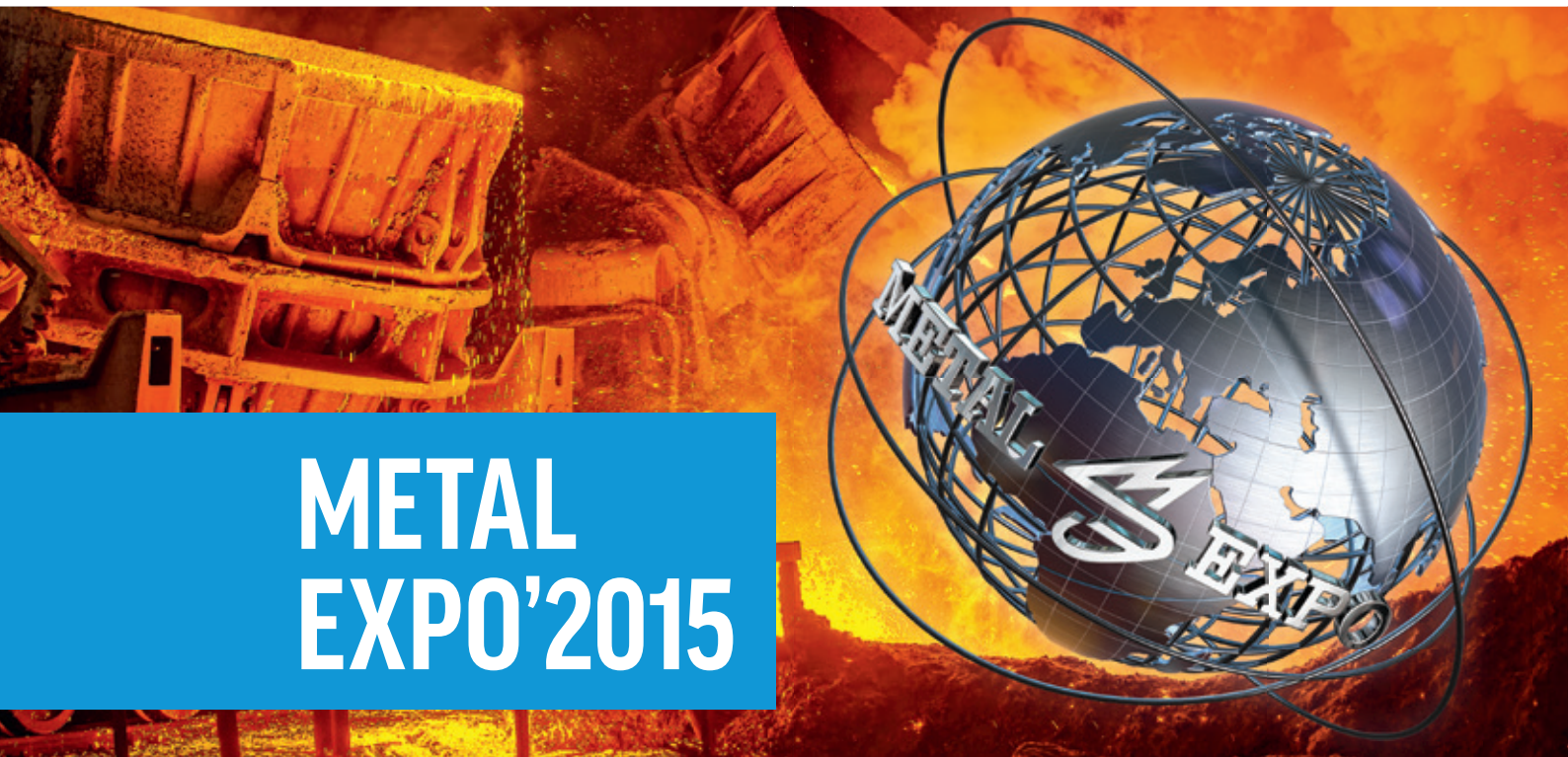
Fax: +49 6831 506958

Email: info@alpha-metall.de

Website: www.alpha-metall.de

HALLS 69, 75, VDNKHA, MOSCOW

NOVEMBER 10-13, 2015



METAL EXPO'2015




21st
International
Industrial
Exhibition



Metal-Expo'2015 organizes the dialogue between steel producers and end-users and, as an efficient channel, promotes the most advanced technologies in the steel industry

ORGANIZING COMMITTEE:
phone/fax: +7 (495) 734-99-66

WWW.METAL-EXPO.COM

 Steel Products and Structures
for Construction
MetallStroyForum'2015

 Equipment and Technologies
for Steel Industry and Metalworking
MetallurgMash'2015

 Transportation and Logistics for
Mining and Metallurgical Complex
MetallTransLogistik'2015

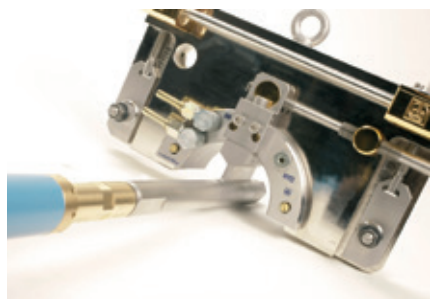
 General Information Pater:
Metal Supply and Sales, Specialized Magazine



Inside tube scarfing systems

REQUIREMENTS such as cost savings and emission reductions are gaining increasing relevance in the pipe producing industry and in plant construction. As a producer of inside tube scarfing systems, Ernst Blissenbach GmbH offers a high level of safety for demanding pipe production processes. BLISSart® tools are synonymous with stability, longevity and functionality. Their construction offers a reduction of tool-related machine downtime, avoids spiralling costs and improves the quality of inside tube scarfing.

Each new development or improvement of a tool is based on



proactive identification of customer needs. All business processes at Ernst Blissenbach GmbH are designed around customer requirements. That is a benefit of great practical value, as it makes pipe production progress predictable and calculable, speeds up processes and reduces sources of errors. BLISSart® seam monitoring, for example, offers a reliable scarfing control that results in reduced scrap rates. This symbiosis of technical innovation and intensive tool and process research is what makes this company so successful. Blissenbach aims to be a global trendsetter when it comes to optimising pipe production standards.

The company also applies innovation to its internal work processes. This led the company to expand its machinery, thus increasing manufacturing capacity. This expansion did not only involve modernising the production facilities and hiring new employees but also improving the flexibility and quality of production. "With the expansions, we are now working at the highest level



and can be even more efficient when it comes to addressing the individual wishes of customers. There is simply no limit to further innovative development of solutions," Ernst Blissenbach explained. He added: "Everybody wants to develop something special – we managed to do that and continue to do that."

The company believes that being innovative does not just mean refining the details, it means always being willing to find future-orientated solutions.

Ernst Blissenbach GmbH – Germany
Email: info@blissenbach.de
Website: www.blissenbach.de

Brushed deburring machine

WHEN using the Spontan high capacity brushed deburring machine, sawn precise lengths are placed (manually or automatically) in the correct position and axially parallel in the integrated singling magazine.

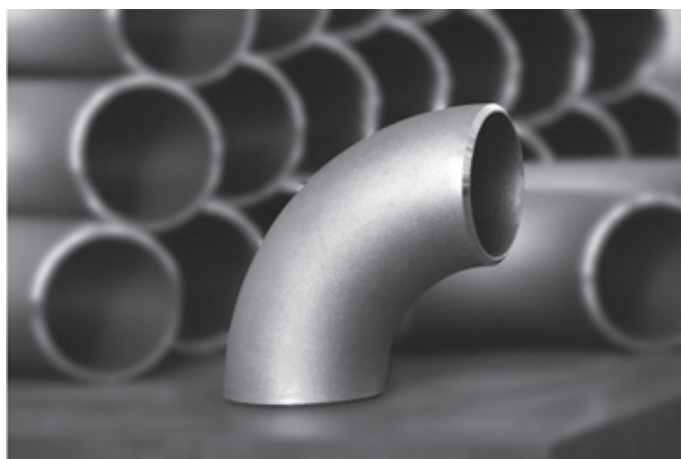
The automatic deburring machine is suitable for two-sided deburring of round pipes (inside and outside) and bar sections in one process. Two driver discs are responsible for singling the

material and for transport during the deburring process. The discs are each produced for 6, 12 or 18 material holders (depending on pipe diameter).

The workpiece rotates in itself and is transported at four points past the rotating roller wire brushes so that it is deburred simultaneously inside and outside in one process (optionally only inside/outside). The disc conveying mechanism is driven by a variable speed

drive. The driver discs are separately mounted and driven by a spline shaft with a frequency controlled three-phase gear motor. Depending on the length of the workpieces, the adjustable brush unit is adjusted by sliding on the machine frame and clamped in position. The disc drive motor has 0.37kW output.

Spontan – Germany
Website: www.spontan.eu



A **NEW LEADER**
IN BUTT-WELD FITTING INDUSTRY

info@tecron-piping.com
www.tecron-piping.com

Inside and outside weld bead scarfing

TSE GmbH Tube Scarfing Equipment is an international operating company offering solutions for tube inside and outside weld bead scarfing (deburring) of longitudinally welded steel tubes, strip conditioning, bead chopper applications, welding equipment, sawing technology, slitting knives, filtering technology, and turning/milling/drilling processes.

The company's product range includes tube inside weld bead scarfing tools/systems, carbide cutting rings for tube inside weld bead scarfing, carbide inserts and holders for tube outside weld bead scarfing, bead choppers, strip shaving units, welding impeders, ferrite cores, epoxy fibreglass tubes, silicone fibreglass tubes, mica silicon tubes, induction coils, flexible PTFE tubes, HSS/HSSE/TCT saw blades, slitting knives, filter systems, filter fabrics, carbide inserts and holders for turning/milling/drilling.

The company works with a network of representatives worldwide.

TSE GmbH Tube Scarfing Equipment
– Germany

Fax: +49 6835 6082 501

Email: info@tube-scarfing.de

Website: www.tube-scarfing.com



Hydraulic OD chopper

OD bead scarfing is a must in welded steel tube production in order to meet high standard norms. The well-known winding technology for scarfed OD bead does not always comply with a factory's safety rules because there has never been an adequate solution for this issue.

It is easier to use a compact combination of OD bead scarfing,

which immediately makes small chips of the OD bead. Alpha Metall provides this solution – a hydraulic driven OD chopper available for tube OD up to 24".

Alpha Metall GmbH & Co KG – Germany

Email: info@alpha-metall.de

Website: www.alpha-metall.de



Hangzhou Zheda Jingyi Electromechanical Technology Corporation Limited

 <p>CPMH-32-I TEC</p>	 <p>Before coating After coating</p>	 <p>Staking and Bundling Production Line and Strapping Head</p>
 <p>Length Measuring, Weighing, Stenolig, Pin-stamping and Color-banding Production Line</p>	 <p>UV Coating and Curing Equipment</p>	 <p>Tubular production Coils</p>
 <p>Rotary Capacitor Ultrasonic testing probe</p>	 <p>Identifying... Identifying... 1474</p> <p>Steel Pipe Online Recognition and Tracking System</p>	 <p>Hard Alloy Circular Saw</p>
 <p>Ultrasonic Nondestructive Testing System for Seamless Pipes</p>	 <p>Numeric Control Profiling Saw</p>	 <p>Electrical Discharge Machining Central Drilling Equipment</p>
 <p>Abrasive Jet Decaling Line</p>		

E-mail: hzzdjy@163.com, lfzlfz@zju.edu.cn
 Tel : +86 (0)571-85022037, 85120269 (Sales Dept.)
 Address: Yuhang District, Hangzhou City, Zhejiang Province P.R.C

Customer Service: +86 400-809-1101

Please visit www.jingyitech.com for more details.

Handling, bundling, packaging & logistics

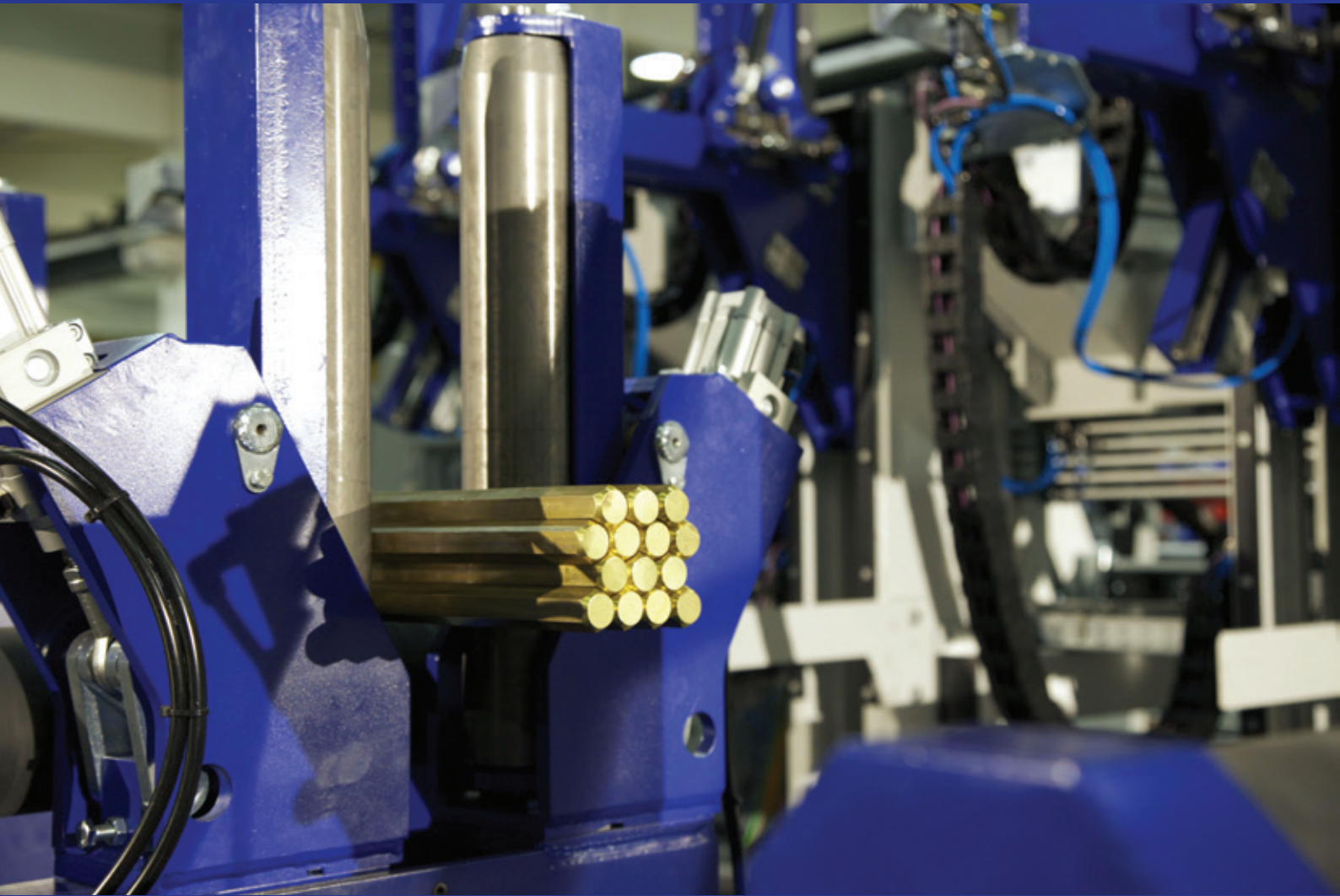


Photo: The Asmag stacking and bundling system

The serviceability of a length of pipe or tube is indisputable. Tough, tempered, resistant to acid, oxidation and corrosion, it was crafted for demanding purposes. But it is in performance that it shines. Prior to installation it must receive the protections due every highly engineered product in transit.

If a shipment of tubing does not reach its agreed destination safely and timely, the customer is entitled to reject it. But someone – the producer – will pay. If conveyance from payoff to delivery is

not accomplished efficiently – ie in accord with the dictates of productivity – the penalty will show up, very promptly, in the bottom line.

This is where logistics comes in, and why it belongs grouped with handling, bundling and packaging. The products and services reviewed here are offered by people accustomed by long experience to view safe-conduct as an integral and essential constituent of tubemaking.

Stacking and bundling system from ASMAG

WHEN working with round, hexagon, squared or rectangular bars and tubes, stacking and bundling is an involved process. Changing from round to hexagon bars and from one size to another is where traditional systems take time and manual work.

Asmag, headquartered in Scharnstein, Austria, has developed a new automated method. Asmag discovered that manually adjusting the stacking machine each time dimensions or shapes changed was unnecessary.

Operators typically spend a few minutes for each time they must replace inserts to accommodate changing hexagon bar sizes or when an insert must be removed altogether to switch from hexagons to rounds.

In regard to the tendency to smaller lot sizes, this normally causes changing

the inserts once an hour. Another disadvantage is the purchase, storage and maintenance of the insert-sets for each product size. The new system eliminates that step.

Usually the cams are necessary because hexagonal material tends to tilt at the wrong angle. The Asmag innovation makes sure that the bars in the first layer fall into the right position. This system is based on a simple idea but it has not been used before.

In addition, software automatically calculates several possible bundle shapes and sizes and then determines whether three or four bars in a layer at the bottom would be the best configuration based on production orders. This innovative system was tested in a customer's complete new production line.

Asmag's in-house manufacturing features such capabilities as design, mechanical and electrical engineering, production of components, assembly, testing of machines, production of switch cabinets and programming of machines and entire lines. Having that kind of control over such processes helps the company to guarantee quality control for complete lines and create new custom solutions.

Asmag GmbH – Austria

Fax: +43 7616 880188

Email: sales@asmag.at

Website: www.asmag.at

Seuthe GmbH – Germany

Fax: +49 2372 506 111

Email: sales@seuthe.com

Website: www.seuthe.com

Torque limiter type ECA for belt drives

APPLICATIONS of torque limiters can be found in all sectors of technique, in any machine or facility where torques have to be limited to protect machines or products from overload.

The torque limiter type ECA, which is especially engineered for belt drives prevents such overload damages or at least reduces them to a minimum. Particular value was put on compulsion-cutting and a fast switching function. Simple, light elements avoid adverse dullness of mass or switching. They were chosen because too-heavy switching elements could considerably increase the (static adjusted) disengagement

torque in case of a dynamic collision and therefore also the destructive collision forces.

In contrary to conventional friction clutches the ECA has a very high repeatability of the adjusted disengagement torque. It is free of clearance and self-reliantly re-engages after one turn.

The movement of switching can be sampled by a proximity switch. Seventeen design sizes make a total torque range of 0.5Nm to 470Nm overall.

The ECA forms a very compact unit together with a crown gear and is

deliverable in diverse versions (with keyway or conical bush).

The ECA is significant because it is one of the smallest torque limiters available on the market.

ENEMAC GmbH – Germany

Email: info@enemac.de

Website: www.enemac.org



Vacuum lifting system

THE Starlift vacuum system from Acimex handles tubes, pipes (concrete, steel and cast-iron), tanks or any other cylindrical device.

Handling by suction cups is a safe way to move products without any mechanical contact.

A rubber gasket ensures a soft touch without leaving any marks or deformation of the pipes.

A single operator carries out both driving and remote handling operations on either an excavator or a forklift crane. Remote control ensures 100 per cent

security. Quick and efficient installation also increases productivity.

Acimex – France

Fax: +33 2 4737 1366

Email: contact@acimex.net

Website: www.acimex.net

join the best: worldwide



Tube Düsseldorf: Innovations go global. Take advantage of the highest calibre expertise of the No. 1 international fair as the show goes global. Draw on international synergies from these leading trade fairs. A cycle of regional events, staged in succession around the globe, responding to local market and customer needs. Detailed information on the full programme can be found at: www.tube.de

Tube[®]

Düsseldorf



Messe Düsseldorf GmbH
P.O. Box 10 10 06
40001 Düsseldorf...Germany
Tel. +49 (0) 2 11/45 60-01
Fax +49 (0) 2 11/45 60-6 68
www.messe-duesseldorf.de



Double success at FLTA Awards

COMBILIFT received two trophies at this year's UK FLTA Awards ceremony, adding to the extensive collection of awards from the association that the company has amassed over the last few years.

As well as developing innovative products for productive materials handling, Combilift focuses on delivering machines that offer precise and easy operation. Winning the award in the ergonomics category for its Rotating Operator Console underlines the company's commitment to providing the best possible environment for the operator.

The console allows 90° rotation of the operator and controls within the cabin. Simple joystick operation activates the hydraulic rotation of the seat, steering column, pedals and mast controls, allowing operators to face the load while manipulating it in confined spaces. The suspension seat and steering column are fully adjustable to operator requirements for further comfort.

Commenting on the award, FLTA chief executive Peter Harvey said, "The rotating operator compartment from Combilift is a prime example of the drive to keep fork lift truck operators comfortable and safe, while achieving the highest levels of productivity and efficiency."

Josh Moffett accepted the award on behalf of Combilift, and there was further recognition for the family name when his father, Robert Moffett, Combilift's technical director, was the recipient of the FLTA's highest honour – the Lifetime Achievement Award.

"It's fair to say that Robert has always done things a little differently," said the FLTA. "He is a problem solver who solves problems before the rest of us have even realised there IS a problem, and his fearlessness – accompanied by almost supernatural energy – has proved him to be both a creative genius and a hugely successful entrepreneur."

Combilift Ltd, Co – Ireland
Fax: +353 47 80501
Email: info@combilift.com
Website: www.combilift.com

(From left) Sponsor Derek Anderson; Josh Moffett of Combilift; Josh's younger brother, Tommy Moffett; and presenter Johnny Gould



Supporting intensive materials handling

THE heavy-duty Ironclad® range of motive power batteries from EnerSys offers more power, extended running times and longer life than comparable designs to support intensive lift truck operations and other demanding materials handling applications. The range is particularly suited to situations where longer truck run times are needed to minimise the use of spare batteries. Models rated from 276 to 1,032Ah are available in standard sizes for small pallet trucks up to large reach and counterbalance trucks. The batteries are now available in the UK and Europe but have been extensively used in the USA, where they have proven to be reliable and rugged performers in tens of thousands of applications, for many years.

Based on more than 100 years of manufacturing experience at EnerSys, the Ironclad batteries have a number of features to deliver significant performance advantages over conventional lead-acid designs.

The positive electrodes in the batteries' cells incorporate a unique square

Cladex tube technology that results in around 18 per cent more surface area than the round tubes or flat plates used in conventional lead-acid batteries. This maximises the contact area between the electrodes' active material and the electrolyte, which enables higher sustained voltages throughout the discharge cycle. The batteries are also used with an electrolyte with a higher-than-average specific gravity. These features deliver more power and increased capacity for work – in simple terms a lift truck can work for longer. The batteries have high ampere-hour capacity ratings, outperforming conventional designs with up to 15 per cent more power, which is suitable for the higher discharge rates demanded by modern AC-drive lift trucks.

To maintain a lift truck's constant drive and lift performance throughout a shift, the motor must offset a battery's normal voltage drop during discharge by drawing more amps. The Ironclad battery's ability to sustain higher voltages, combined with industry-leading capacity ratings, extends its run



time when compared with conventional lead-acid models. Materials handling equipment will run for up to one hour longer on each charge, reducing the need for time-consuming battery changes and maximising productivity in even the heaviest duty applications, including busy distribution centres and other 24/7 operations such as airports and transport hubs.

In addition to increased power and longer run times, the greater surface area of square tube technology and electrolytes with higher specific gravities also help the battery achieve a longer service life.

EnerSys – Switzerland
Website: www.enersys-hawker.com

Pay-off and take-up stands for tubes

QUEINS Machines GmbH, Germany, specialises in the manufacture of heavy duty pay-off and take-up stands, to be used for unwinding/winding of tubes having a diameter between 9.5 and 50mm ($\frac{3}{8}$ " to 2"). These tubes are mainly used for manufacturing umbilical

cables in the offshore industry. The machines are of floor-traversing type for reel flange diameter of up to 3,600mm (141") and reel weight up to 23 tons (50,000 lb). Other models are being manufactured for reel weights up to 300 tons. Further highlights are heavy-

duty belt- or chain-caterpillar capstans for the same product, with pulling force up to 200kN.

Queins – Germany
Email: info@queins.com
Website: www.queins.com

Grooving Machine
Furniture Machine

Gas Spring Machine
Chair Machine

TD31040

TONG DA PRECISION ENTERPRISE CO., LTD

✦ Email: sales@tdco.com.tw
✦ HTTP://WWW.TDCO.COM.TW

这一栏目专为我们
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。

全电动弯管机

AMOB公司的CE认证数控R弯管机设计用于弯曲复杂的管道形状，耗损、精度、可重复性以及控制装置都得到提高。这台全电动数控弯管机设计环保，无漏油或地面污染，操作起来非常节能，安静而且干净。

该弯管机能弯曲9到90毫米的碳钢、铜、不锈钢、铝和其他材料。所有轴都是伺服电动驱动的并有位置储存。这样具有工具更换优势，因为不再需要机械调整。该系统在大多数情况下可以“首件”生产，减少材料浪费。



AMOB的全电动数控弯管机

AMOB SA – 葡萄牙
传真: +351 252 376 887
电子邮件: comercial@amob.pt
网址: www.amob.pt

Omni-x管端成型工具

Omni-x公司主要以设计和生产弯管工具而出名，现已成为管端成型工具大型生产商。

这是因为客户不仅需要弯管机弯曲工具，还需要用于管端成型机的工具。

决定将时间于金钱投资到新的机器和设计程序。Omni-x 公司总经理Josef Weber先生表示：“我们想要确保管端成型工具的质量和性能与我们的弯管工具标准一样。”

“客户的反应一直都令人鼓舞，而且这部分业务的增长也是空前的。我们能够生产加工外径20毫米到76.2毫米的管端成型工具。”

Omni-x生产的管端成型工具有三种，内径/外径加工、C型减径和C型扩口。这是双功能分段成型I/O工具。适合管道缩径和扩口。整套装配包括外部夹头、内部抓具、芯轴以及单个部件在里面组装的筒体。

这是唯一有卡爪和外部夹头的工具。意味着它能够从内部或外部固定成型区，使这种工具有更大的可变性。在分段成型工具中，从管道成型来看，I/O工具提供的质量最佳。

专用分段成型工具标识着“C”或“R”，用于管道缩径。全套包括外部夹头、抓具适配器和锥体。

这种工具只有外部夹头。意味着可以从外部对成型区施加压力，对管道完成缩径。

这种专用分段成型工具标记着“C”或“E”。适用于管道扩口。整套装配包括内部抓具、芯棒以及单个部件在里面组装的筒体。这种工具只有扩口抓具。意味着可以从内部对成型区施加压力，对管道完成扩口。

Omni-x CZ sro – 捷克共和国
传真: +420 548 212 804
电子邮件: sales@omni-x.cz
网址: www.omni-x.cz

管刮刀

RITMO公司的RTC 160、RTC 315和RTC 710是旋转式刮刀，用于塑料管道和管件电熔焊前的准备。管刮刀将因天气和紫外线造成的氧化层清除掉。如果不能清除，这些氧化层会影响溶接质量。

其中最主要的构造特点是有一个装置

能保持连续切屑厚度一致，即使管道已变形，还能根据电耦合器的深度调节表面长度，使其能够进行刮除。

RTC 710刮刀有一个可伸长的臂将电耦合器多余长度刮除，这对在建筑工地进行保养/维修来说具有优势。主夹头

有四个可伸长的臂能直接在管道内径夹紧。

外部加工范围为通径355到710毫米，最长是530毫米。RTC 160刮刀加工范围为通径50到160毫米，最长为114毫米；RTC 315是 \varnothing 75到315毫米，最长137毫米。

PS系列有两种型号：PS 180和400 PS。这些易于使用的旋转刮刀也用于塑料管道和管件电熔焊前的准备。这些刀具有可调的夹头，涵盖整个加工范围，还有刮刀座轨道臂。

PS系列可确保持续、定期清除切屑。刮刀刀片架可以使整个电熔套筒长度能够刮除，这对现场维修最有用。

PS 180刮刀外部加工范围为75到200毫米，最长达129毫米；PS 400加工范围是137到426毫米，最长达150毫米。

Ritmo SpA – 意大利
传真: +39 049 9901993
电子邮件: info@ritmo.it
网址: www.ritmo.it



Ritmo的RTC 710旋转刮刀有一个可伸长的臂，可刮除电耦合器多余长度

从卷材到成品管道

四年前，属于所有者经营的奥地利 Asmag Group 集团接管了德国 Seuthe 公司，那时，两家公司分别都取得了巨大成功，而且成为轧管机一站式设备供应商。

奥地利钢管和有色金属行业机械和设备制造商 Asmag 公司在拉拔、矫直、切割、倒角、堆码和捆扎设备方面实现了优质的产品以及极高的生产效率。公司是全球经验丰富的供应商，其创新性产品生产效率高、质量顶级而且制造标准高。Asmag 公司的主要优势在于内部制造能力深厚。公司提供有效的沟通以及突出的个人服务和支持。

在过去三十年，许多管道和型材制造公司一直依靠总部位于奥地利沙坦坦的 Asmag GmbH 公司提供的定制和独特解决方案。不管客户是需要挤压、锻尖、拉拔、矫直、切割和倒角、精整、堆码和捆扎设备还是需要材料搬运设备——专用机器和设备工程师们都将花足够的时间去提问、查看、调查、研究、开发和设计，确保符合最小的细节并找到最好的解决方案。Asmag 公司认为新系统应该不仅仅为客户提供更灵活、更快和

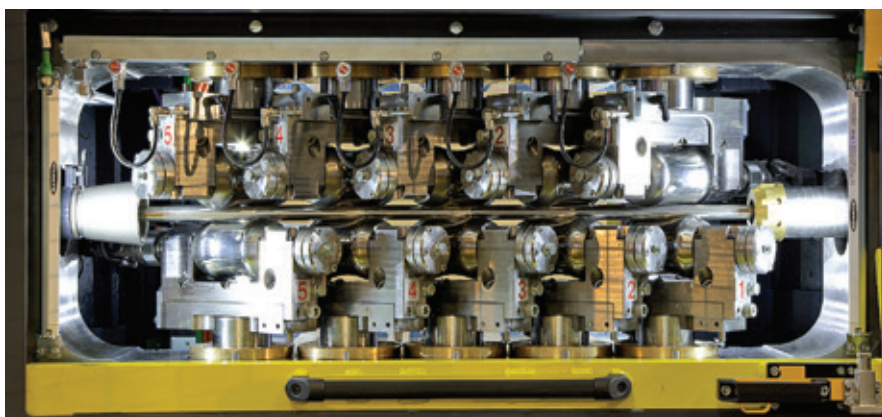
更经济的生产解决方案，还应该带来特定的竞争优势。

公司的组织和结构是以顾客为中心并满足顾客需求的。有专门的项目经历作为每个客户的主管合作伙伴，负责从项目开始到客户现场的启动的全部过程。有资质的设计团队以及经验丰富的生产团队确保交付给客户的是客户正需要的设备。这也是公司想要实现的目标。

Asmag GmbH – 奥地利
 传真: +43 7616 880188
 电子邮件: sales@asmag.at
 网址: www.asmag.at

Seuthe GmbH – 德国
 传真: +49 2372 506 111
 电子邮件: sales@seuthe.com
 网址: www.seuthe.com

Asmag 矫直机内部视图



钢质对焊管件

STAROFIT 公司是钢、合金钢和不锈钢对焊管件供应商，能为全球客户提供快速交货。

公司的永久性管件库存为 6,500 吨，能够快速响应客户需求。持有大量符合 ASME 和 EN / DIN 标准的产品，以及极端壁厚和非常规尺寸的高度专用性碳钢、合金钢和不锈钢弯头及管件。

公司计划库存超过 50,000 多种不同尺

寸和 100 多种材料等级的产品，公司最近投资持有低合金材料产品，以便提供 WP11 和 WP22、壁厚从 STD 到 XXS 的全面的弯头和管件库存。

公司严格选择供应商，只接受获得 ISO、PED 和 TUV 批准的制造商。

Starofit 将参加今年在欧洲举办的各种展览会，包括土耳其伊斯坦布尔 2015 国际专业管道、管材、配件及管道（材）

机械贸易展览会；捷克共和国布尔诺 2015 国际不锈钢展以及荷兰马斯特里赫特 2015 国际不锈钢世界展览会。

Starofit Klose GmbH & Co KG – 德国
 传真: +49 4222 9440 44
 电子邮件: info@starofit.de
 网址: www.starofit.de

设置时间减短的管道和型材冷弯机

船舶、化工以及电厂施工都需要大量管道制造。主要的生产过程，如弯曲不同类型的管道，必须是高效的。

这些行业使用的弯管机必须灵活，并能够接连不断地加工不同公称直径和材质的弯管。Schwarze-Robitec 营销经理 Jürgen Korte 表示：“如果客户要不断转换加工新的弯管，则总产量将非常耗时且漫长。因此需要将设置时间减到最少，并借助多个弯曲工具。”

Schwarze-Robitec 公司的 220 HD MW 数控管道和型材冷弯机使用多个弯曲工具有效地解决了这个问题，而且带测量系统以确保精确度。它还可以加工最大直径为 219.1 毫米 x 12.7 毫米壁厚、长度达 6 米管道。

尽管尺寸很大，但这个 32 公吨的设备非常灵活：多个弯曲工具使设置时间比传统设备节省了 70%。它可以加工不同材质的管道，如钢、铜镍铁合金和不锈钢，而且只用一个工具，无需转换。同时还能弯曲不同直径的薄壁和厚壁管道。

机器内集成 Spring Matic 测量系统可确保精确度，这确定了初始弯曲后管道的回弹。然后再立即进行“再弯曲”，以便弯管精确到半度。Korte 先生表示：“对这种尺寸设备和管道来说，这已经是极高的精度了。”

除了弯管机和弯曲工具，Schwarze-Robitec 的产品还包括管道打孔机、测量站以及专用机器构造解决方案。

Schwarze-Robitec GmbH – 德国
 传真: +49 2218 9008 9920
 电子邮件: sales@schwarze-robitec.com
 网址: www.schwarze-robitec.com



Schwarze-Robitec 的 CNC 220 HD MW 管道和型材冷弯机

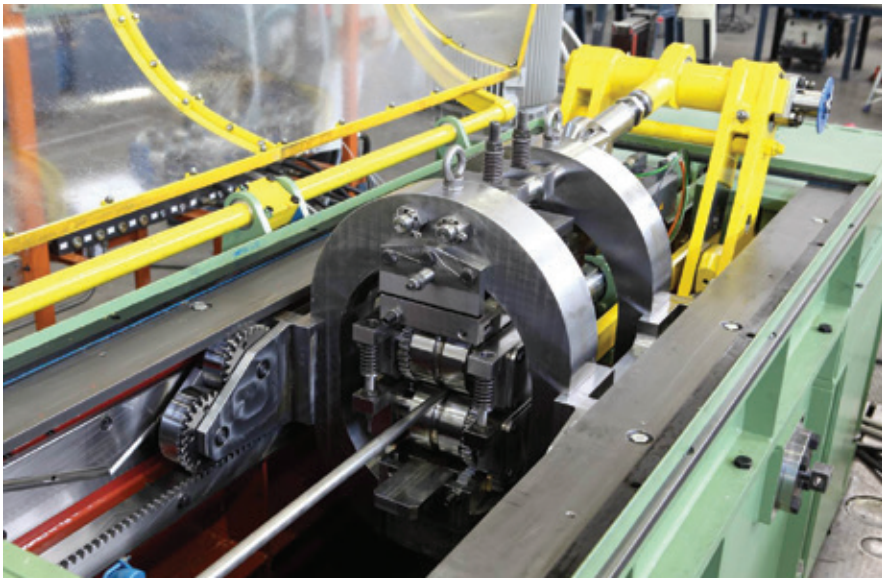
核工业、航空航天以及医疗管道生产

DANIELI公司已经开始生产一流的优质螺纹机以及相关设备，目标是使产能增加20%，而资本投资减少20%。

该螺纹机利用最先进的有限元技术，检验和确保最大的结构刚度、时间的可靠性以及减少维护。该设备对于管道和管接头都能确保产出质量一致，而且不依靠操作工的技能。

Danieli周式轧管机采用来自俄罗斯的控制杆、双辊和四辊轧机设计经验和技能，并集合自己意大利生产过程质量和对细节的关注。该设备生产率更高，能持续生产顶级质量的管道。

Danieli SpA – 意大利
网址: www.danieli.com



管状产品检测服务

National Oilwell Varco, LP公司分公司Tuboscope是石油和管道制造行业管状产品检测服务和设备主要供应商。其技术用于检测新、旧管状产品，按照最苛刻、最严格的行业和客户规范进行。

其Amalog®和Sonoscope®电磁检验(EMI)技术的效率值得推荐，而Truscope®、TruWall®以及TruScan®超声波(UT)检测系统能够高速度运行。

Tuboscope还提供轧机检测设备，全球管状产品生产厂商可用它来有效检测其生产的管状产品。这些轧机装置能够以高检测速度运行，并根据生产线要求进行定制设计。

Tuboscope产品系列独特的例子是Truscope A/S®，可以替代Truscope-Amalog-Sonoscope。该系统结合了EMI(电磁感应)非破坏性检测技术以及UT(超声波)原理，在单道次内对管道横向和纵向以及内部和外部缺陷以及壁厚变化和分层进行检测、评估和分类。

Truscope A/S System系统可以对大范围直径管道进行全身检测。这些管道可

以是无缝管也可以是电阻焊管，可以是金属管也可以是非金属管；管端条件也可以多样，可以是锯切的或斜切的，是平端、螺纹端、接箍端或者是加厚端或未加厚端。

EMI (Amalog和Sonoscope)与UT技术的结合使Truscope A/S能满足最新的API 5CT、5L和5D标准，以及能源行业管状产品无损检测领域其他国际规范。

该检测系统由两个主要部分组成——检测平台以及电脑化检测电子设备。

放在管道传送线上的管子推进到检测平台。平台上安装有夹送辊，里面包括管子，它可提供动力匀速将管道送入每个检测头或定位器。检测顺序首先是Sonoscope，随后是Amalog，最后再是Truscope。三个定位器安装在轨道轧辊系统上，这样他们可以在传送线上移进移出，以便更换管道尺寸以及维护。待检测管道首先通过Sonoscope检测装置，在这里纵向高强度活跃磁场引入管道。

随着管端的进入，多个固定监测器组件，或“托举件”，接触到管道外径表

金属型材拉伸机

VIOLI Srl公司开发了一系列可靠的拉拔机，用于金属型材加工，包括金属和非金属管材、棒材或线材加工设备。

TRI系列是具有圆形截面或复杂外形的管材或棒材全套液压拉拔设备。TRI拉床拥有先进的技术，优选的组件以及创新的设计解决方案，整个加工阶段和安全保护都是全PLC控制的。随车携带的夹钳与拉拔材料的孔完全对齐，这样可以避免弯曲形成影响金属结构。牵引速度是可调节的，只需要使用控制面板上的操纵杆就可以操作拉床，这样操作者可以控制过程中的每一步。

Violi还提供TR系列链式拉拔机，设计用于加工最大直径12毫米的棒材和管材。带可调节钳牙的锚固钳配有锁紧系统，由操作者手动控制，拉拔升降装置的返回也是电控制的。工作速度可以固定在一档或二档，或者由逆变器调整。

完整的产品还包括附属设备，如APT系列管材和棒材车锥度机床，或AP系列线材加工机床；手动或自动主轴解锁系统；KTF10液压拉拔机床KTF10——用于生产半加工管材或棒材的小型装置。

Violi Srl – 意大利
传真: +39 057 5815903
电子邮件: sales@violimacchine.it
网址: www.violimacchine.it

面。这种方法可以检测到如横向裂纹、轧入料头和凹面等缺陷。

然后管道再进入 Amalog检测装置。该装置配有双托检测系统，集成到旋转导磁体装置中。管道进入Amalog检测装置时，横向高强度活跃磁通量场引入管道。然后旋转探测器托具以螺旋路径横向扫描管道外表面区域。这种方法可以检测到如纵向接缝、裂缝和重叠等缺陷。然后管道通过Truscope检测装置，用水作耦合剂利用超声波贴管道表面检测内部和外部缺陷以及壁厚变化。

与Amalog一样，Truscope也配有多托具检测系统，集成到旋转装置中。随着管道进入旋转装置，将水涂到管道表面，为超声波检测提供声学耦合。这些检测器托具接触管道外表面，以螺旋路径扫描外表面。

Truscope可以进行配置，用来检测纵向、横向和斜向缺陷，以及超出公差的壁厚变化和分层。

Tuboscope – 美国
网址: www.nov.com

轻量级挤压技术和流线型数控加工

CONSTELLIUM NV公司拥有新的流线型数控加工能力，可生产能直接用于组装的定制部件。

公司专供优化合金、模具设计、工艺和挤压技术，以进一步减少向全球铁路市场提供的下一代产品的重量。公司表示新开发的PAVIM挤压产品家族使挤压线性重量发生了很大的变化，可用薄的内腹板生产大型结构挤压制品，同时保证

结构稳固性一致，材料特性不变。数控加工流程化成品和半成品组件以及挤压制品生产，减少了前置期、优化了库存并提高了质量。Constellium公司Patrick Wahl表示：“新的数控功能大大降低了客户成本，他们可以购买成品或半成品零部件以及装配好的挤压制品，不需要其他的供应商。现在我们可以提供挤压铝制品以及内部生产的部件，客户可以

直接用来组装。”轻量级PAVIM结构挤压制品对某些结构大有好处，如机车，减少生命周期成本以及温室气体排放是这类产品最关注的。该产品家族使按照EN 13981-1标准使用标准结构合金挤压的型材内腹板厚度下降到1.5毫米。

Constellium – 法国
网址: www.constellium.com

自动冲孔机

来自意大利SMS Engineering公司的PA-80自动冲孔机适用于圆形、方形和矩形截面钢、不锈钢和铝棒冲孔。

可加工变形或没有变形的圆形和方形孔，适用于生产用于排架、散热器、爬梯、床架以及类似产品的组成件。

冲孔可以在一边、两边或两边交替进行（节距可变）。该冲孔机主要特点是节距精确、加工后棒才平直，而且工具更换加快。操作者只需要站在恰当的

位置将工件加载到机器上并按下开始按钮。

该机器由一个较大的电焊刚结构框架、一个配有专用夹紧爪的小车、专门的冲压单元、控制管道移动的控制轴、液动力装置以及带有控制面板和电气装置的电器柜组成。

可加工管道最大尺寸为80毫米，标准长度为3米（也可选4、5或6米）；冲击力是3、6或10吨。



SMS Engineering
的PA-80自
动冲孔机

SMS Engineering Srl – 意大利
传真: +39 035 58 15 09
电子邮件: commerciale@sms-italy.it
网址: www.sms-italy.it

用于斜切和弯管的新型自动去毛刺机

KENT Corporation公司开发了一台新型Burrmaster去毛刺机，可以自动去除斜切和弯管端的毛刺。

该机器可用于多个行业，最近美国一家大型排气系统制造商购买了该机器。这是该公司购买的第二套系统，而且正考虑购买第三套。

新型Burrmaster去毛刺机允许操作者在按钮站对机器进行全部控制。过程从机器操作者将管道装载到定制夹具里开始。然后管道被夹住并传送通过旋转宽面毛刷。旋转刷头也同时旋转，这种双重行动使整个管道外围表面质量非常高而且一致。该机器可以手动、自动或由

机器人喂料。能够加工圆钢、方钢、型材、管道、棒材以及铝型材。

Kent Corporation – 美国
传真: +1 440 237 5368
电子邮件: sales@kenttesgo.com
网址: www.kenttesgo.com

重型管道坡口机发布

TAG Pipe Equipment Specialists公司宣布全球发布新系列内径锁紧管道坡口机（管端准备）。Prep系列是TAG开发的最新开坡口技术，是行业30多年的经验发展而来。

TAG Pipe表示作为市场地位保持者，公司根据客户反馈、体验以及要求不断评估、改进和提高产品。

新系列旗舰机是Prep 24。加工范围为7到24英寸的管道，用于满足管道制造商面临的各样艰难条件和材料。

可快速和简单地设置的可移动中心轴、改进的轻量级重载六点锁紧系统、新电机（3,200瓦电动或3.5马力气动）以及升级的齿轮传动装置使Prep 24机器

能对所有壁厚和材质的管道进行坡口加工。

对于大量重复性工作，需要一致的高质量机器加工坡口，TAG Prep系列坡口机适合所有工作现场或车间应用。

TAG Pipe的设备系列还包括便携式管道坡口机；便携式管道切割和倒棱机；管道对准夹；管架及管道搬运设备；管道清洗设备；板材磨边机；拔管和扩管设备以及管子对管板的焊接机。

TAG Pipe Equipment Specialists Ltd
– 英国
电子邮件: sales@tag-pipe.com
网址: www.tag-pipe.com

TAG Pipe的Prep 24
管道坡口机



1.32mt/y greenfield turnkey plant for high quality steel grades at Interpipe

By Gennadiy Yesaulov and Andrea Michielan, Interpipe Steel and Aurelio Mortoni, Colloredo Marco and Marco Rinaldi, Danieli Officine Meccaniche SpA

Interpipe Steel's plant claims to be the largest facility for high quality round billets and blooms production in Eastern Europe, with 1.32mt/y nominal yearly production, supplied by Danieli as a turnkey greenfield plant.

Interpipe Steel's product range includes high quality grades such as wheel steels, which are about 25 per cent of total production and are cast in a CCM 2 4-strand bloom caster.

The other caster (CCM 1) is a 5-strand billet caster having F 150mm as the most produced section, which is reliably cast at 3.5m/min for low C grades.

The plant is located inside the Dnipropetrovsk city in Ukraine, so several solutions like EAF dog house or paintings on the external walls have been adopted in order to limit the environmental impact.

Introduction

The key reasons for the Interpipe steel plant project has been the reinforcement of vertical integration of the group, an increase in billet/bloom productivity and economic and environmental advantages of the route electric arc furnace + continuous casting versus previous open hearth furnace + ingot one.

Danieli successfully started up the Interpipe mini mill in 2012, reaching high productivity as well as high quality levels, regardless of the wide production mix, not only as grades but also as round diameters (nine sizes, from 150 to 470mm rounds).

The achievement of these results is even more remarkable due to the challenging and compact layout that was chosen (one EAF feeding two CC casting simultaneously, each of them having lower productivity than EAF), which proved to be a good balance between investment cost and productivity.

This paper is focused on the description both of the mini mill equipment and of the quality and productivity achieved as a result.

Plant features

Layout

Interpipe Steel is a three-bay plant with one EAF, one LF twin, one VD twin tank, two CCMs and two billet/blooms yards. The scrap yard has a single bay and this layout allows for future expansion with a longer scrap yard, an additional EAF and LF plus a sixth strand on CC1.

A notable feature of this plant is the presence of five large-scale permanent masterpieces by Olafur Eliasson, with the aim of forming a special relationship of employees with their work and to make the plant more friendly to the local community. It also aims to highlight the low environmental impact of the meltshop, which is located not far from residential areas. Figure 1 shows the 'Your heat murals', a group of giant thermal images on the factory side walls.

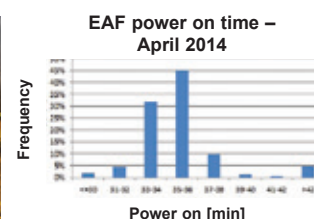


Figure 1: Interpipe melt shop front view

EAF

Interpipe EAF is a 7.5m EBT, with a 140 MVA transformer. It works by keeping a hot heel of 26t and is designed for a rated tapped size 160t. The nominal tap-to-tap time is 50 min in order to achieve 192 t/h of productivity. It is remarkable that power in a short time (34.5 minutes) is significantly lower than contractual figure with 100 per cent scrap (38 min).

Figure 2: Interpipe EAF



LRF twin

In order to have a fast treatment and a buffer able to match the different EAF and CCMs productivity, it has been designed with an LRF twin with 28 MVA transformer and electrode conductive arms, which allows it to reach 5.6°C/min as a heating rate, significantly higher than the guaranteed 4.7°C/min.

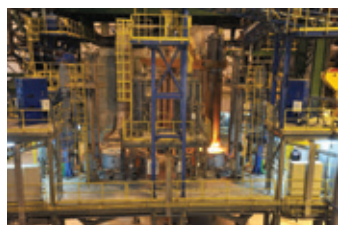
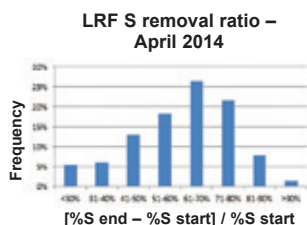


Figure 3: Interpipe LRF



Both LRF positions are equipped with a 4-strand wire feeder machine, emergency lance for stirring, semi-automatic steel and temperature sampling and batch hopper.

One of the key drivers for internal quality is S content. Therefore Interpipe developed an LRF practice aiming to an LRF final S content of below 80ppm, reaching 63b per cent average LRF S removal ratio, including Si-K grades.

VD twin

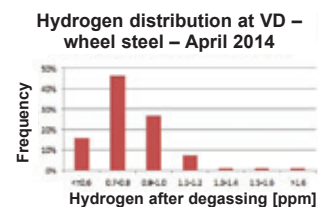
A vacuum degassing station with twin tanks and single cover have been installed close to the LRF, both in order to be able to fulfil the strict requirements of some of grades mainly cast in CCM 2 and – in case of both CCMs casting together – in order to have an additional buffer for EAF and LRF.

The VD station is equipped with a new 400kg/h 4-stage steam ejector pump, whose design has been performed based on consolidated Danieli experience in this field.

Since one of the main risks for wheel steel rejection are hydrogen flakes it was defined as a practice aimed at very low hydrogen, reaching 0.8ppm on average after 22 minutes average degassing time, almost half of the guaranteed figure (1.5ppm).



Figure 4: Interpipe VD station and hydrogen distribution after vacuum for wheel steel



Billet continuous caster (CCM 1)

Interpipe's billet continuous caster (CCM 1) has a five-strand configuration, rigid dummy bar, two unbending points and 12m radius, in order to share same platform level with CCM 2.

Tundish is not symmetric due to the option for an additional sixth strand, and reaches 35 tons capacity. The flow of liquid steel through the tundish to the mould is controlled by a stopper rod system. A hydraulic oscillating table guarantees a tight control of the mould movement as well as the chance to

adopt particular oscillation laws aiming at optimising the billet lubrication and surface quality.

The mould is curved, 780mm long with parabolic taper and steel level, and is measured by a conventional radioactive system. This project was the first time that Danieli adopted a new taper with parabolic shape to overcome the typical issues of small round casting (longitudinal cracks), even when reaching very high casting speeds.

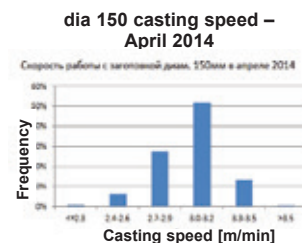
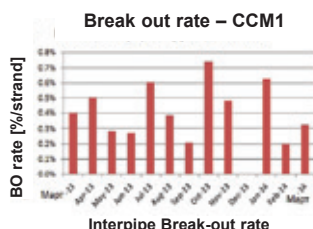


Figure 5: Interpipe CC1 and casting speed distribution for dia 150

Maximum average steady speed achieved in CCM 1 for dia 150 has been 3.7m/min for 10Y, 15GY and 20Y grades, which is significantly higher than the 3.4m/min guaranteed speed. Even casting at very high speeds, CCM 1 proved to be reliable, reaching a low BO rate, which mainly (55 per cent) depends on problems during first heat in sequence. The air-mist secondary cooling, as well as 5-pinch rolls withdrawal and straightening module forces, have been optimised in order to have low porosity (average 0.8 as per OCT 14-1-235-91).



Interpipe CC1 air mist sprays

Figure 6a

The main products obtained from CCM 1 billets (F 150-290 mm) are seamless tubing and line pipes according to API 5CT, API 5L. For this product Interpipe's melt shop product mix has 60-114mm diameter range and 4.8-6.9mm thickness range, with final quality checked with tight limits at US test.

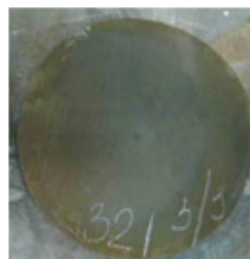


Figure 6b - Interpipe CC1 dia 150mm sampled at 3.35m/min and seamless pipes from CCM 1

Bloom continuous caster (CCM 2)

CCM 2 has a four-strand configuration, flexible dummy bar, three unbending points and 12m radius. The strand distance is 1.8m.



Figure 7a: CCM2 side view

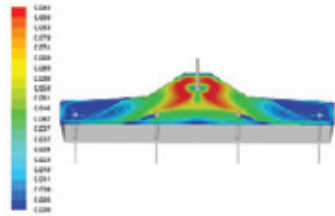


Figure 7b: Tundish meniscus speed

Tundish capacity is 30 tons and its design has been optimised through a CFD study (figure 7b), which showed – for the configuration chosen – that maximum inclusions size going into from tundish to mould is 120mm and that the maximum speed at tundish meniscus level is well inside the 0.2m/s limit, thus preventing slag entrapment.

The flow of liquid steel through the tundish to the mould is controlled by a stopper rod, as it is for CCM 1. An SES avoids the reoxidation of liquid steel, allowing the chance of performing fly-tundish practice, which is commonly performed for wheel steels with 41 heats being the longest sequence achieved.

A hydraulic oscillating table guarantees a tight control of the mould movement and the mould is curved and 780mm long.

The steel level in the mould is measured by a conventional radioactive system, and automatic powder addition is performed in order to avoid powder entrapment, which may lead to defects.

The internal quality of as-cast rounds has been improved through the proper set up of two stirrers (MEMS and FEMS), which are very important in the case of wheel steels, due to the tough requirement of subsurface and centre quality.

In this plant it was decided to apply an innovative approach for the FEMS regulation, aiming to reach the highest stirring intensity without white band: FEMS current/frequency and mode (continuous or alternate) is changed based on the lifetime speed (see figure 7c).



Fig 7c: FEMS dynamic set up

The very low centre porosity coupled with the absence of white band was confirmed not only by as-cast macros, but also by the achievement of the same wheel microstructure from CCM and ingot (see figure 8).

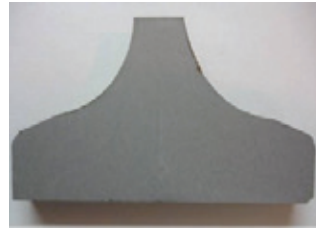


Fig 8a: wheel section produced by EAF+CCM 2

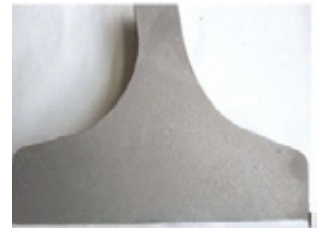


Fig 8b: wheel section produced by OHF+ingot

Blooms are moved from a cooling bed by crane to the bloom cooling area. In order to improve the quality of some grade crack sensitivity, some additional slow cooling areas have been installed. A thorough process analysis was also performed by LRF at the Interpipe rolling mill in order to improve the understanding of the key parameter, allowing CCM 2 to cast wheel steel 0.60%C F 450 at 0.37m/min, while keeping porosity not higher than 2.0 for 90 per cent of samples and average wheel rejection rate below 5 per cent of the 2mm US test limit. This result is in full agreement with guaranteed speed and internal quality for wheel steel.

Productivity trend and production mix

On 17 January and 7 February, 2012 the first casts respectively at bloom (CCM 2) and billet (CCM 1) casters were successfully performed.

Following this a steady increase in production levels from plant start of 15,000 ton/month were achieved during six months (March to August 2013).



Figure 9: Interpipe monthly production

Running at 70-90,000 tons/month allows Interpipe to cast 15-19 heats/day, ie to run at approx 100-130ton/h, which is feasible running only one caster, going for fly tundish for CCM 2 or starting the other caster just before the beginning of restranding, without having any buffer or EAF stop.

Running at 115,000 tons/month requires Interpipe to cast 25 heats/day, corresponding to approx 170 ton/h. This figure can be reached only with the two casters simultaneously casting for most of the time.

The melt shop production mix is quite wide and is currently mainly focused for CC1 on low C grades for pipes and for CC2 on railway wheel steel grades (see figure 10) with 3 per cent production dedicated to export.

The aim for the future is to bring this figure up to 15 per cent in Europe, North and South America markets.

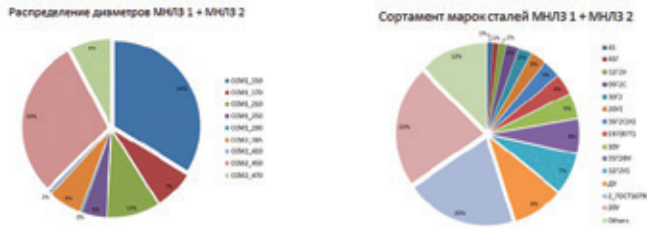


Figure 10: 2014 Interpipe production mix

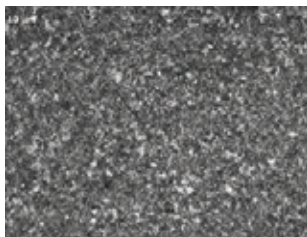
New steel grades have recently been tested in order to enlarge the production mix. Some of the most challenging are 28X3CHMBΦ (0.3%C, 1%Si, 3% Cr, 1% Ni, 1%Mo, 0.07%V), P23HBB (0.25%C, 0.9%Cr, 0.2% Mo, 0.02%Nb, 0.02%Ti, 0.09%Al) and 18Г2У1 (0.2%C, 0.02%S, 0.035% Al).

At the same time a continuous improvement is ongoing, ISO 9001-2009 certification has been reached, and some of the top oil and gas companies have approved the Interpipe steel manufacturing plant for production of steel billets for use in rolling of casing and tubing.

One the most important current products for Interpipe melt shops are railway wheel blooms, which are rolled not only within Interpipe group (mainly 2_ГОСТ10791 grade, with outside diameter ranging from 650 to 1,269mm) but also in external mills (like ER7, 0.50%C alloyed with Cr).

Regarding new tougher limits for internal defects through US tests (2mm vs previous 3mm) of railway wheels, requested by Ukrainian standards since January 2013, a 2 per cent improvement in rejected wheels was achieved compared to 2012 OHF + ingot casting route. This result, coupled with higher metallic yield of CCM compared to ingot casting, allowed a significant cost saving with higher quality for this product.

Figure 11



Rolled wheel steelgrade 2 – homogeneous ferritic-pearlitic structure

Φ 957mm wheel – steelgrade 2



The next challenge is to move to 1mm as a US test limit, increasing as much as possible the metallic yield.

Conclusions

After one year of operation Interpipe's steel mini mill has reached its project quality and productivity goals, starting from a greenfield plant built on a turnkey base by Danieli.

The achievement of these results is even more remarkable due to the challenging compact layout chosen and due to the quality level required by the final end users, which include oil and gas companies as well as railway wheel producers.

Unusually, the plant is located inside the Dnipropetrovsk city limits, so several solutions (ie EAF dog house, paintings on the external walls, etc) have been adopted in order to limit the environmental impact of the plant.

Interpipe – Ukraine
4 Vinokurova Str, Dnipropetrovsk, Ukraine, 49051
Email: sales.eu@interpipe.biz
Fax: +380 562 389 482
Website: www.interpipe.biz

Advertisers Index

Acimak Mak. San. Tic. Ltd. Sti	24	Metal Expo Jsc – Metal Expo 2015.....	73
Adda Fer Meccanica Srl.....	14	Milltech Co Ltd.....	1
Alpha Metall GmbH & Co KG.....	66	MOJ Machines Ltd	69
Ava-Matic (UK) Ltd.....	43	Moreschi Srl	59
Baekchun Machinery Manufacturing Company	45	Officine MTM SpA	42
Behringer GmbH	50	Nakata Mfg Co Ltd	17
Ernst Blissenbach GmbH	29	Olimpia 80 Srl.....	49
Bültmann GmbH.....	57	Ozimeks Int Ltd	2
Cofim Industrie	55	Pines – A Park Ohio Company.....	21
Combilift Ltd	61	Prodim International BV	51
Contrast Eredi SDF	32	Randolph Tool Co.....	20
Dalian Field Heavy Machinery Mfg Co Ltd.....	23	Rea Steam Cleaning Srl.....	8
DieTronic Srl.....	18	RE-BO Reber GmbH.....	39
DMC Tech Corporation.....	Inside Back Cover	Schuler AG	3
Entech Engineering Co Ltd	24	Schwarze-Robitec GmbH.....	44
Fives Bronx Inc.....	Front Cover	Seco/Warwick Europe Sp. Z.o.o.	47
Framag Industrielagen GmbH.....	16	Sen Fung Rollform Machinery Corporation.....	20
Gem Tool Corporation	37	Sikora AG	Inside Front Cover
Haeusler AG	19	Sofratest	22
Hangzhou Zheda Jingyi Electromechanical Technology Co Ltd	75	SST Forming Roll Inc	11
hs-Umformtechnik GmbH.....	55	Suraj Limited	13
Jang Wuel Steel Machinery Co Ltd.....	35	TAG Pipe Equipment Specialists Ltd	53
Kanefusa Corporation	41	Tanitec Corporation	13
Kent Corporation	15	Tecron Piping Systems (Qingdao) Co Ltd.....	74
KraussMaffei Technologies GmbH	56	Tenryu Europe GmbH.....	48
Lessmann GmbH	58	Thermatool Corporation	Back Cover
Limab AB	33	Thermatool IHWT	Back Cover
Linsinger Maschinenbau GmbH.....	46	Tong Da Precision Enterprise Co Ltd.....	79
Manchester Tool & Die Inc	69	USM Mazzucchelli Srl	31
Messe Düsseldorf GmbH	78	Winner Stainless Steel Tube Co Ltd	35
Messe Düsseldorf GmbH – Tube South East ASIA 2015... 60		Zumbach Electronic AG.....	9

Enhancing the value...



A famous mill builder from Korea
Special design for automotive industry and for the normal & structure pipes



Turnkey ERW tube mills from 10mm up to 373mm

Key products are: Vertical accumulators

Cold saws

Friction saws

End facing machines

Pipe straighteners

Automatic Packing systems

Pipe painting lines

Also presents the special partner - a slitter and cut-to-length lines maker from Korea:

 **IMC TECH**



Homepage: www.dmctech.com

E-mail: dmctech@hanmail.net

Worldwide sales: MMS International (www.mmsol.ru)

E-mail: 9951502@mail.ru



THERMATOOL

HAZControl™ Technology

The choice of the next generation

- Process repeatability - store and retrieve weld recipes
- Consistent product quality using Vee Axis™ Control
- Optimal weld with precise heat input control
- Selectable HF weld frequency: 150-300kHz or 250-400kHz

www.thermatool.com

www.inductothermhw.com