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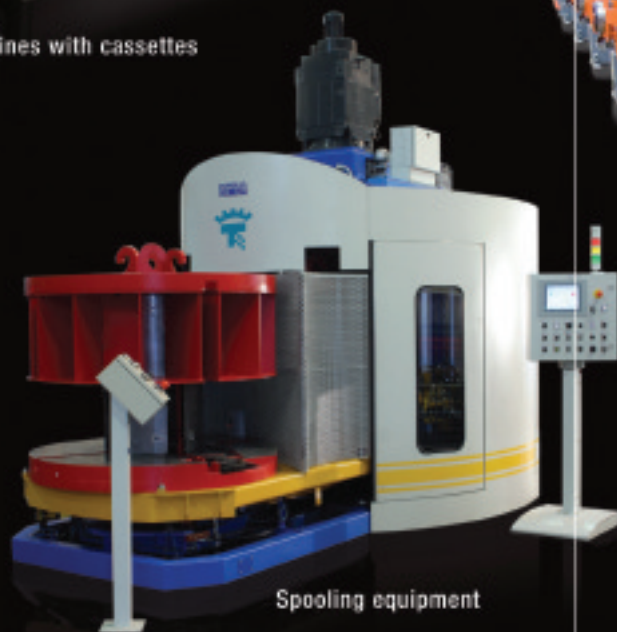
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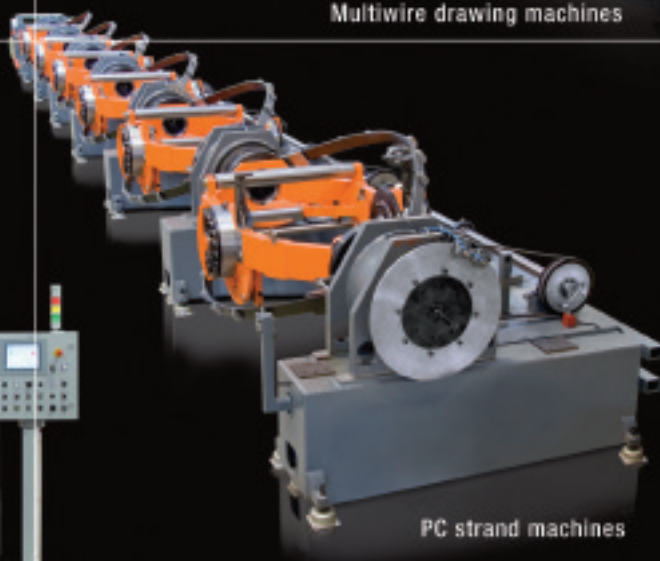
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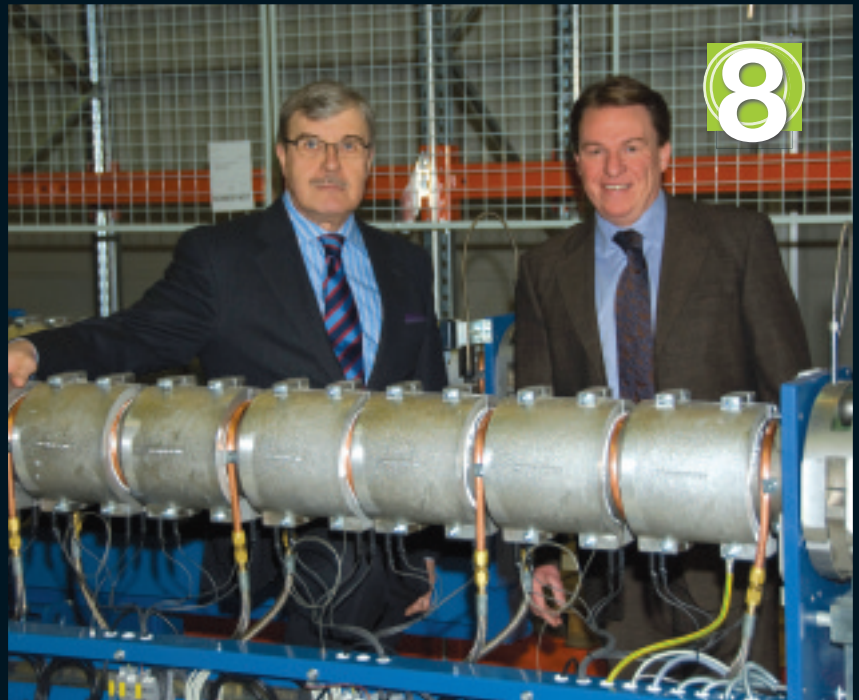
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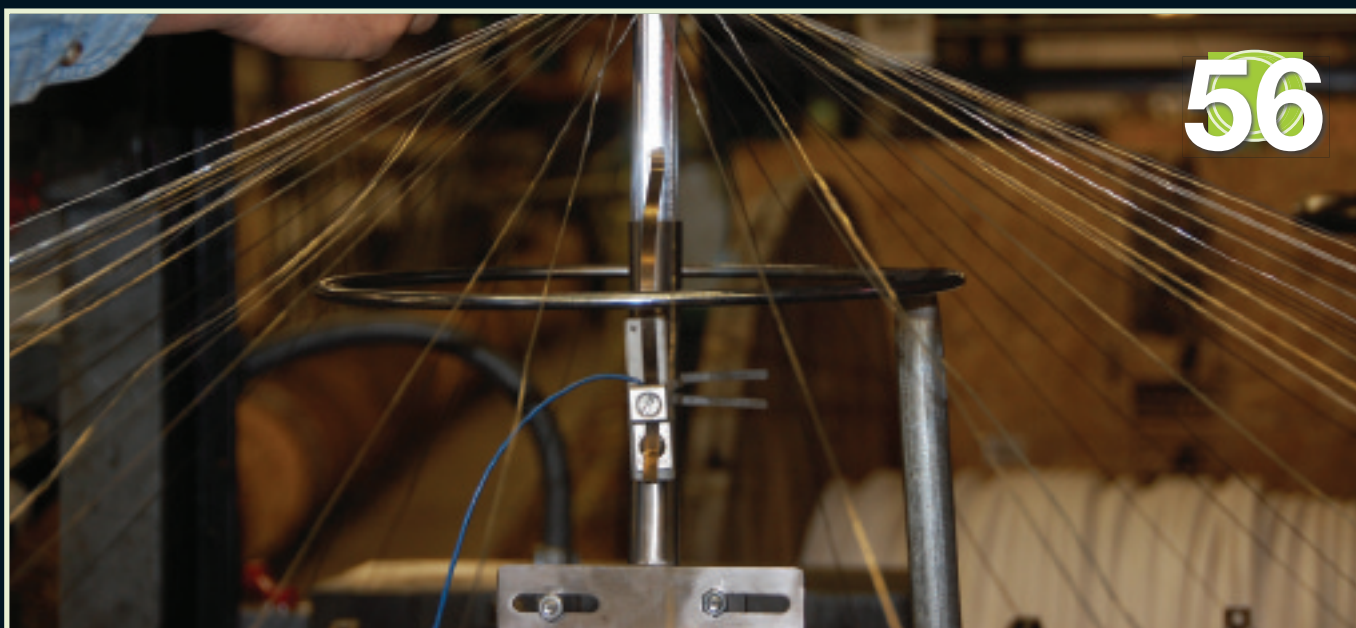
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Leverkusen公司Manuel La Rosa和Andreas Roos

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 'New Milwaukee Skyline'
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May 2010

12–13: **Wire Expo** – technical conference and trade exhibition – Milwaukee, Wisconsin, USA
Organisers: Wire Association International (WAI)
Fax: +1 203 453 8384
Website: www.wirenet.org



'Gothenburg Utkiken Tower'
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June 2010

2–4: **4th World Wire & Cable Conference** – technical conference – Gothenburg, Sweden
Organisers: CRU Events
Fax: +44 20 7903 2432
Email: conferences@crugroup.com
Website: www.crugroup.com

September 2010

21–24: **wire China 2010** – trade exhibition – Shanghai, China
Organisers: Messe Düsseldorf China
Fax: +86 21 5027 8138
Email: wire@mdc.com.cn
Website: www.wirechina.net

November 2010

7–10: **59th IWCS** – technical conference – Providence, RI, USA
Organisers: IWCS Inc
Fax: +1 732 389 0991
Email: admin@iwcs.org
Website: www.iwcs.org

18–20: **Wire & Cable India** – trade exhibition – Mumbai, India
Organisers: CII
Fax: +91 22 2493 9463
Email: info@ciionline.org
Website: http://cii.in

May 2011

3–5: **Interwire** – trade exhibition – Atlanta, Georgia, USA
Organisers: Wire Association International (WAI)
Fax: +1 203 453 8384
Email: info@wirenet.org
Website: www.wirenet.org

23–26: **wire Russia 2011** – trade exhibition – Moscow, Russia
Organisers: Messe Düsseldorf GmbH
Fax: +49 211 4560 7740
Email: info@wire-russia.com
Website: www.wire-russia.com

September 2011

13–15: **wire Southeast Asia** – trade exhibition – BITEC, Bangkok, Thailand
Organisers: Messe Düsseldorf Asia Pte Ltd
Email: wire@mda.com.sg
Website: www.wire-southeastasia.com

October 2011

4–6: **WiCAB** – trade exhibition – São Paulo, Brazil
Organisers: Grupo CIPA Ltda
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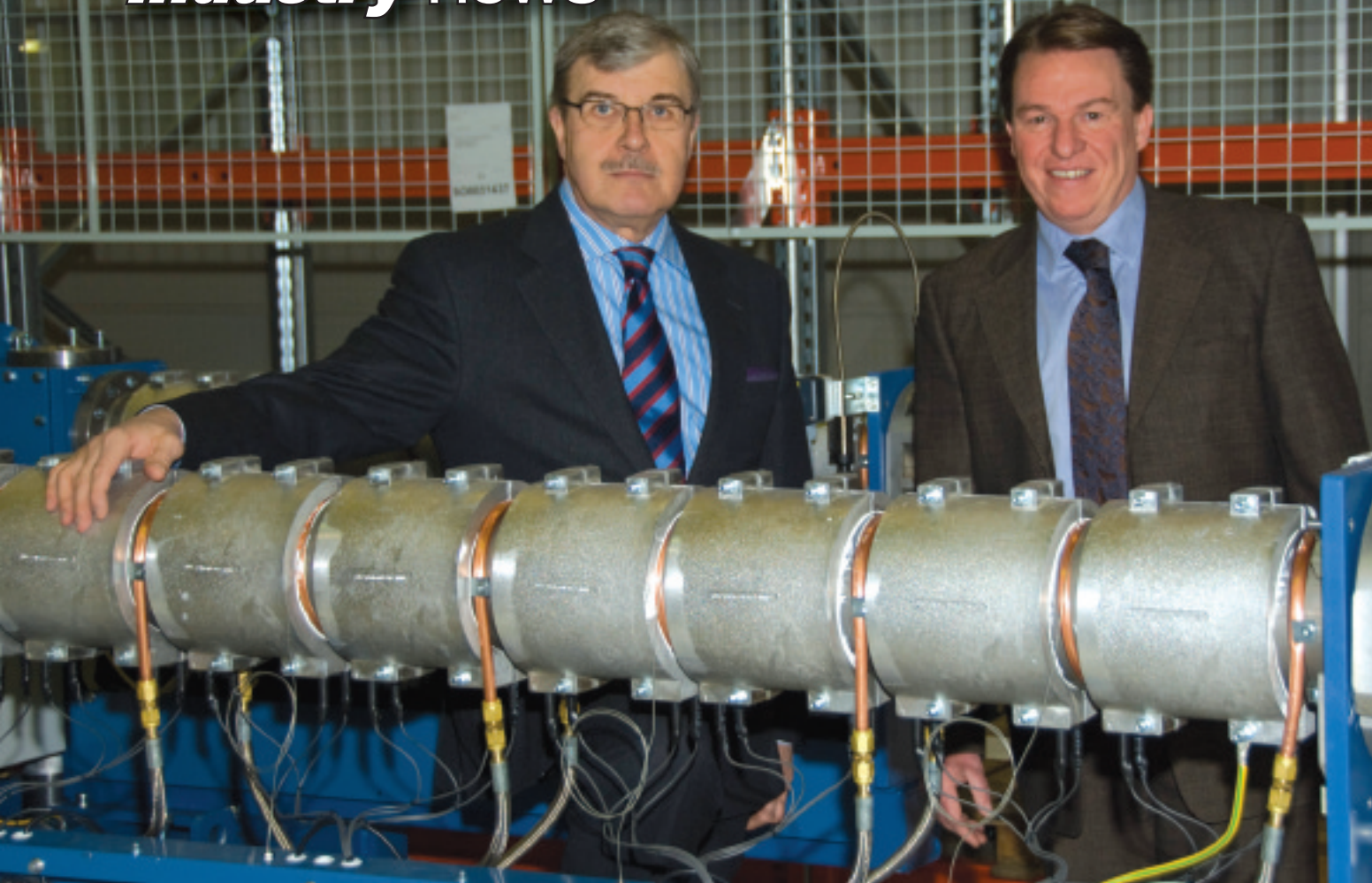
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○ New chairman Mr Pentti Hätälä (left) with Mr Peter Roos

Time for change

With the company's chief executive officer, Mr Pentti Hätälä, having reached the age of 65, the Mailefer board of directors has announced key changes within its board and management team. On 17th December 2009, the directors chose to elect Mr Hätälä to the active position of chairman of the board of the Mailefer Group. Consequently on the same date, Mr Peter Roos was promoted to CEO. The changes took effect on 1st January 2010.

Mr Hätälä leaves his executive position after more than 30 years serving the plastics and wire and cable industries. He joined Nokia Machinery in Finland over 20 years ago and moved up the company's ranks. He became Mailefer's CEO in 2001. In his new role as chairman of the board, he will continue to offer his valuable input in steering the company forward.

As Mailefer's current CEO, Mr Roos benefits from over 20 years of experience in the European automotive industry, including several years in key management positions. He joined Mailefer over a year ago as operations officer and has worked closely with Mr Hätälä during that same period.

Mailefer SA – Switzerland

Fax: +41 21 691 2143

Email: info@mailefer.net

Website: www.maileferextrusion.com

Cable system in the Middle East

The Indian telecommunications company Tata Communications has signed agreements with operators in the Middle East to build a new cable system for the region.

It disclosed in a statement to the Mumbai stock exchange that the cable is to connect the region to major business hubs through the Tata Global Network.

The agreements were signed with Bahrain Internet Exchange, Nawras of Oman, QatarTelecom, Mobily of Saudi Arabia and Etisalat in the UAE.

Tata Communications Ltd – India

Website: www.tatacommunications.com



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FTTH take up gathers pace

At the FTTH Conference 2010 in February, the FTTH Council Europe unveiled the latest figures showing which European countries are leading the way in the penetration of fibre-to-the-home at year-end 2009.

Although Sweden, Norway and Slovenia maintained their places in the top five, they were overtaken by Lithuania, which made a dynamic jump to the number one position with 18 per cent FTTH penetration. All four countries now have penetration rates greater than 10 per cent.

France and Portugal broke into the ranking for the first time, helped by strong deployment of fibre infrastructure as well as marketing efforts to engage subscribers.

FTTH uptake in both countries is expected to continue to increase rapidly as both countries also rank in the top ten economies in terms of the availability of FTTH.

In absolute figures Europe has reached 2.5 million subscribers – 3.5 million if Russia is also included.

The majority of subscribers (77 per cent) are concentrated in seven countries, in the following order: Sweden, Italy, France, Lithuania, Norway, The Netherlands and Denmark.

Amongst these seven, five countries now have more than 200,000 connected subscribers.

FTTH Council Europe – Belgium
Fax: +32 2503 2277
Email: info@ftthcouncil.eu
Website: www.ftthcouncil.eu

New shareholder in Italian WWM

Supplier of wiredrawing machines for the steel wire industry, Ernst Koch GmbH & Co KG now holds a 49% share in Italian manufacturer, Welding Wire Machineries Srl (WWM).

WWM supplies producers of welding wires around the world and, in the past, Koch has implemented many joint projects with the company. Koch expects its shareholding in WWM to result in even better cooperation in terms of the development of new welding wire machines and equipment, as well as in obtaining greater expertise in the production of welding electrodes and flux-cored welding wire.

According to executive director Jochen Koch, WWM could also partner with his long-established company when it comes to equipment that complements the drawing machines.

“Working with WWM allows us to enter the Italian market directly. This will facilitate both the distribution of our own machines and the commercialisation of our joint projects while we will also benefit from the possibility to purchase additional components and equipment,” explained executive director Thomas Voss.

Ernst Koch GmbH & Co KG – Germany
Fax: +49 2372 985 167
Email: sales@koch-ihmert.de
Website: www.koch-ihmert.com

150,000km installed base for OPGW

Prysmian Cables & Systems has reached a major milestone in its optical ground wire (OPGW) business with the latest delivery of a system which takes its total installed worldwide cable volume past the 150,000km mark.

OPGW cable forms an integral part of an overhead electricity network, performing both the primary function of a conventional earth conductor together with the provision of a state-of-the-art communications link, due to the optical fibres contained within.

The project is being carried out with one of the main power utilities in Eastern Europe, with the cable manufactured at Prysmian’s main facility at Vilanova, near Barcelona together with the production unit in Soracaba, Brazil. Prysmian also produced the optical fibres within the cable at the company’s facility in Battipaglia, Italy.

Since supply of OPGW began in 1984, Prysmian’s aluminium tube technology design has been installed into a wide range of environments in all five continents.

“This is an important achievement for us and confirms the commitment shown by our customers in our OPGW system over the last quarter of a century,” said Mr Raul Gil, head of Prysmian’s global OPGW business. “We have now installed our system in more than 80 countries around the world and we are delighted to reach this significant point in the product’s history.”

Prysmian Cables & Systems – Italy **Website:** www.prysmian.com

New website for IST

The Institute of Spring Technology (IST) has launched a new version of its website. Designed to be more attractive than its predecessor, and with clearer navigation, the new site provides full details of the services, equipment, testing and technical expertise available at IST.

The new site has been developed in-house and incorporates extra information, improved graphics, moving pictures and significantly more

downloadable content. Additions to the site include:

- Expanded details of IST’s range of spring testing equipment
- “Meet the staff” page
- History of IST
- Information on British and European funded IST research

IST members will also have access to a “Members Only” area.

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Plastics industry loses a pioneer in PVC and thermoplastic manufacturing

Dave Kiddoo, of AlphaGary Corporation, writes:

After a brief illness, John "Jack" Gallant, aged 77, a long-time employee of AlphaGary Corporation, passed away on 28th December 2009 at his home, surrounded by his wife, Betty, and his family.

Jack was a pioneer and well-known expert in PVC and thermoplastic manufacturing with over 50 years' experience in such positions as line supervisor, R&D manager and VP of manufacturing. Jack truly enjoyed his profession and worked nearly full-time until his death, as Director of Color Management at AlphaGary.

Through his distinguished career, Jack also worked with Blaine Chemical, Great American Chemical, Abbott Industries and Lynn Plastics.

Jack proudly served in the United States Air Force from 1950 to 1952,

stationed in England and deployed throughout Europe and North Africa.

A devoted husband and dedicated father and grandfather, his family was everything to him. Jack loved spending time with his wife and family, vacationing and driving his convertible on the coast of Southern Maine. He enjoyed walking the Marginal Way, Perkins Cove and eating at the Maine Diner. He had a wonderful sense of humour and was loved by all who knew him. Jack always took the time to know and share his thoughts with all of his friends and colleagues.

Jack was larger than life. He was outgoing, always cheerful and genuine to his cherished family, friends and work colleagues.

Bob Gingue, AlphaGary managing director, reflects, "While Jack brought tremendous spirit, dedication and innovation to the development and growth of plastic compounding, his



○ *John "Jack" Gallant with his wife, Betty*
true legacy is the sincere warmth and joyous love he and Betty have deeply instilled within their family. He was so important to so many. He will be sadly missed by all who knew him."

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Heat saving facelift

Enkotec A/S has completed a full renovation and facelift to its office and production buildings. The new front is constructed in glass and galvanised steel plate for long life and minimum maintenance and the construction is designed to reduce heating loss.

Managing director Bent Petersen commented: "I am sure this has a positive effect on both productivity and job satisfaction, and I believe that also our customers will benefit from our facelift. We are so thrilled with our new buildings that our stand design for the wire Düsseldorf 2010 show was based on our renewed image."

Enkotec's new image underlines the modernisation of the company products, people and strategy that has taken place since 2007, when Enkotec came under new ownership and management. During that period, Enkotec has launched several new nail machine models, as well as a threadrolling machine, and streamlined the production based on Lean principles. There is also a strong focus on continuous staff training and using the latest manufacturing technologies. The company has indeed completed an external and internal facelift.

Bent Petersen concludes: "Our new image supports the high quality level we are working so hard to achieve at Enkotec. We are confident that we are more than ever prepared to meet the market demands within the nail industry."

Enkotec A/S – Denmark
Fax: +45 8652 4199
Email: sales@enkotec.dk
Website: www.enkotec.com

Russian office

NOVA-S as, a producer of gabion production machinery, chain link fencing machinery and wire and strip forming machinery, has opened a new representation office in Russia.

Full details of all NOVA-S representation offices, and information on the product range, are available on the company website.

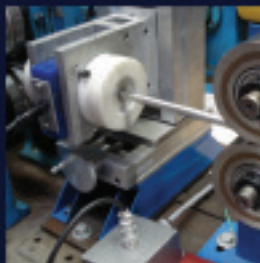
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○ Enkotec staff are delighted with the recent facelift

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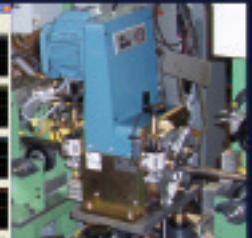
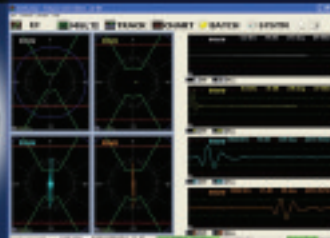
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Niehoff to represent Bühler- Würz-Kaltwalztechnik

Maschinenfabrik Niehoff has assumed the representation of the non-ferrous products area of Bühler-Würz-Kaltwalztechnik GmbH in all countries outside the European Union as from 1st January 2010. For the ferrous products area, South America and India are also included in the Niehoff representation. The product range includes wire reduction mills, flat and profile wire mills, strip rolling mills, complete production lines and accessories for the cold rolling of non-ferrous metals as well as for steel alloys.

Bühler-Würz-Kaltwalztechnik was founded in July 2009 when the Würz industry group, based at Driedorf, Germany, acquired the machinery branch of the insolvent rolling mill manufacturer Bühler & Co GmbH. In the wire and cable industry Bühler rolling mills are used for the production of flat conductors for solar cells, enamelled wire and CTC (continuously transposed conductors).

Maschinenfabrik Niehoff and Bühler have cooperated for many years and, together with the annealing specialist Dr Rainer Menge, have founded the NBM joint venture company specialising in the development and construction of induction annealers. NBM now is a subsidiary of the Niehoff group. The Bühler-Würz rolling mills can be combined with NBM annealers for the continuous production of precision wires and strips made of almost any alloy with narrow tolerance physical properties.

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Email: info@niehoff.de
Website: www.niehoff.de

Bühler-Würz-Kaltwalztechnik GmbH – Germany
Fax: +49 2775 9544 44
Email: info@buehler-wuerz.de
Website: www.buehler-wuerz.de

Schaaf machines will continue to operate

In its largest takeover to date, Bremer has purchased the former Schaaf building, the capital and current assets, and retained some of the former workers. Bremer's target is to strengthen and develop to become a complete supplier for wire drawing companies, and to increase the turnover and revenue strength of the company by organic growth and international expansion.

Schaaf was an established and renowned name in the wire industry. The Schaaf machine programme to process diamond and Compax drawing dies is said to remain the most comprehensive in the field of diamond drawing die tool manufacturing.

Willi Bremer GmbH – Germany
Fax: +49 2778 2190
Email: bremer.willi@t-online.de
Website: www.bremer-willi.de

IWMA 40th anniversary commemorative book

The largest and most influential corporate membership association for the wire, cable and wire product industries is celebrating its 40th anniversary in 2010.

A new IWMA publication marks this important milestone by tracing the Association's development from 1970 to 2010. The commemorative book, "History of Achievement, Positive Future", has been sent to every current member and to many important fellow organisations, partners and contacts in the industry.



INTERNATIONAL WIRE & MACHINERY ASSOCIATION



History of Achievement Positive Future

○ IWMA's 40th anniversary commemorative booklet

The 68-page publication needed many hours of research to compile and in addition to a narrative history of the IWMA includes an appendix of key dates, founder members, an historical list of past and present member companies, officers and board members, scholarship awardees, speakers awards and conference history.

Someone who has played a significant part in the IWMA's history and involvement with wire Düsseldorf is Manuel Mataré, a director of Messe Düsseldorf GmbH.

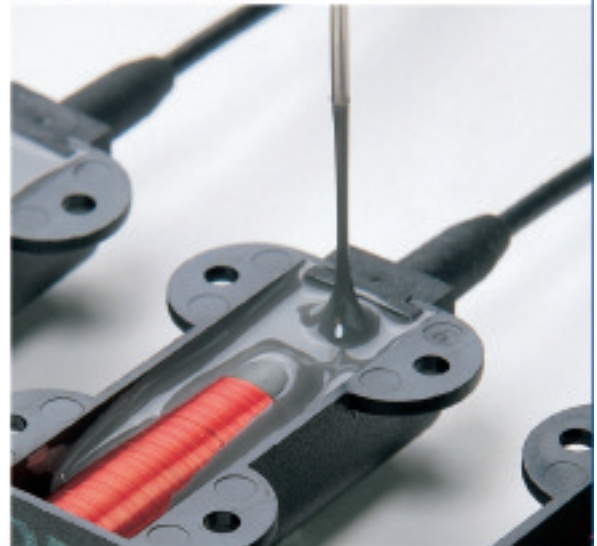
The IWMA was delighted that Manuel accepted an invitation to write a foreword for the 40th anniversary book and for his closing remarks: "I am convinced that the IWMA will still be going strong in another 40 years' time and would like to thank the Association for giving me the opportunity of playing a small part in its history.

"I wish the IWMA all the very best for the future and good luck."

"History of Achievement, Positive Future" will be widely distributed at wire and cable exhibitions during 2010. Any reader interested in receiving a hard copy of the book is invited to contact the Association's Secretariat.

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

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It is in the area of electronic and engineering materials that our two newest additions, Quadrant and Shimo, will reside. The unique technologies and applications provided by these acquisitions will enhance the ELANTAS leadership position around the globe. ELANTAS intends to leverage the new resins systems acquired in these acquisitions to service all of our customers with a broad range of products to meet their electrical insulation needs.

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www.elantas.com


Electrical Insulation

New appointment

Kühne + Vogel Prozessautomatisierung Antriebstechnik GmbH has appointed Mr Norbert Bergmann to take charge of sales of the company's range of cable machinery. Mr Bergmann has many years of experience in the field and is well known within the industry.

Kühne + Vogel, supplier of the Extrumatic product family, is planning to extend its activities in the cable machinery sector.

**Kühne + Vogel Prozessautomatisierung
Antriebstechnik GmbH – Germany**

Fax: +49 9171 62767

Email: pa@kuehneundvogel.de

Website: www.kuehneundvogel-pa.de

API licence granted

In 2009 Remer, a producer of industrial wire ropes for over a hundred years, was awarded the American Petroleum Institute - API licence 9A-0076. This important goal confirms the capacity of the Italian firm, and gives the opportunity to serve clients with a wider range of high performance wire ropes.

As well as the new drilling line for oil wells, Remer produces wire ropes for fishing, elevators, rockfall barriers and cranes; also plastic covered steel wire ropes, spiral strands and cable laid ropes.

Remer Srl – Italy

Fax: +39 0735 583490

Website: www.remer.it

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SKET to continue the Wardwell brand

SKET Verseilmaschinenbau Magdeburg GmbH has acquired the assets of Wardwell.

SKET had previously purchased the assets of Wardwell Europe and was also the highest bidder for the assets of the braiding machine manufacturer at auction on 14th December 2009. A spokesperson for the German manufacturer and member of the WILMS Gruppe confirmed the acquisition and its plans to restart operations at the same location on 4th January 2010.

"We are pleased to add the Wardwell brand and products to our program and offer more options to our customers. Wardwell has been supplying braiding equipment to the wire and cable industry for 98 years and has many prominent and loyal customers," said the source.

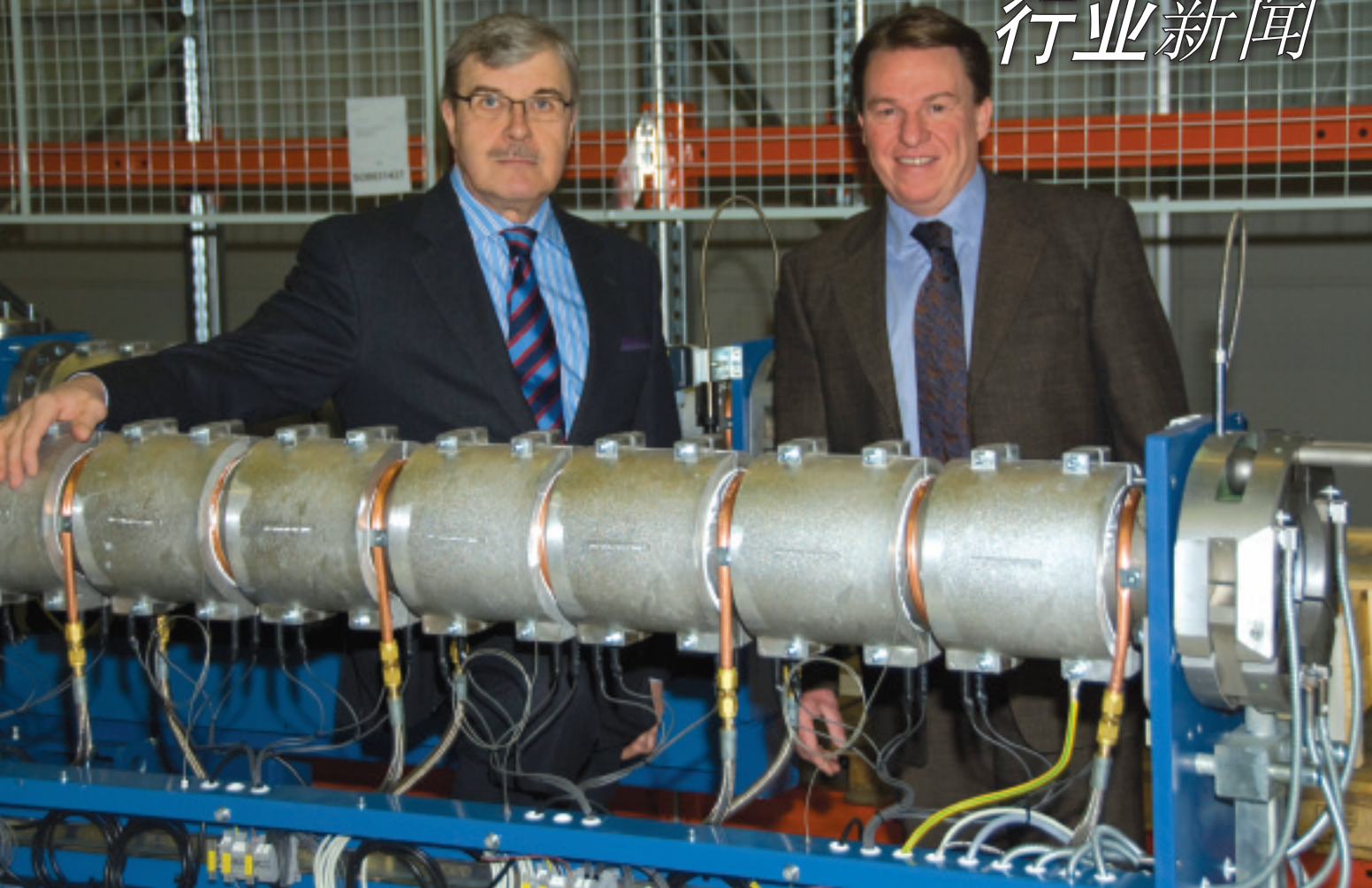
The new company will have a smaller work force, initially, and a new name – Stolberger Incorporated DBA Wardwell Braiding Co.

**Stolberger Incorporated DBA
Wardwell Braiding Co – USA
Berlin email:**

hbaumbach@spirka-schnell-
flechter.com

USA email:

jtomaz@wardwell.com



○ 新主席Pentti Hätälä先生（左）和Peter Roos先生

管理层变更

随着公司首席执行官Pentti Hätälä先生已到65岁，Maillefer董事会宣布了董事会和管理层的重要变更。2009年12月17日，董事们决定选举Hätälä先生为Maillefer Group董事会主席，同一天，Peter Roos先生被任命为首席执行官。变更于2010年1月1日生效。

Hätälä先生在服务于塑料和电缆工业30年后离开首席执行官职位。20年前他在芬兰加盟Nokia Machinery，并使公司排名向上攀升。他在2001年成为Maillefer首席执行官。在他担任董事会主席期间，他将为公司的发展继续作出他宝贵的贡献。

作为Maillefer现在的首席执行官，Roos先生得益于20多年来在欧洲汽车工业的经验，包括担任了若干年的关键管理职位。他于一年前加盟Maillefer，负责经营，并在那段日子里与Hätälä先生密切合作。

Maillefer SA - 瑞士
 传真: +41 21 691 2143
 电子邮件: info@maillifer.net
 网址: www.mailliferextrusion.com

Schaaf设备继续沿用

Bremer开发和制造用来生产和修理拉伸模具的设备，提供各种软件、知识和技术援助。

在公司至今最大的接管中，Bremer并购了以前的Schaaf大楼、资本和流动资产，留下了前者部分的工人。这项动议符合公司的战略，成为构架清晰面向国际的技术型公司。

Bremer旨在进一步加强和发展，成为德国和海外线材拉伸公司全面的供应商，并通过强健的增长和海外扩张来增加公司的营业额和创收能力。

Schaaf以前在线材工业还是颇具声望的。据说，Schaaf的钻石和康派斯（Compax）拉伸模具生产设备在钻石拉伸模具生产领域中仍然是最高级的。Bremer将与Schaaf以往的客户合作，继续服务和供应Schaaf设备的备件。

Willi Bremer GmbH - 德国
 传真: +49 2778 2190
 电子邮件: bremer.willi@t-online.de
 网址: www.bremer-willi.de

节能翻新

Enkotec A/S完成了对其办公室和生产大楼的全面翻新。新的建筑采用玻璃和镀钢板设计，寿命长，维护低，降低热损失。总经理Bent Petersen评价道：“我相信这有助于我们的生产率和工作满意率，而且我们的客户能从我们的翻新得益。我们为大楼感到兴奋，我们在线材Düsseldorf 2010年会展站台设计基于我们的崭新形象。”

Enkotec的新形象强调2007年来公司开展的产品、人员和战略现代化，当时，Enkotec更替了它的拥有权和管理。在该期间，Enkotec推出若干新

型制钉设备、滚丝设备，根据倾斜原则精简生产。集中力量进行连续的人员培训，并采用最新的生产技术。公司着实完成了一次内外翻新。Bent Petersen总结道：“我们新的形象支持我们要在Enkotec达到的高质量水平。我们相信我们的准备比以往任何时候都要充分，满足制钉工业市场的需求。”

Enkotec A/S - 丹麦
 传真: +45 8652 4199
 电子邮件: sales@enkotec.dk
 网址: www.enkotec.com

翻新使Enkotec员工感到兴奋



IWMA 40周年纪念册



线材、电缆和线材产品工业最大和最具影响力的公司成员协会将于2010年庆祝其40华诞。

一份新的国际线材机械协会 (IWMA) 出版物将记录这个重要的时刻，它记录了协会从1970年到2010年的发展。这本纪念册“辉煌的过去、光明的未来”已送达每个成员和行业的许多重要合作组织、合作伙伴和联系人。

一份新的国际线材机械协会 (IWMA) 出版物化了很多时间进行编写。除了IWMA叙事般历史外，它附录了关键日期、创始成员、以往和现有会员公司、官员和董事会成员、学者奖和演说奖获得者、大会历史。

Manuel Mataré 是 Messe Düsseldorf GmbH 的一名董事，他积极参与Düsseldorf线材会展，在IWMA历史中发挥了重要作用。IWMA很高兴Manuel Mataré接受为40华诞纪念册写序的邀请，他在结束语中说：“我深信，在今后的40年中，IWMA将依然强壮，而且我要感谢协会给我机会为IWMA尽绵薄之力。我祝愿IWMA拥有最美的未来、最好的运气。”

“辉煌的过去、光明的未来”将广泛分发，在线材和电缆会展在2010年期间，任何感兴趣读者想要得到一本印刷版纪念册，请联系协会秘书处。

IWMA - 英国
 电子邮件: info@iwma.org

传真: +44 1926 314755
 网址: www.iwma.org

OPGW安装量超越150,000公里

随着Prysmian Cables & Systems递交其最后一个系统后，Prysmian Cables & Systems的光学接地线 (OPGW) 业务达到了一个重大的里程碑，其全球电缆总装量超过150,000公里。OPGW电缆是高架电力网不可分割的部分，既执行传统接地线的主要功能，又提供一流的通讯连接，其中，内含的光学纤维起到了重大重要的。

项目正在东欧的一个主要电力设施中进行，由Prysmian在巴塞罗那附近Vilanova的主要设施、以及在巴西Soracaba的生产装置生产电缆。Prysmian还在公司在意大利Battipaglia的公司中生产光纤电缆。自从1984年开始供应OPGW后，Prysmian的铝管技术设计已被安装在全球5个大陆的各种环境中。

“这是我们的一个重要成就，在将近四分之一世纪的日子里，我们向客户提供的OPGW系统也证实了我们的承诺，” Prysmian全球OPGW业务主任Raul Gil说：“我们现已将我们的系统安装在全球80多个国家，我们很高兴在我们的产品历史中我们达到了这个意义重大的时刻。”

Prysmian Cables & Systems - 意大利
 网址: www.prysmian.com

FTTH人气聚增

在2月份举行的2010年FTTH大会上，FTTH理事会欧洲揭示的最新数据表明：截止2009年年底，欧洲国家引领着光纤到家的业务渗透。尽管瑞典、挪威和斯洛文尼亚仍在前五名中，但被立陶宛后来居上，立陶宛一下子跳到第一，占FTTH渗透量的18%。这四个国家的渗透率都大于10%。

在强劲的光纤基础设施开发和与订户盟约的市场努力下，法国和葡萄牙首次闯入排名。预计这两个国家的FTTH渗透量将继续快速增加，而且就FTTH而言，这两个国家也将入座10大经济强国。就绝对数字讲，欧洲订户达250万，若将俄罗斯包括在内，则达350万。大多数订户 (77%) 按以下顺序集中在7个国家：瑞典、意大利、法国、立陶宛、挪威、荷兰和丹麦。在这7个国家中，5个国家的订户数现已分别超过20万。

FTTH Council Europe - 比利时
 传真: +32 2503 2277
 电子邮件: info@ftthcouncil.eu
 网址: www.ftthcouncil.eu



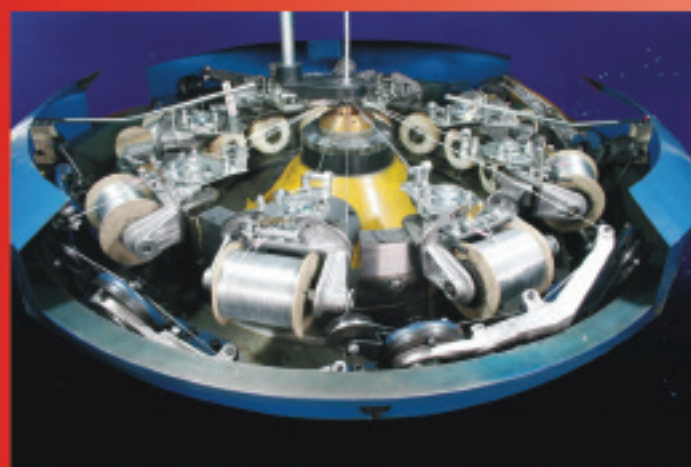
NYDG

上海南洋电工器材有限公司主要从事于电线电缆机械的设计和制造，现主要产品为编织机，绕包机，印字机。其中，编织机按编织线径由小到大分为：轻型、标准型、重型。



GSB-1Q型

GSB-1Q型16锭高速编织机是目前我公司的最新产品。该机型适用于编织极细丝，应用行业包括微型电脑，移动通讯设施，航天航空及军事领域等。该机型的主要技术指标达到国内领先水平，接近国际先进水平，每分钟转速范围0~120米，无极调速；由交流伺服系统控制牵引，编织节距可在2~60mm范围内以精度0.1mm无级任意选择；可编织0.03~0.05mm的极细铜丝；恒张力收放线机构确保编织过程中的张力均衡；机器工作噪音 ≤ 75 分贝。



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本系列产品可分单头，双头或三头绕包，绕包分为卧式或立式，是生产通讯电缆、控制电缆、防火电缆等专用设备。绕包盘最大转速可达1500r.p.m，绕包节距0.5mm~30mm，绕包盘最大外径 ϕ 300mm。绕包带可分为片式和筒式两种。

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传真：0086-21-33896305
http: www.shanghai-nanyang.com
E-mail: sales@shanghai-nanyang.sina.net

Wardwell新闻

SKET Verseilmaschinenbau Magdeburg GmbH已购得Wardwell的资产。SKET以往采购Wardwell Europe的资产，也是2009年12月14日拍卖会上编织设备制造商资产的最高竞标者。这家德国制造商发言人和WILMS Grupper成员确认了并购，其计划是要在2010年1月4日在相同的地点重新开工。“我们很高兴把Wardwell编织设备和产品加入我们的范围，为我们客户提供更多的选择。Wardwell向线缆工业提供编织设备已有98年，有许多优秀和忠诚的客户”发言人说。新公司的员工队伍在开始时将要小一些，并用一个新的公司名称 - Stolberger Incorporated DBA Wardwell Braiding Co.。

Stolberger Incorporated DBA Wardwell Braiding Co - 美国
柏林邮箱: hbaumbach@spirka-schnellflechter.com
美国邮箱: jtomaz@wardwell.com

新的俄罗斯办事处

NOVA-S是一家设备生产商，产品包括金属管生产设备、链接围栏生产设备、线材和带材成型设备，它宣布在俄罗斯开设一家新的代理公司。有关NOVA-S所有代理公司和产品详情，请参见公司网站。

NOVA-S as - 斯洛伐克
传真: +34 6242 468
电子邮件: novas@novas.sk
网址: www.novas.sk

中东的电缆系统

印度电信公司Tata Communications与中东的诸多运营商签署协议，为区域建设一个新的电缆系统。据它在孟买整卷交易所披露的声明，电缆要通过Tata全球网络把区域连接到主要业务中枢。

签署协议的有Bahrain Internet Exchange、Nawras of Oman、QatarTelecom、Mobily of Saudi Arabia和阿联酋的Etisalat。

Tata Communications Ltd - 印度
网址: www.tatacommunications.com

意大利WWM的新股东

钢丝工业用线材拉伸设备供应商Ernst Koch GmbH und Co KG现在拥有意大利制造商Welding Wire Machineries srl (WWM) 49%的股份。WWM向世界各地生产商供应焊接线材，过去，Koch已经与该公司共同实施了许多合资项目。Koch期望其在WWM的股份能导致更好的合作，以开发新型焊接线材机械设备，获得更多的焊条和焊剂芯焊丝生产专业知识。根据执行总裁Jochen Koch所说，当要补充拉伸设备时，WWM还能与其长期公司合伙。“与WWM合作能使我们直接进入意大利市场。这有助于我们双方经销我们自己的设备，利用我们的合资企业盈利，另外，我们还可能采购附加元件和设备而得益”，执行总监Thomas Voss解释说。”

Ernst Koch GmbH & Co KG - 德国
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电子邮件: sales@koch-ihmert.de
网址: www.koch-ihmert.com

Bühler-Würz-Kaltwalztechnik任命 Niehoff为其代理

Bühler-Würz-Kaltwalztechnik GmbH自2010年1月1日起任命Maschinenfabrik Niehoff为欧共体外所有国家有色金属产品代理。对于黑色金属产品，南美和印度也包括在Niehoff的代理范围内。产品范围包括线材减径、压扁和成型设备、带材轧制、黑色金属以及合金钢全套冷轧生产装置和辅助设备。

Bühler-Würz-Kaltwalztechnik成立于2009年7月，当时位于德国Driedorf的Würz工业集团兼并了破产的轧制制造商Bühler & Co GmbH的机械分公司。线材和电缆工业用Bühler轧制设备来生产扁平导体，用于太阳能电池、漆包线和连续调频导体(CTC)。Maschinenfabrik Niehoff和Bühler已经合作多年，他们和退火专家Rainer Menge博士一起成立了NBM合资公司，专门开发和建造感应退火设备。NBM现在是Niehoff集团的一家分公司。Bühler-Würz轧制设备能与NBM退火设备结合，连续生产几乎任何精密合金线材和带材，具有极好的公差和物理性能。

Maschinenfabrik Niehoff GmbH & Co KG - 德国
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电子邮件: info@niehoff.de
网址: www.niehoff.de

Bühler-Würz-Kaltwalztechnik GmbH - 德国
传真: +49 2775 9544 44
电子邮件: info@buehler-wuerz.de
Website: www.buehler-wuerz.de

塑料工业失去一位PVC和热塑制造先驱

John “Jack” Gallant - AlphaGary Corporation公司的长期员工 - 病后不久于2009年12月28日，在妻子Betty和家人的陪伴下逝于家中，享年77岁。

AlphaGary Corporation公司的Dave Kiddoo这样写到: Jack是一位先驱、著名的聚氯乙烯和热塑制造专家，50多年来历任生产线主管、研发经理和生产副总裁。Jack作为AlphaGary的Color Management总监，非常热爱其专业，他几乎全日工作，直到去世。在他整个杰出的职业生涯中，Jack还为Blaine Chemical、Great American Chemical、Abbot Industries和Lynn Plastics工作过。

1950年-1952年Jack自豪地服役于美国空军，驻扎在英格兰，部署于整个欧洲和北非。

他是一位深爱着妻子的丈夫、一位全心全意奉献的父亲和祖父，他的家庭就是他的一切。Jack爱和妻子和家人在一起，喜欢在缅因州海岸度假和驾驶他的敞篷车。他高兴地走在Marginal Way海滩和Perkins Cove峡谷、吃在Maine Diner普通小餐厅。他很幽默，每个认识他的人都敬爱他。Jack总是花时间让朋友和同事了解和分享他的思想。

Jack的生活意义重于生命本身。他友好、总是乐呵呵的，真诚地对待他挚爱的家人、朋友和同事。AlphaGary总经理Bob Gingue说: “Jack带给我们巨大的精神力量，对塑料母料事业发展壮大的奉献和创新，他留给我们的真正财富在于他和Betty潜移默化于他们家庭的那种真挚的热诚、快乐的热爱。他对很多人来说是那么的重要。所有认识他的人都会深深地怀念他。”

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○ John “Jack” Gallant和他的妻子Betty

Keynoter at GSMA Mobile World Congress 2010 cites Google dominance as harmful to the mobile broadband industry

Barcelona again was host to the Global System for Mobile Association's Mobile World Congress, where over the period 15th to 18th February some 1,300 companies showcased their products and services to handset manufacturers, mobile operators, software developers, and others in wireless and related industries around the globe.

Keynote speakers included Ericsson chief executive Hans Vestberg, Huawei CSO Guo Ping, and China Unicom president Lu Yimin, who agreed that cheaper smartphones are key to boosting mobile broadband usage; Erik Huggers, director of BBC Future Media & Technology, who made a pitch for standardisation ("Twenty-one flavors of iPlayer is complete madness") and Alcatel-Lucent chief Ben Verwaayen, urging that mobile broadband accept its obligations to society – not just the customer – lest the industry become "little more than a source for taxation and a force of limitation."

Probably the most notable keynoter was Vodafone CEO Vittorio Colao, who opened the proceedings with an assertion that, for mobile broadband to move forward, the industry had to "get some things right" first. Leaving no room for doubt that here was the anti-Google, the Vodafone head called for open platforms and more competition across the value chain – especially the parts dominated by Google.

While conceding that there is competition enough in most links of that chain (network operators, devices, apps development), Mr Colao declared that search and advertising are dominated by Google and, to a lesser extent, Yahoo, which together command 80% of the market. "From a public policy perspective, this is something that should be looked at," he said. "We need to ensure that all players in the value chain are open and competitive."

John C Tanner, who summarised the keynote addresses on telecomasia.net (17th February), wrote that Mr Colao voiced similar concerns over the

UN network restoration efforts in Haiti get a helping hand from Singapore's smartBridges Solutions

On 12th February it was reported by M2 PressWIRE (via COMTEX) that the United Nations telecommunications agency was working with Singapore-based smartBridges Solutions to set up fast wireless phone and Internet connections to assist aid workers and local authorities in Haiti.

The terrestrial network there was rendered largely inoperative by damage from the earthquake that struck Haiti a month earlier.

Under the terms of a cooperation agreement with the International Telecommunication Union (ITU), the UN's oldest agency, the Singaporean wireless broadband equipment provider would supply ten carrier-grade WiMAX base stations and equipment to 100 holding centres for internally displaced persons. ("UN Telecom Agency Plans Wireless Hotspot in Haiti," 12th February)

The ITU, which allocated over \$1 million to strengthen disaster response in Haiti, had already contributed 100 satellite terminals to help re-establish basic communications links within the country.

As part of that effort, smartBridges Solutions installed a deployable base station with complete cellular network to provide wireless communications essential to disaster relief and clean-up efforts.

Sami Al Basheer Al Morshid, the director of ITU's Telecommunication Development Bureau, said that he looked forward to working with smartBridges Solutions, not only to help save lives during emergencies but also "to fully leverage the power of information and telecommunication technologies to drive the ongoing development of Haiti and other developing nations."

The bureau director also said he calls upon "like-minded potential partners" to join with the agency to advance that cause.

dominance of fixed-line networks, which he said accounted for 60% to 80% of telecom cash flow in a given market.

The industry, Mr Colao said, needs to develop a framework that emphasises viable competition (including mobile virtual network operators) and an open approach that allows apps to go cross-platform at the customer's convenience.

The Vodafone chief offered his own firm as a model for the promotion of open platforms, both on its own and in its capacity as a founding member of Joint Innovation Lab (JIL) Initiative.

He said, "We are open to all operating systems and app stores and we've opened our billing system to developers and content owners."

[Note: Netherlands-based JIL, established in 2008, has as its focus the creation of a single global platform for developers that would foster a wide range of innovative mobile widgets.]

Research finds mobile dominating the telecom market

The mobile sector now accounts for over half of the global telecommunications market, according to a provider of market intelligence for the telecom and information technology sectors.

As reported on 12th February by Jessie Richards of ihotdesk communications (London), research carried out by IDC (Framingham, Massachusetts) found that the mobile market is now worth \$850 billion a year and makes up 57% of the overall communications field.

Identifying trends for the coming year, IDC predicted that smartphones would continue to be a major driver of growth, while the emergence of connected devices (such as embedded laptops and machine-to-machine equipment) will lead to further success. The consultancy also tipped mobile broadband to be the focus of

infrastructure growth in 2010, with more high-speed packet access likely to be rolled out in mature markets.

WiMax makes significant inroads worldwide, but LTE technology is preparing a spirited challenge

WiMax growth is surpassing expectations, according to a new report from the WiMax Forum, an industry-led organisation formed to certify and promote broadband wireless products based on the IEEE 802.16 standard.

The Forum announced on 15th February that the 4G technology is currently on track to surpass predictions of covering 800 million people by the end of 2010. And, with WiMax service available in 147 countries, the expectation is for coverage of more than a billion people worldwide by the end of 2011.

The Forum reported that the greater part of WiMax coverage is in the Asia Pacific region, where 237 million people are reached under 100 network deployments. Central and Latin America have 109 deployments, covering 113 million people. Africa has 142 deployments and Europe 153, covering 108 million and 115 million users, respectively. In North America, deployments have reached 51, for coverage of 47 million people.

"The new deployment numbers and population statistics demonstrate that the WiMax ecosystem has strong momentum for the start of the New Year and will continue to meet the global market demand for high-speed broadband access in developed and emerging regions," said Ron Resnick, president and chairman of the Forum. ("WiMax to Cover 1 Billion Plus in 2011, Surpassing Expectations," *eweek.com*, 15th February). But, as noted by Michelle Maisto of *eweek.com*, this momentum could be checked by the competing 4G technology LTE (long term evolution). AT&T has already begun testing LTE and plans to begin rolling out its new network in 2011. Verizon will launch its network in mid-2010.

Seeing a "mixed picture" in place of the WiMax Forum's clear outlook, the New York-based technology research firm ABI stated in a 3rd December report that, while WiMax has a head start, it expects "the LTE ecosystem

[to] eventually be vastly larger than the mobile WiMax ecosystem."

Elsewhere in telecom . . .

① Huawei has presented what it believes is the world's first LTE wireless modem compatible with LTE, W-CDMA/HSPA, and GSM/GPRS/EDGE networks, based on Qualcomm's MDM9200 chipset and supporting multiple LTE frequency bands. As reported on 18th February, the triple-mode Huawei E398 modem will be launched first over the Swedish network operated by Tele2 and Telenor Sweden via their joint infrastructure venture Net4Mobility.

The Swedish partners selected the Chinese technology provider to develop their nationwide LTE network, including the supply of infrastructure and terminal solutions.

② Samsung Electronics and Sony Ericsson were among those introducing new smartphones at Mobile World Congress 2010, held in Barcelona in February. Sony Ericsson presented its Android-enabled Xperia10 Mini and X10 Mini Pro, compact versions of the well-received Xperia X10, the firm's first Android smartphone which was unveiled in November. Samsung presented the Wave, the first smartphone incorporating the firm's new Bada operating system. Set for commercial launch in May, the Wave features a 3.3" touch screen, five-megapixel camera, high-definition video, Samsung apps, and 1GHz Samsung applications processor.

③ The rivalry between Nokia Siemens Networks (NSN) and Huawei for the No 2 position, behind Ericsson, in India's mobile infrastructure market has intensified. NSN, of Finland, announced a \$700 million deal with Bharti Airtel to boost the capacity of Bharti's 2.5G network by 50% in eight circles: Mumbai, Maharashtra and Goa, Gujarat, Madhya Pradesh and Chattisgarh, Bihar and Jharkhand, Orissa, Kolkata, and West Bengal.

Meanwhile, NSN's Chinese competitor Huawei – which itself has network contracts with Bharti – is busy advancing its professed aim of increasing Indian revenues by \$1.2 billion this year over 2009.

"We are looking at more than \$3.5 billion [in 2010 revenues]," Huawei's India executive director for strategy and marketing, Lester Herbert, told the *Economic Times* (15th February).

The report says Huawei will invest \$500 million in India over the next five years, and plans to increase R&D staff at the facility in Bangalore from 2,000 employees to 5,000 by 2015.

④ Citing the Brazilian daily O Globo, a 10th February item in the Wall Street Journal suggested that Spain's Telefónica and Telecom Italia might be close to a merger.

The Rio De Janeiro-based paper said that, according to unnamed sources, Telefónica had obtained financing for the deal, which would be announced after both companies reported financial results later in the month. Officials of both firms declined to comment on the report.

Jeff Fick of Dow Jones Newswires commented that Telefónica-Telecom Italia would likely face "a tough test" from antitrust officials in Brazil: "The deal would merge the country's largest and third-largest mobile phone companies, as well as the fixed-line operator in São Paulo, Brazil's richest state."

Telefónica owns a 50% stake in mobile operator Vivo, Brazil's largest mobile phone company, and Telecomunicações de São Paulo, or Telesp. Telecom Italia, meanwhile, controls an 86% stake in TIM – the country's No 3 mobile phone company.

Mr Fick wrote, "One of the sticking points to any deal, O Globo reported, was how to value the stakes in each company's Brazilian assets. According to sources, Telecom Italia's holding in TIM is worth more than Telefónica's stake in Vivo."

⑤ In other news from Brazil, Embratel Participações SA posted stellar results for the fourth quarter of 2009 as compared to the same period a year earlier. Citing operational improvements for the impressive showing, Embratel reported net profit gains for the quarter of 181%, to \$176.7 million.

2010年GSMA移动世界大展 基调发言人称Google垄断地 位危及移动宽带行业发展

巴塞罗那再度成为GSM协会移动世界大展的举办城市。从2月15日到18日，有1,300家公司向来自世界各地的手机厂家、移动运营商、软件开发和其他无线相关行业的厂商展示了自己的产品和服务。

主题发言人包括爱立信首席执行官Hans Vestberg、华为首席安全官Guo Ping、中国联通总裁Lu Yimin。Lu Yimin认同价格更加平和的智能电话是促进移动宽带使用的关键。BBC Future Media & Technology的主管Erik Huggers对标准化进行了大力宣传(《iPlayer的21项特色纯属疯狂》)。阿尔卡特朗讯的首席执行官Ben Verwaayen敦促移动宽带接收对社会的义务，而不仅仅是对客户的义务，否则移动宽带业务将“不过是税收来源和限制力量”。

可能最引人瞩目的基调发言人是沃达丰的首席执行官Vittorio Colao。他的发言以论断开始。他表示，要推动移动宽带业务的深入发展，行业必须首先“让一些事情回归正规”。毫无疑问，这说的是反Google。Vittorio Colao呼吁在这条价值链上引入开放平台和更多竞争，特别是在被Google垄断的地方。

Vittorio Colao承认在这个价值链上的大多数地方竞争已经足够充分(网络运营商、设备、应用开发)，但他宣称搜索和广告业务被Google和Yahoo所垄断，两种合计占据了市场的80%的份额。他表示：“从公共政策角度来看，这是应该被关注的现象。我们应该保证价值链上的所有参与者都是开放和竞争的。”

John C Tanner在telecomasia.net上(2月17日)对基调发言进行了总结，称Colao对固网领域的垄断现象有类似的担忧，因为固网能够贡献给定电信市场60%到80%的现金流。

Colao表示，这个行业需要发展出这样一种框架：以可持续竞争(包括移动虚拟网运营商)为重点，引入开放的途径，让应用跨越平台，为客户带来便利。

沃达丰首席执行官Colao把自己的公司作为推广开放平台的范例，因为沃达丰自身在做这方面的努力，而且沃达丰还是联合创新实验室(JIL)计划的创始成员。他表示：“我对所有的操作系统和应用程序都开放，我们已经对开发人员和内容所有人开放了计费系统。”

[注意：位于荷兰的JIL成立于2008年，主要为开发人员开发单一全局性平台，以推动多种创新移动产品的开发工作。]

联合国在海地的网络修复工作得到新加坡 smartBridges Solutions的支持

据M2 PressWIRE(通过COMTEX)2月12日报道，联合国下属的国际电信联盟正在与新加坡smartBridges Solutions合作，建设高速无线电话和互联网连接，为海地的援助人员和地方当局提供协助。在一个月前袭击海底的地震中，海底的地面网络破坏严重。根据与联合国最早成立的机构之一——国际电信联盟(ITU)签署的合作协议的规定，这家新加坡无线宽带设备供应商将为100个临时人员安置点提供运营商级的WiMAX基站和设备。(见2月12日《联合国国际电联计划在海地建设无线热点》)

为增强海地的灾害响应能力，国际电联在海地投入了100多万美元，捐赠了100多套卫星终端，帮助重建海地的基本通信链路。作为国际电联的援助活动的组成部分，smartBridges Solutions安装了一个可部署基站，组建完整的移动网络，为救灾和清理工作提供必要的无线通信服务。

国际电联电信发展局局长Sami Al Basheer Al Morshid表示他期望与smartBridges Solutions展开合作，不仅是为了在紧急情况下提供援助，也是为了“充分发挥信息和电信技术的威力，推动海地和其他发展中国家的发展”。

该局长还表示，他呼吁“有类似想法的潜在合作伙伴”与该局合作，共同为此努力。

研究发现移动占据电信市场

据电信和信息技术行业市场调研公司提供的数据，移动市场现在占据全球电信市场的半壁江山以上。来自Ihotdesk Communications(伦敦)的Jessie Richards 2月12日报道，由IDC(马萨诸塞州Framingham)在研究中发现，移动市场目前的市场价值为每年8,500亿美元，占通信市场总市场价值的57%。

在对来年趋势的预测中，IDC认为智能电话仍将是主要的增长点，而连接设备的兴起(比如嵌入式笔记本电脑和机对机设备)将引领未来的成功。IDC还提示移动宽带将成为2010年基础设施增长的重点，原因是速度更快的包接入将很可能在成熟市场上推出。

WiMax在全球取得重大进展， 但LTE技术正在准备强势反攻

据WiMax论坛提供的新报告，WiMax的增长超过了预期。WiMax论坛是一个行业领导性的组织，其成立的目的是为了认证和推广基于IEEE 802.16标准的宽带无线产品。该论坛2月15日宣布，4G技术上路的速度高于预期，到2010年底覆盖的人口可超过8,000万。另外，随着WiMax业务在147个国家投入使用，预计到2011年底，覆盖的人口数量将超过10亿。

据论坛的报告，WiMax在亚太地区的覆盖面较大，已部署有100个网络，覆盖人口2.37亿。中美洲和拉丁美洲已部署109个网络，覆盖人口1.13亿人。非洲部署142个网络，欧洲153个，分别覆盖

1.08亿人口和1.15亿人口。北美51个，覆盖人口4,700万人。

论坛总裁和主席Ron Resnick表示：“新的部署数量和人口统计数据显示，WiMax生态系统自新年以来发展神速，将在发达地区和发展中地区继续满足全球市场对高速宽带接入的需求。”(eweek.com 2月15日《WiMax发展超预期，到2011年覆盖人口超10亿》)

不过，正如eweek.com的Michelle Maisto所指出的，这种发展势头会受到竞争性的4G技术LTE(长期演进)的影响。AT&T已经开始测试LTE，准备在2011年推出新网络。Verizon也准备在2010年年中推出自己的LTE网络。

与WiMax论坛描绘的清晰的前景不同，位于纽约的技术研究公司ABI在12月3日提供的报告认为前景错综复杂。该报告认为虽然WiMax占了先机，但“LTE最终的覆盖面会远远大于WiMax生态系统。”

其他电信新闻...

◎ 华为采用高通的MDM9200芯片组，推出了其声称的世界上第一款LTE无线调制解调器。该调制解调器兼容LTE、W-CDMA/HSPA和GSM/GPRS/EDGE网络，并支持多种LTE频段。据2月18日的报道，三模的华为E398调制解调器将首先在由Tele2和瑞典Telenor通过其合资企业Net4Mobility经营的瑞典网络上推出。这两家瑞典公司选中华为来建设覆盖全国的LTE网络，包括提供基础设施和终端解决方案。



Steel

Labour union complains that an Obama plan for two new nuclear reactors would create jobs for steel workers in Asia

The 16th February announcement by President Barack Obama that, after three decades, the United States will recommence building nuclear power plants produced immediate and strong objections, especially in the European press. The proposal, backed by initial loan guarantees of more than \$8.3 billion, drew charges of domestic political motives (Germany's *Süddeutsche Zeitung*); disregard of alternative sources of energy (Austria's *Der Standard*); and contempt for the views of nuclear energy opponents all over the world (Spain's *Expansión*). The main adverse reaction on the home front came from the United Steelworkers (USW) and centred on the more mundane issue of jobs. According to Mr Obama, the pair of nuclear reactors to rise near Augusta, Georgia, will create thousands of construction jobs at the site and about 800 permanent jobs after commissioning. The union leadership does not dispute that the project promises employment opportunities, but claims that the main beneficiaries will be Asian steel workers.

In a letter to the US Nuclear Regulatory Commission, the USW international president, Leo W Gerard, expressed concern about "the potential foreign sourcing of components for these reactors," which he said "limits our nation's ability to address our unacceptably high unemployment rate." Matthew L Wald and Keith Bradsher of the *New York Times* reported the assertion by Westinghouse, which designed the reactors' central components, that the only steel mills certified for the work are in Japan and South Korea. These essential units include the reactor vessel itself and part of the giant heat exchangers called steam generators. Westinghouse is based in Pittsburgh but owned by the Japanese company Toshiba. ("Steelworkers Say Reactors Will Create Overseas Jobs," 19th February)

The *Times* reporters pointed out that nuclear power is a global industry, with most reactor designs having been developed by foreign or foreign-owned companies and calling for components that are manufactured only overseas. They noted that the Energy Policy Act of 2005, the law under which the loan guarantees were obtained for the two new reactors, does not have a "Buy American" clause. But even the Tennessee Valley Authority, a federal agency required to exercise such a preference, was reportedly obliged to buy 20% of the components for its Watts Bar Unit 2 reactor from overseas because they were not available in the United States.

- ❖ The current Westinghouse reactor design includes a freestanding steel structure about 1³/₄ inches thick. This containment vessel is to be made of strips of steel 130-foot long and 13-foot wide, with 11 strips stacked on one another. American steel mills are not equipped to manufacture strips of 13-foot wide, Westinghouse told the *Times*. But according to a company spokesman, because Westinghouse would like to encourage US companies to compete for contracts it is considering altering the design to stipulate strips 11-foot wide stacked 13 high.
- ❖ Meanwhile, the United Steelworkers union is firmly of the opinion that American taxpayers should not bear the burden of loan guarantees that would create jobs abroad. Thomas M Conway, a USW vice president, asserted, "If we're going

to start shoveling a lot of money at nuclear, and nuclear is part of America's plan to get less oil-dependent, then we need to build it ourselves."

Elsewhere in steel . . .

- ❖ Universal Stainless & Alloy Products Inc (Bridgeville, Pennsylvania) on 15th February announced a base price increase of 5% on all stainless wire rod manufactured at its Dunkirk Specialty Steel facility, effective with all new orders as of 1st March. Current material and energy surcharges will remain in effect. Chris Zimmer, vice president of sales and marketing, said the price adjustment was necessary to support continued reinvestment in equipment and facilities. The company manufactures and markets semi-finished and finished speciality steels, including stainless, tool steel, and other alloys.

Energy

Ontario clinches a very good, if controversial, deal with Korea's Samsung Group

"This kind of rhetoric ignores the fact that we're living in 2010 – not 1960."

The observation, by energy and technology consultant Tyler Hamilton of the *Toronto Star*, was prompted by the grumbling of some Canadians over a deal recently concluded for the province of Ontario. Their "rhetoric" was directed at the government of the province for facilitating an ambitious plan by the Korean industrial giant Samsung to manufacture and deploy green energy gear there. Where the opposition sees a backroom deal with a foreign company that will lead to higher electricity prices, Mr Hamilton sees a winning strategy by which Ontario kept a \$7 billion clean-energy project from going to the US instead of Canada. It did this by putting regulations and policies in place to attract that investment. ("Samsung Deal Keeps Jobs from Going South," 28th January)

Samsung, which has committed to building four manufacturing plants and developing 2,500 megawatts of wind and solar projects in Ontario, affirms this view. The company and its consortium partners say they were attracted to the province by its new Green Energy Act and feed-in-tariff (FIT) programme, deemed by Samsung outstanding in North America. Feed-in tariffs refer to the premium rates paid by a utility to its customers for the excess power generated by their solar, wind, and other renewable energy systems. In view of the 16,000 green-collar jobs Samsung Group expects to bring to Ontario, Mr Hamilton believes that these and certain other sweeteners that figured in the negotiations are fully justified.

Putting the 'special treatment' accorded Samsung in perspective, he noted that the company is getting roughly 4% more for its solar and wind power production than other participants in Ontario's FIT programme, which already pays a generous amount to producers. It is expected that Samsung's "economic adder," which over 25 years has a net-present value of \$437 million, will tack \$1.60 more a year onto the average residential electricity bill. "That's an increase of 0.15% on the power bill of a typical household [in the province]," Mr Hamilton wrote. Moreover, he observed, if Samsung and its consortium partners do not deliver as promised on manufacturing and jobs, they forfeit the adder.

Automotive

The Ford at the head of Ford Motor Company finds no joy in Toyota's crisis over safety recalls

On the face of it, Toyota's ongoing troubles must benefit the other auto makers in the US market. For months now, bad press about the products of Toyota's North American plants should have buoyed the spirits of the Japanese producer's competitors – notably Ford Motor Co, best positioned of any of them to take advantage of an ill wind blowing on another producer.

But the truth is quite otherwise. Bill Ford, executive chairman and great-grandson of legendary founder Henry Ford, struck a decidedly sombre and cautionary note on 16th February when he spoke at a Chamber of Commerce luncheon in the Detroit suburb of Livonia.

If members of his audience were disposed to quietly exult in the latest twist in a spectacular fall from grace – a US government request for proof of when Toyota learned of problems with its accelerator pedals and how long it waited before initiating recalls – Mr Ford was not.

"I wouldn't wish that on anybody," he told the local business networkers, many of whom may remember the failure of Firestone tyres on Ford Explorers, in 2001. "We've had our own challenges. We've been through our own tough times."

Mr Ford asserted that the biggest issue facing his company is self-satisfaction and complacency. "Things have been going well for us for the last year," he said. "But dial it back 18 months and you get a very different picture." The reference was, of course, to the perilous if ultimately successful course steered by Ford Motor through the travails that brought its peers in the Detroit Big Three – General Motors and Chrysler – to near-ruin.

Ford not only survived the auto industry shakeout of 2008 without a rescue by Washington; it also posted a \$2.7-billion profit for 2009. And now Ford models have swept the 2010 North American car and truck of the year awards.

But the Ford chairman reminded his listeners that the company "survived the abyss" by the skin of its teeth; also that "it is very early days" in the new era. What worries him the most, Mr Ford said, is that the company has always done well in times of adversity: "It is in handling prosperity where we get into trouble."

❖ *Detroit Free Press* columnist Tom Walsh has been covering automotive Detroit long enough to be able to corroborate Bill Ford's account of Ford Motor's repeated lapses into periods of overconfidence and entitlement. That is why, in Mr Walsh's view, the timing of Toyota's trouble is good for Ford. He wrote, "If the world's largest and most respected auto maker can get rocked so hard, so fast, the same thing – or worse – can happen to any competitor." ("Toyota Turmoil Can Keep Ford, Others Humble," 17th February)

Mr Walsh also suggested that the lesson of Toyota's fall to earth would not have been lost on Alan Mulally, Ford's president and CEO. The columnist reminded his readers, "Before being recruited from Boeing to Ford in 2006, [Mr Mulally's] personal ride was a Lexus because, at the time, he considered Toyota's luxury brand the world's best."

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Making batteries for electric cars: an enticing new commercial enterprise with an uncertain future

“Stimulus dollars have sparked battery production for electric vehicles and plug-in hybrids. But will there be more batteries than cars?”

The question was posed by Joann Muller, of *Forbes Asia*, in reference to President Barack Obama’s wish to see a million plug-in hybrids on American roads by 2015. Matching grants and other government loan programmes to help realise the president’s intention have induced no fewer than six companies to announce plans for building or expanding battery factories in the US, at a combined cost of \$3.7 billion. With another \$3 billion of such endeavour going forward elsewhere around the globe, a glut of batteries for electric cars would seem to be a possibility by the middle of the decade. (“Will Electric-Car Batteries Go Bust from Overcapacity?” 8th February)

The amount of automotive propulsive power to be generated in the new factories over the next five years is impressive: according to Deutsche Bank, 36 million kilowatt-hours’ worth – enough to supply 15 million hybrid vehicles, or 1.5 million fully electric cars. Will there be buyers enough for that many electrified vehicles? Not likely, according to Ms Muller, “unless gas prices soar and battery prices plunge.” Endorsing that view, Matthew M Nordan, vice president of the venture capital firm Venrock (Cambridge, Massachusetts), said that the battery makers are going after an artificially created market. He told *Forbes*, “We’re looking at a replay of the solar market in 2009,” when overcapacity led to sharply lower prices.

The battery makers consult another set of numbers and are undeterred. Given how many plug-in hybrids or electric vehicles are in the works – at least 120 models in showrooms by 2012 and perhaps 200 a decade from now – they see themselves as not yet even close to supplying the developing need.

- ❖ The battery makers will not have long to wait before learning whether or not exuberance has routed their business sense. Auto makers are preparing to offer the first mass-market electric cars in the US later this year, mainly in ‘green’ cities popular with technology enthusiasts. The first test of customer receptiveness will probably come in December, with the introduction by General Motors of the Chevrolet Volt, able to go 40 miles on electricity before its small gasoline engine takes over. Around the same time, Nissan will introduce its Leaf, a five-passenger electric car with a range of 100 miles on a fully charged battery. Several thousand of these, made in Japan, will be delivered to metropolitan areas in California, Arizona, Washington state, Oregon, and Tennessee. “This is the game-changer for our industry,” exulted Carlos Ghosn, Nissan’s president and chief executive, who predicts that, by 2020, electric vehicles will account for 10% of car sales.
- ❖ San Franciscans are first among those taking Mr Ghosn at his word. As reported in the *New York Times* [15th February], drivers are already plugging converted hybrids into a row of charging stations downtown. In nearby Silicon Valley, companies are ordering workplace charging stations to be installed. And the San Francisco building code will soon be revised to require wiring for car chargers in new structures. Perhaps most telling of all, utilities are gearing up to cooperate with the auto makers: “a first for the two industries,” according to the *Times*, and for Pacific Gas and Electric a matter of some urgency. Executives of

the San Francisco-based utility are preparing ‘heat maps’ of neighbourhoods that they fear may overload the power grid in their zestful embrace of electric cars.

Elsewhere in automotive . . .

- ❖ In other news of Nissan’s Leaf, Hertz Corp (Park Ridge, New Jersey), the world’s largest car rental agency, said on 12th February that it will offer it to customers in the US and Europe in 2011. The all-electric vehicle with rechargeable battery will be available at selected Hertz rental sites. The Japanese auto maker plans also to use its partnership with French producer Renault to mass-market electric vehicles worldwide in 2012.
- ❖ In response to rising demand for the 2011 Chevrolet Camaro and Buick Regal, General Motors Co will be restoring a second shift at a Canadian car assembly plant. On 11th February, GM said it would bring back roughly 700 employees to its Oshawa plant in Ontario for the additional shift scheduled to begin in the fourth quarter of this year. The plant, located near Toronto, has been operating on one shift since the spring of 2009. The facility also makes the Chevrolet Impala sedan.
- ❖ The wide tread, long wheel base, and menacing aspect of the Hummer from General Motors come at a penalty in gasoline mileage (only 14 miles per gallon in city driving and 18mpg on the highway), and high fuel prices over the last two years have caused sales of the ‘big box’ to plunge. When, in June 2009, the Chinese company Sichuan Tengzhong Heavy Industrial Machinery Co made an offer for the Hummer division, GM accepted it promptly and since then has repeatedly extended its deadline for completing the \$200 million transaction. But on 24th February it appeared to be near collapse, blocked by financing problems and opposition from Chinese regulators concerned for environmental responsibility. According to Chinese media reports, Tengzhong hoped to save the deal by setting up a subsidiary outside China to purchase Hummer. While this would probably satisfy the objections of regulators, it would complicate Tengzhong’s plans for its acquisition, which would not then qualify as a Chinese company. Because China requires foreign auto makers seeking to operate there to set up 50-50 joint ventures with Chinese car companies, Hummer production could not readily be shifted to China.

Telecom

Buoyed by the early success of the Droid smartphone, Motorola activates a plan to divide itself down the middle

Motorola has confirmed that it will reorganise itself into two independent, publicly traded companies by the first quarter of 2011. On 11th February the Schaumburg, Illinois-based company said it would combine its core handset unit with the unit that makes television TV set-top boxes. This and the unit governing Motorola’s other operations – two-way radios, bar code scanners, and gear for telecommunications carriers – will each be headed by a co-chief executive. The combined mobile handsets and home unit could fit into the ‘three screens’ lifestyle being promoted by carriers like AT&T and Verizon, whose customers would be able to watch content on TV, on their computers, and on their mobile phones. That business will own the Motorola brand and will license it royalty-free to the networking company.



Motorola had been considering selling or spinning off its mobile handset business for some time, but falling sales forestalled any action. The separation decision comes as the higher-profile handset unit has revived with the success of its Droid smartphone, which benefited from a strong push by Verizon Wireless. The unit's chief executive Sanjay Jha said in January that he expected it to return to profitability by the fourth quarter, putting it on a sounder footing for the spinoff. But, as noted by Roger Cheng in the *Wall Street Journal* (12th February), "The unit remains under pressure as it changes its focus to a more profitable segment of the cellphone market but still faces competitive pressure from the likes of Apple's iPhone." Under the division plan, the two companies would each account for roughly half of Motorola's current sales, which totalled \$22 billion last year.

Finance

Reflecting a cautious strategy of diversification, China owns \$9.6 billion worth of stock in American companies

A 5th February filing by China Investment Corp (CIC) with the US Securities and Exchange Commission provides a clue to Beijing's thinking in the matter of investments in the United States. The filing clearly signals the \$300 billion fund's intention to move away from concentration in Treasury bonds and other US government-oriented debt securities toward diversification into stock in some of the biggest American corporations, including leading banks. Given that China commands more than \$2 trillion in foreign currency holdings, it is a significant trend shift. Most of the US holdings are small. Even so, at the end of last year CIC owned stakes totalling \$9.6 billion in some prominent American companies. These include Motorola (Schaumburg, Illinois), the manufacturer of wireless infrastructure equipment and phone handsets. The detailed list of holdings would come as no surprise to anyone who was listening when Prime Minister Wen Jiabao, among other Chinese officials, voiced their fears of how China's substantial position in US Treasuries could be hurt by inflation or by mounting American debt. In addition to risk reduction through diversification, China's new strategy can be seen as gaining it a say in companies able to provide a wide range of commodities.

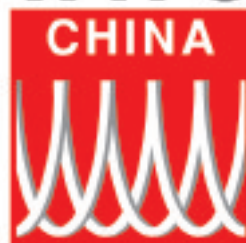
The CIC, formed only in 2007 but already one of the world's largest sovereign funds, very likely is exercising extreme care with its American selections, after some painful early experiences. It acquired a \$3 billion non-voting stake in the US private equity firm Blackstone, and paid another \$5 billion for a 9.9% stake in the investment bank Morgan Stanley, only to see shares of both companies plummet in 2008. But the fund retained its confidence in Morgan Stanley; and, having added to that stake last June, now holds \$1.7 billion worth of Morgan Stanley shares.

❖ US companies are not alone in offering investment opportunities for China's rapidly accumulating wealth. CIC holdings include a \$1 million stake in Research in Motion, the Canadian maker of BlackBerry mobile phones. The fund has also been buying small stakes in Australia's biggest banks and last autumn paid \$646 million for a holding in Noble Group, a diversified commodities company based in Hong Kong with global operations in industries including iron ore mining.

Dorothy Fabian – Features Editor



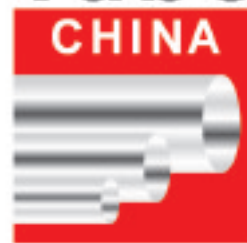
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钢铁

劳工联盟抱怨奥巴马新建两个核反应堆的计划会给亚洲的钢铁工人提供岗位

2月16日，在奥巴马总统宣布美国三十年来首度重启核电厂建设之后，媒体中被激起轩然大波，特别是欧洲的新闻界。这项首期贷款担保金额就超过83亿美元的计划，遭到了国内政治势力的大量抨击（德国Süddeutsche Zeitung），忽视其它替代性能源（澳大利亚Der Standard），蔑视世界上核能反对者的意见（西班牙Expansión）。美国国内的主要反对意见来自美国钢铁工人联合会（USW），其重点是家喻户晓的就业问题。据奥巴马总统表示，这两个核反应堆的建设地点是佐治亚州附近的Augusta，可以在当地创造上万的建筑业岗位，试运行之后可以带来800个永久性工作。美国钢铁工人联合会的领导没有就项目可能带来的就业机会提出质疑，但认为主要的受益者将是亚洲的钢铁工人。在致美国核能管理委员会的信函中，美国钢铁工人联合会的国际部总裁Leo W Gerard担忧“这项反应堆的部件有可能从国外进口”。他认为“这会严重影响美国应对高失业率的能力”。

《纽约时报》的Matthew L Wald 和 Keith Bradsher报道，据设计这两个反应堆的核心组件的Westinghouse表示，惟一通过该工程认证的钢铁厂是日本和韩国的钢铁厂。这些核心组件包括反应堆本身和称为蒸汽发生器的大型热交换器的一部分。Westinghouse位于匹兹堡，但所有者是日本的东芝。（2月19日《钢铁工人认为反应堆会为海外工人创造岗位》）。《时报》记者指出，核能行业是一个全球性行业，大多数反应堆设计都是外国公司或者外资公司完成的，组件也在海外生产。他们还提到，这两个新反应堆所依据的贷款担保法律为《2005年能源政策法》，但这项法律中没有“限购美货”的规定。但即便一贯崇尚“美国制造”的田纳西流域管理局（TVA），也不得不承认其Watts Bar Unit 2反应堆有20%的组件来自海外，因为美国国内早已断货。

- ❖ 目前的Westinghouse设计采用13/4英寸厚的钢材建造自立式钢结构建筑。安全壳采用130英尺长、13英尺宽的钢板，由11块钢板堆叠而成。在《时报》采访中，Westinghouse表示，美国的钢铁厂目前没有生产13英尺宽钢板的设备。不过，根据Westinghouse的公司发言人，为鼓励美国公司也参与竞争，Westinghouse正在考虑改变设计，采用11英尺宽的钢板堆叠13层的方式。
- ❖ 同时，美国钢铁工人联合会坚持认为，美国纳税人不应该同意为外国创造工作岗位的贷款提供担保。美国钢铁工人联合会副总裁Thomas M Conway坚持认为：“如果我们决定向核能投入大量资金，把核能作为美国减少石油依赖的计划的一部分，我们就应该自己建造。”

能源

安大略与三星集团达成虽有争议、但成效显著的交易

“这种论调忽略了我们身处2010年，而非1960年的事实。”多伦多《星报》能源和技术咨询专家Tyler Hamilton这样认为是因为部分加拿大人对近期安大略省达成的一项交易颇有怨言。“论调”的指向是安大略省政府，因为安大略省政府协助韩国工业巨头三星在当地制造和安装绿色能源设施的宏大计划。反对方认为这是政府与外国公司私下达成的协议，会推高电力价格，但Hamilton认为这是一项成功的战略，因为这样安大略省可以吸引70亿美元的清洁能源项目，防止其流失给美国。安大略政府靠出台规章和政策吸引了这笔投资。（1月28日《与三星达成的交易防止工作岗位流失给美国》）

三星已经承诺在安大略省建设四家生产厂，开发2,500兆瓦的风电和太阳能发电项目，并确认了上述说法。三星及其联合合作伙伴表示，它们是受到安大略省心的《绿色能源法》和上网电价计划所吸引，因其在北美是最优惠的。上网电价指的是公用事业部门以较高费率采购客户以太阳能、风能和其他可再生能源系统发出的额外电力。就三星准备给安大略省带来的1.6万个绿色工作岗位而言，Hamilton认为这些有利因素加上磋商中敲定的其他有利因素，足以让计划具备可行性。

针对三星所得到的所谓“特别待遇”，他表示，三星公司的太阳能发电能力和风电发电能力较其他参与安大略省的“上网电价”计划的厂商要高4%。安大略省的“上网电价”计划已经给能源生产厂商带来了慷慨的回报。预计三星的“经济增值”折合净现值为4.37亿美元，在25年的时间跨度内，将让每户居民的平均电费每年增加1.60美元。Hamilton指出：“这相当于一个典型的家庭电费开支增加0.15%。”此外，他还认为，如果三星及其联合合作伙伴无法如约完成生产设施的建设和提供相应的工作岗位，它们就得放弃这部分经济增值。

汽车新闻

福特执行董事长福特严肃对待丰田安全召回事件

从表面上来看，丰田公司目前面临的问题应该对美国市场上的另外两家汽车厂商带来好处。到现在的几个月里，关于丰田北美车厂的负面报道本应该让丰田的竞争对手精神一振，特别是福特，因为福特所处的地位应该最能够捡丰田倒霉带来的便宜。但事实上的情况大相径庭。

福特公司执行董事长，传奇公司创始人Henry Ford的长孙，在2月16日以决绝的口吻，在底特律郊区Livonia的商会午餐上，进行了严肃的、告诫性的发言。如果他的听众想静享最近丰田大戏的幕布徐徐降下所带来的欢欣鼓舞的话，他们就大错特错了——美国政府要求提供丰田知晓油门踏板存在问题到启动召回之间耽搁的时间的证据。他告诉在场的本地商圈人士：“我不希望这种事情发生在任何人身上。我们也有自己的问题。我们也在度过我们自己最艰难的时光。”许多本地商圈人士都对2001年Ford Explorers的“Firestone”轮胎存在问题的事件记忆犹新。

Ford表示，福特所面临的最大问题，是自负和自我嘉许。他表示：“去年我们干得不错，但倒回去一年半，情况就大有不同。”

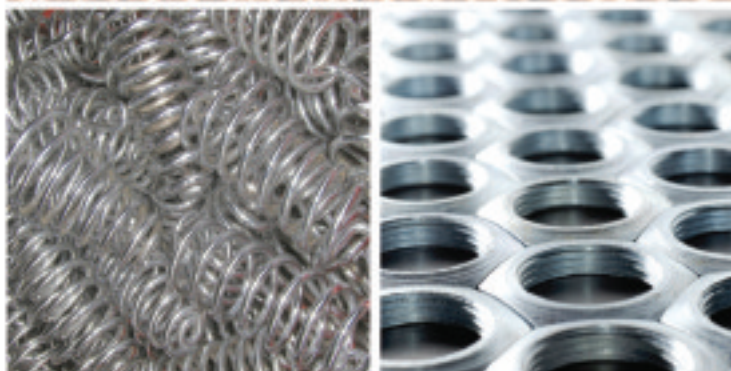
他所指的，是福特汽车所经历的致命的衰退。在这次衰退中，底特律三巨头中的通用和克莱斯勒都倒下了，只有福特最终成功度险。福特不仅在没有任何政府援手的情况下度过了2008年汽车行业的大震荡，在2009年还取得了27亿美元的盈利。现在，福特的车型把2010年北美轿车和卡车年度奖项均纳入囊中。不过福特的董事长提醒听众，福特公司能够“摆脱深渊”完全是虎口脱险，而且现在不过是新时代的“最起初的时候”。Ford表示，他最担心的，是公司一直在逆境中有良好的表现：“我们的问题是如何处理成功。”

- ❖ 底特律Free Press专栏作家Tom Walsh一直在报道底特律的汽车行业，故而能够证实Bill Ford所描述的Ford Motor一再陷入过度自信和自满的情况。这就是为什么Walsh认为丰田所处的困境对Ford来说是件好事。他报道称：“如果世界上规模最大、声望最隆的汽车厂家也会跌得这么惨，那么同样乃至更糟的事情也会发生在任何竞争者身上。”（2月17日《丰田的波折会让福特和其他厂商谦逊》）

Walsh还提到，丰田倒地的教训对福特前总裁及首席执行官Alan Mulally不起作用。Walsh告知读者：“在离开波音福特之前，Mulally的个人座驾一直是辆Lexus，因为他认为丰田的豪华车品牌是世界上最棒的。”

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为电动汽车生产电池：充满诱惑的新兴行业，难以确定的前景

“激励计划的资金刺激了电动车辆和充电混合车辆使用的电池的生产。不过电池的数量会超过车辆吗？”这个问题是《福布斯亚洲》的记者Joann Muller针对奥巴马总统提出的到2015年美国充电混合车辆数量达到100万辆的愿望所提出的。为实现总统的这个愿望所匹配的政府补助和其他政府贷款计划已经吸引了不下六家公司提出了在美新建或者扩建电池厂的计划，合计金额达37亿美元。另外，美国之外的电池厂投资也有30亿美元。到2015年，有可能电动汽车的电池供应会出现过度的情况。（2月8日《电动汽车电池是否会因产能过剩而失败》）

新建工厂今后五年生产的汽车动力电池的总量将是惊人的：据德意志银行的统计，将达到3,600万千瓦时——足以为1,500万辆混合动力车或者150万辆全电动汽车供电。有没有足够数量的消费者愿意购买如此多的电动车辆？Muller认为可能性不大，“除非汽油价格上升，电池价格大幅度下降。”风险投资公司Venrock（马萨诸塞州剑桥）的副总裁Matthew M Nordan也支持这种观点，表示电池厂家在追逐人为的市场。他对《福布斯》记者表示：“我们将看到2009年太阳能电池市场的重演”，产能过剩造成了价格大幅度下挫。电池厂家则掌握的是另一组数据，毫无畏惧之意。关于有多少种充电混合动力车或者电动车准备投入生产，他们的数据是至少有120种款式在2012年会在展厅亮相，10年后有200款——他们觉得自己供货的速度赶不上车辆开发的速度。

❖ 不久之后，电池厂家就会发觉这种繁荣是否破坏了他们的商业嗅觉。汽车厂家正准备在今年晚些时候推出首款大规模生产的电动汽车，主要是在充斥着技术爱好者的“绿色”城市里。随着通用的Chevrolet Volt的推出，对消费者接受程度的测试可能将在12月进行。这款车可在电力驱动的情况下行驶40英里，随后由小型汽油发动机接手。基本在同一时间，尼桑也将推出五座全电轿车Leaf，靠电池可行驶100英里。日本生产的数千辆这类轿车将交付给加州、亚利桑那、华盛顿、俄勒冈和田纳西的城市。

尼桑总裁兼首席执行官Carlos Ghosn对此欢呼雀跃：“这是我们行业的转折点。”他预计，到2020年，电动汽车将占轿车销售总量的10%。

❖ 旧金山人将成为首批见证Ghosn的话变为现实的人。据《纽约时报》（2月15日）报道，旧金山的驾驶人员已经在把改型的混合动力车插在城内的充电站上充电。在附近的硅谷，企业正在安装充电站。旧金山的城建规定也很快会进行调整，以要求新建筑中都装上充电器。

可能最值得一提的是，公用事业企业也准备开始与汽车厂家展开合作。《时报》称“这是有史以来头一次”，而且对太平洋供气供电公司来说，这还是件比较紧急的事情。这家位于旧金山的公用事业企业的高管正在准备居民区的“热点图”，因为他们担心由于居民对电动车辆的高度热情，供电网络可能出现过载。

其它车新闻...

❖ 在关于尼桑Leaf的其他报道中，世界上最大的轿车租赁公司Hertz Corp（新泽西Park Ridge）2月12日表示，到2011年将为美国和欧洲的客户提供一个Leaf车供租赁。这款携带可充电电池的全电车辆将在选定的Hertz租赁点提供。尼桑计划通过与法国的雷诺的合作，在2012年在世界范围内大批量生产这款汽车。

❖ 通用的悍马的宽轮距、长轴距和咄咄逼人的外貌所付出的代价是高油耗（每加仑汽油在城内只能行驶13英里，在高速公路上只能行驶18英里）。由于过去两年的高油价，这个“大盒子”的销售一路直下。因此，当2009年6月来自中国的四川腾中重工提出购买悍马部门的时候，GM立刻就接受了。但从那

时起，这项总额2亿美元的交易就被一拖再拖。到2月24日，由于融资困难和中国官方出于环境问题的反对意见，似乎已经走到了崩溃的边缘

据中国媒体报道，腾中为了挽回这笔交易，计划在中国之外设立一家子公司来购并悍马。虽然这样可以绕开监管当局的反对意见，却会把这次购并复杂化，因为这样就不是一家中国公司。因为中国要求外国车商应与中方按50-50的比例组建合资企业，悍马的生产就不能立刻转到中国。

电信新闻

Droid智能手机初步成功，摩托罗拉准备中途自我拆分

摩托罗拉已经确认，将在2011年1季度之前把自身重组成两个独立的公开上市企业。2月11日，位于伊利诺伊州绍滕堡的摩托罗拉表示，将把核心的手机业务部与生产电视机顶盒的部门合并。这个新部门和另一个负责双向无线电、条形码扫描器、电信设备的部门将分别由一名共同首席执行官负责。手机和家电部门的结合，符合AT&T和Verizon提倡的“三屏”生活方式，即在电视、计算机和手机上都可以观看节目。这项业务将采用摩托罗拉品牌，但免费许可给网络公司使用。摩托罗拉一直在考虑出售或者剥离手机业务，但销售下降阻止了任何行动。拆分的决定正好在Droid智能手机的成功改善了该部门的形象之际。Droid的成功得益于Verizon Wireless的大力推广。该部门的首席执行官Sanjay Jha 1月份表示，预计该部门将在四季度扭亏为盈，为拆分打下更加坚实的基础。不过，正如《华盛顿邮报》（2月12日）记者Roger Cheng的报道，“这个部门在转向更具盈利能力的手机市场板块的时候仍然承受着压力，因为它仍然面对着来自苹果iPhone的竞争压力。”根据拆分计划，两家公司的销售额将各占摩托罗拉的一半，去年总计为220亿美元。

金融新闻

中国拥有96亿美元美国公司股份，折射出谨慎的多元化战略

中国投资有限公司（CIC）2月5日提交给美国证券交易委员会的文件透露了中国政府对在美投资的看法。根据这份文件，这家总额3,000亿美元的基金准备把投资的重点从国库券和其他美国政府相关的债券上转移到包括最大银行在内的一些美国最大公司的股票上，实现投资多元化。鉴于中国的外汇储备多达2万亿美元，这是一个重要的方向转变。中国投资有限公司在美国的大多数投资金额较小。即便如此，去年底中国投资有限公司拥有的一些美国大型公司的股份市值仍然高达96亿美元。这其中包括摩托罗拉（伊利诺伊州绍滕堡），无线基础设施设备和手机生产厂家。

投资的详情不会令人惊讶，如果曾专心听过温家宝总理和其他中国官员对中国大量持有的美国国债可能会因通胀或者美国债务高企而缩水的忧患言辞。除了通过多元化来降低风险，中国的新战略还包括在提供各类大宗商品的公司中获得发言权。中国投资有限公司成立于2007年，已经成为世界上最大的主权基金之一。在经历了初期的一些沉重教训后，中国投资有限公司现在在选择在美投资方向的时候非常谨慎。中国投资有限公司曾购买过美国私有股权公司黑石价值30亿美元的无投票权股份，购买过投行摩根斯坦利价值50亿美元、9.9%的股份，最终在2008年看着这两家公司的股票大幅度缩水。不过该公司仍然对摩根斯坦利充满信心，去年又增持股份。目前持有的摩根斯坦利股份价值为170亿美元。

专栏编辑：Dorothy Fabian

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○ The double-furnace casting line supplied to Vatan Kablo, Turkey

Greener casting

The Upcast® system for the production of copper and copper alloy rod is supplied exclusively by the Finnish company Upcast Oy.

Upcast technology is available in both single- and double-furnace configurations, with maximum outputs of 12,000tpa and 40,000tpa respectively. Single-furnace lines can easily be expanded to double-furnace configuration.

Upcast copper rod is said to be suitable for all electrical applications and is a popular feedstock, especially for:

- Fine and multi-wire drawing, where ductility requirements are demanding
- Magnet wire production, where surface finish is of utmost importance
- Continuous rotary extrusion processes, where tool wear rate is a crucial factor

Upcast is described as a 'green' technology; only electricity, compressed air and cooling water are needed to run the process, and no harmful emissions are released. With direct environmental effects said to be 'practically nil' Upcast Oy has concentrated on the indirect effects, especially energy consumption, which also has an obvious economical dimension.

New developments with such twin-acting characteristics have been labelled GREENerCAST technology. These developments include:

- Better refractory materials to reduce heat losses
- Fast switching power transistors (FSPT)
- Double loop inductors with a special design to enhance heat and mass flows, and reduce cooling needs

A typical example of an Upcast line incorporating all above mentioned GREENerCAST features is the unit started up last year by Vatan Kablo AS in Turkey. The casting line is a double-furnace unit with a production capacity of 24,000tpa, satisfying the total need of 8mm copper rod feedstock for the Turkish cable producer.

Upcast Oy – Finland

Fax: +358 207 577 401

Email: info@upcast.com

Website: www.upcast.com

Reels and drums

Boxy Group (including Boxy SpA, Italy, and Mossberg Reel LLC, USA) offers a complete range of steel reels and drums for the wire and cable industry, including:

- Fully machined reels for copper wire drawing
- Resistant reels for steel wire drawing
- One-way shipping reels
- Forged reels
- Heavy-duty reels and large cable drums

The company's production includes special equipment for reel handling, such as take-apart reels in a variety of types (hydraulic, mechanic, pneumatic), built-in or floor mounted tilting units, and mechanical reel and coil lifters.

Boxy SpA – Italy

Email: boxy@boxy.com

Fax: +39 030 957244

Website: www.boxy.com

Bright annealing of shaped wire

A new Rad-Con 100% hydrogen annealing furnace system has been commissioned for Charter Wire's new facility in Menomonee Valley, Wisconsin.

Charter Wire moved its manufacturing facility to a new location last year, and called on Rad-Con Inc to replace old batch annealing capacity with 100% hydrogen annealing, the latest technology available.

Charter, a supplier of shaped steel bar and wire products, will utilise the Rad-Con annealing system primarily for recrystallise annealing of low-carbon drawn wire.

The new system also gives Charter the capability to anneal alloy steels.

Rad-Con's FlexLoad™ plenum allows Charter to load a variety of coil packages.

The system includes a rapid hydrogen cooling spray-water feature, and Rad-Con's AC/APEX™ atmosphere control for regulation of heating rates and atmosphere flows.



○ Rad-Con technology at Charter

It also includes Rad-Con's super-high convection (H2SHC™) technology for superior atmosphere circulation resulting in uniform material properties with low utility costs.

Rad-Con Inc – USA
Fax: +1216 221 1135
Email: sales@rad-con.com
Website: www.rad-con.com

Bell annealer facility for United Wire

In August 2009, Ebner received an order from United Wire Factories Co, Riyadh, Saudi Arabia for a Hicon® N2 bell annealer facility.

The scope of supply includes two Hicon N2 workbases, two heating bells, two cooling bells, a control centre and ancillary equipment.

The facility will be used to recrystallise bailing wire in a nitrogen process atmosphere. With an effective workload space diameter of 3,450mm and a charging height of 4,400mm, each workbase can accommodate a net charge of up to 48 tonnes.

The facility is scheduled to begin production some time in the first quarter of 2011.

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'No Smoke' tempering furnace technology from Italy



○ Agibi's new furnace technology

Agibi Progetti states that its new family of horizontal chamber furnaces for spring tempering allows energy saving with environmental compliance. The Progetti patented No Smoke System totally eliminates fumes (the system converts fumes into harmless air

components) and doesn't need chimneys, even with very oiled springs. The system is also said to be very low maintenance. An automatic four-station basket loading system facilitates running the line overnight, when power costs are reduced.

The insulating material used for the furnace coating, developed by NASA researchers, maintains the temperature of the external panels at under 40°C and so saves energy. The inside ventilation conveyor system maintains even distribution of the inside temperature, even when loading the furnaces with four to eight baskets.

Working temperature is controlled by high-accuracy microprocessors and by controlling the motors through frequency converters for adjusting the speed to the production requirements.

The tempering process is a key issue for spring manufacturing costs, but is also an ecological matter relating to air pollution. For this reason the No Smoke System is used in all spring tempering furnaces produced by Agibi Progetti.

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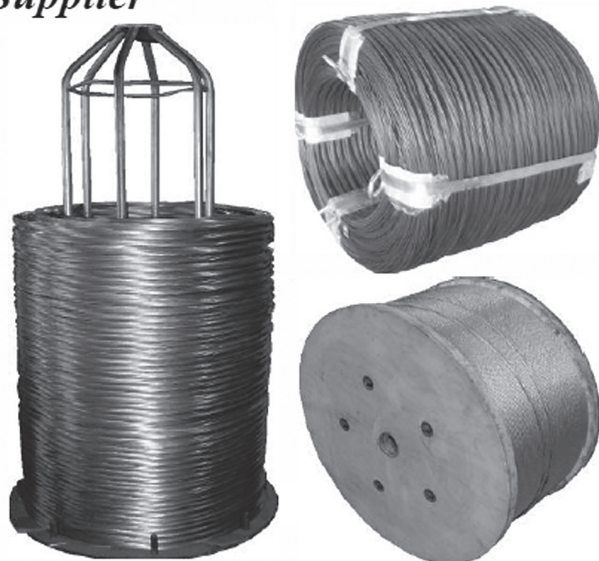


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Los Angeles, California, United States of America

Spring steel and wire range

Chinese company Anbao (Qinhuangdao) Wire & Mesh Co Ltd is a manufacturer and exporter of spring steels in carbon steel, high carbon spring steel, alloy and stainless steel. The surface can be galvanized or phosphated (ungalvanized), and can be heat-treated or oil tempered.

Anbao can provide non-mechanical spring wire (#45, #60, #70), mechanical spring wire (70# or 65MN), carbon spring wire, oil tempered and music spring wire, mainly as per Din17223-1, EN10270-1; ASTM A227, ASTM A228, ASTM A313; JIS G352, JIS G3522 and JIS G4314.

Packing can be in coils or on formers, 5kg to 1,000kg depending on size.

Anbao (Qinhuangdao) Wire & Mesh Co Ltd – China

Fax: +86 335 3870760

Website: www.anbao.com

Chipless forming rolls



○ Chipless forming technology

Precision rolls for the chipless forming technique are more than just standard items. Reliability and service life depend on material, geometry and the accuracy of production. Therefore it is essential for the design of the rolls to find the ideal material constellation and geometry for every application.

Kämpfer Würz has considered the increased requirements of users of rolling tools and extended the manufacturing possibilities of roll machining by a considerable step. A few years ago, users of rolling tools for precision roll techniques had to use carbide rolls with a maximum diameter of 200mm. By investing in new grinding technology Kämpfer Würz is now able to machine cold rolls with carbide tipping up to 600mm diameter, and a maximum length of 2,500mm with accuracy of <math>< 2\mu\text{m}</math>.

For manufacturers of carbide rolls for large dimensions further adaptations are important to achieve an optimal composite between roll base body and carbide ring, by the precise internal grinding of these large carbides. Here accuracies of shape with a cylindrical form of <math>< 3\mu\text{m}</math> are essential.

Modern CNC machines permit the machining of complex forms and geometries that allow large dimensioned profiles to be machined with highest precision into large and heavy rolls. Kämpfer Würz can also produce roll barrels with convex or concave contours.

Kämpfer Würz Umformtechnik GmbH – Germany Fax: +49 2775 9545 95

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Precision measurement³

New laser devices will expand Sikora's current range of diameter gauges by three powerful models, said to offer even higher precision and reliability, thus effectively improving the efficiency of the production line.

The 2,500 measurements per second provide extremely high single-value precision, ensure an optimum line control and provide reliable statistical data. With the new measuring devices the cable diameter is measured with an accuracy of up to 0.2 micrometres.

Sikora engineers have integrated a number of practical improvements. The opening of the gauges is twice as large as the measuring range, to ensure an easy cable feed through. Directly integrated into the gauge head is a new, pluggable universal interface module for all connections. In this position it is protected against water, dirt or mechanical influences during production.

Another highlight is a specially developed over-voltage and over-current protection, which is serially integrated into the devices.

A special feature, carried over from the larger Laser Series 2000 gauges, is the swivel gauge head design. It allows for the gauge head to be easily moved up, out of the extrusion line. The measuring axes are arranged in such a way that the gauge is open at the bottom to prevent dirt and water from falling into the measuring area.



○ The new Laser Series 6000

Sikora offers the Laser 6020 XY for product diameters from 0.25mm to 20mm, Laser 6040 XY for a measuring range from 0.5mm to 40mm and the Laser 6080 XY for products from 1mm to 80mm.

Sikora AG – Germany
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Website: www.sikora.net

TCD lines to China

Radyne IHWT has completed the supply, installation and commissioning of induction heating equipment for six tyre cord diffusion (TCD) lines in China, each capable of running 24 wires at 80DV for wire diameters in the range of 1.1mm to 2.2mm. Each of the six lines included a pre-heat zone and a final heat zone, each supported by an IGBT power source, followed by two muffle temperature holding zones. The tyre cord diffusion process is done to prevent corrosion of wire within the tyre itself and to act as a lubricant for further wire diameter reductions in subsequent drawing operations.

There are said to be many advantages and benefits associated with Radyne TCD systems, such as high electrical efficiency and contact-less heating without the need to heat media (such as sand). The system is operator-friendly and includes a control system with a Siemens HMI that is an integral part of the operator control desk and communicates with the Siemens Simatic series PLC using the Profibus DP protocol. This allows operator access to all machine parameters and controls, in addition to providing diagnostic information.

Most importantly the Radyne TCD system ensures product consistency with perfect diffusion of both copper and zinc. Multi-wire heating at high DV can be achieved and it is also simple to change over from one wire diameter to another.

Radyne IHWT – UK
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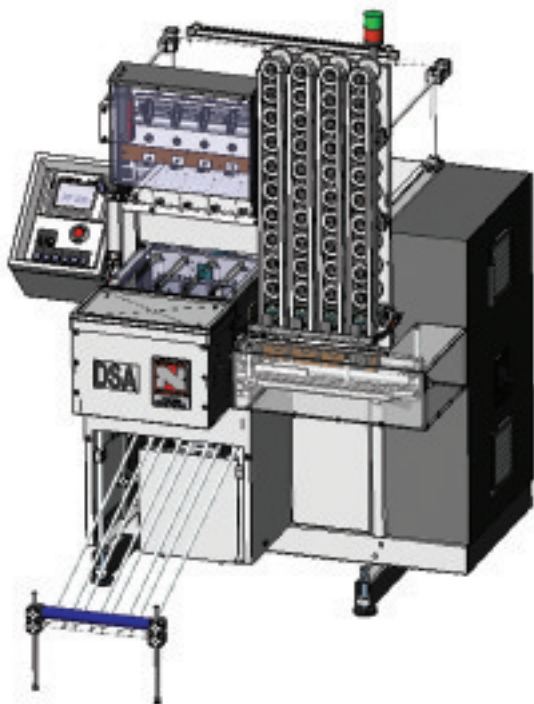
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RFID for spool management

Product variety and the need to record each step of a production process require reliable labelling of filled spools. Niehoff's most recent development is a system based on radio frequency identification (RFID) technology for automatic identification of braiding bobbins and NPS spools and helps with the administration of the products.



○ Rewinding machine type DSA4 (system Hacoba) with integrated RFID

The Niehoff system was jointly-developed by Niehoff with the MES software company Advaris, the bobbin manufacturer Steintex and a team from Erlangen-Nuremberg University. It consists of spools with RFID transponders, a read/write unit integrated into the rewinding machine and mobile reading devices. The RFID transponders embedded into the spools can be easily and durably encoded with data, storing much more information than traditional barcode systems and which cannot be erased or become illegible.

The RFID system can be connected to a production data acquisition (PDA) system with a manufacturing execution system (MES). Furthermore, machine operators can be supplied with portable reading devices that can be equipped with a conventional barcode identification system as an option.

Data transmission to the host computer and subsequent data processing are achieved using MES software specifically developed by the Niehoff partner Advaris.

The new RFID system enables decentralised data storage beyond factory boundaries, tracking of single bobbins/spools and data documentation. When further processing the spools, a machine operator can compare the spool data with the order data and recognise whether a spool is suitable for the production process or not.

The described RFID system is also suitable for other production processes and packages, for example spooling automotive wires onto NPS spools and the subsequent manufacturing of harnesses. The spools of the Niehoff Package System (NPS) can be equipped with RFID transponders by Astroplast, the NPS spool manufacturer, during the fabrication of the spool.

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AS, ACS, ACSL, ACSLW, AAC, AAAG Wire, CCS, CCA, CCAM, TCCA, TCCAM Wire, CCS Strand Wire, Galvanized Steel Tape, GSW, GSWA and Strand Wire, Cu Al Tube;
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 Tel: +86 516 86579650 8602133788191891
 Fax: +86 516 86579650 86021332288191892
 E-mail: sales@jshengtong.com.cn

Multi-compound heavy-duty extruders

Due to a lack of suitable second-hand extruders, Gauder sa has announced the addition of Mapré heavy duty equipment to its scope of sales.

Ranging from 38mm up to 150mm with L/D ratio 25, Mapré extruders will process high friction materials such as HFFR and LSF0H, as well as PVC, PE, XLPE, PA and PUR compounds. Said to be maintenance free, the extruders are described as offering "perfect melt homogenization" and high linear output.

Mapré extruders are suitable for integration in existing insulation and sheathing lines or to be combined with new or second-hand machines, either from the customer's workshop or selected from within the Gauder Group.

Gauder sa – Belgium

Email: sales.mapre@gaudergroup.com

Fax: +32 4367 8798

Website: www.gaudergroup.com

Wire break detection system



○ Typical placement of wire break detection monitors

Yield Management Corporation has released a new product for detecting wire breaks in stranding and cabling machines. The system monitors individual spool rotation using optical sensors mounted outside the machine's rotation, and detects a non-rotating spool in less than 1.5m of product travel, stopping the machine before the broken wire reaches the next section. The broken wire can be repaired, preserving the finished product and reducing costly scrap. This method of detection has been proven to be fail-safe in all applications and significantly improves productivity and product quality.

The product can be custom configured for most planetary and rigid frame and planetary cabling machinery and utilises a Siemens hardware platform and HMI. The HMI provides the operator interface for initial set-up and continuous monitoring. The operator selects which spools are expected to run and enters the product lay for each machine section. Once configured, no other inputs are required. When the machine starts, the system continuously monitors each spool and is unaffected by machine speed. The system does not rely on slip rings or expensive radio frequency transducers and is said to be simple to maintain and operate as a result.

Most existing wire break detection systems monitor the collecting die. Repairing a wire break after it has passed the forming die takes longer and is more difficult. The YMC system monitors spool rotation and detects wire breaks, often before the wire end reaches the collecting die. Stopping the machine before the collecting die makes the cable repair more efficient, improving product quality and productivity.

Manufacturers of power cables or underground cables who require minimum continuous lengths report the greatest cost savings. Other users include those who strand non-conductive materials such as glass fibre where conventional wire break detections systems fail.

Yield Management Corp – USA

Fax: +1 413 283 7778

Email: sales@yieldmanagementcorp.com

Website: www.yieldmanagementcorp.com

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 Email: zlf@changsan.net

Wire for all purposes

Nevatia Steel & Alloys Pvt Limited, an ISO-9001 accredited company, and Government of India recognised export house was incorporated in 1988 to manufacture stainless steel wires. The company has added new facilities to increase its total capacity to 9,000mt per year.

The company manufactures special stainless steel wire for braiding, knitting and weaving applications, for cold heading and spring production as well as general purpose wire. In 2010 Nevatia has started production of its new MIG and TIG welding wire. Wire is made in a variety of grades, in sizes ranging from 0.1mm to 10mm diameter.

The company exports 90 per cent of its products to over 35 countries, which include Argentina, Australia, Austria, Canada, France, Germany, Italy, Korea, Poland, Spain, Turkey, UK and USA.

Nevatia Steel & Alloys Pvt Ltd – India

Fax: +91 22 2493 1336

Email: sales@nevatiasteel.com

Website: www.nevatiasteel.com

Coding and printing for cable

Leibinger manufactures coding systems and continuous inkjet technology for fast, non-contact marking. Leibinger inkjet printers use an automatic nozzle seal to prevent drying or clogging even after a long machine shutdown. The nozzle seal is also said to guarantee a printer start without flushing processes or cleaning procedures.

Several device alternatives and accessories are available for individual adjustment of the inkjet printer for special applications.

Leibinger's range includes a high-end printer, JET3, with special functions including a graphics and font editor for individual designs, and the Matrix and Linescan camera systems for highest security in product marking. The cameras can be easily combined with the inkjet printers to offer reliable control in product marking from one source.

Paul Leibinger GmbH & Co KG – Germany

Fax: +49 74 61 92 86199

Email: info@leibinger-group.com

Website: www.leibinger-group.com

Improving production in cable lines

Since 1993 Sikora has offered X-ray measuring devices for eccentricity, wall thickness, ovality and diameter of medium, high and extra-high voltage cables in CCV-, VCV- and MDCV-lines. Since then over 600 X-ray 8000 systems have been sold worldwide. Now, Sikora offers a variety of technological improvements with the X-ray 8000 NXT, which helps to further optimise the productivity of production lines.

Multi-sensor technology (MST) and two high-speed scanners ensure a reliable online measurement. With every scan the MST measures the vertical speed of the cable and thus compensates vibration. The measuring values are available within seconds of start-up of the line. Warm up and/or calibration are not required. Wall thickness and eccentricity values are displayed at 8-points for three insulation layers at the new 19" TFT monitor for quick centring of the extrusion tools.

X-ray 8000 NXT uses ceramic and NTX-windows (non-toxic X-ray windows). These windows separate the scanners from the pressure in the CV-line. The surfaces of the windows do not react with by-products that occur during the cross linking of the polyethylene material and thus remain permanently clean. The measuring system is equipped with XLL-X-ray tubes (eXtra Long Life). These tubes contribute to a long operation time with highest accuracy and reliability.

Sikora AG – Germany
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Fax: +49 421 48900 90
Website: www.sikora.net

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Bonding wire

New copper wire annealers

GER SA has manufactured a newly designed continuous resistance annealer for copper wire, the 3000A model.

This annealer can be combined with any make of rod breakdown machine, due to its self-contained design and motorisation. It can be used to anneal copper wire in a diameter range from 1mm–3.4mm, equipped with a 22kW AC motor with a frequency control system.

Annealer model, 220A, is also available for fine copper wire drawing machines. It is also a standalone model with a 15KVA transformer, 120mm diameter contact pulley, wire diameter range of 0.15mm to 0.5mm, and a maximum speed of 30 metres per second. This model is offered with either its own drive motor or driven from the drawing machine by a flat belt.

GER SA – Belgium
Website: www.ger.be

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Mob: 0091-98 110 76882
E-mail: ajextumer@gmail.com • sales@ajextumer.com
Website: www.ajextumer.com

EHV for hydropower project

Nexans has been awarded a €13 million turnkey contract to supply the power cables for the new Kraftwerke Linth-Limmern pumped-storage hydropower plant currently under construction in the Linth Valley in eastern Switzerland. This contract covers the design, manufacture and supply, installation, connection and commissioning of about 30km of extra high voltage (EHV) cables. The company will supply six 380kV XLPE-insulated underground cables, each approximately 5km in length, which corresponds to the length of the underground access tunnel in which they will be installed. Laid in parallel to connect the new plant to the EHV power transmission grid, these cables will comprise copper core conductors with a cross-section of 1,600mm².

The Limmern pumped-storage project will utilise the proximity of two existing water-holding reservoirs – the Muttssee Lake and the Limmernsee Lake – by building an underground pumped-storage plant between them.

During the day, when power demand is at its peak, water will be released through the turbines of the new Limmern plant to generate electric power for the coverage of demand peaks. At night, as demand decreases, a larger amount of electric power is available on the grid and this will be used by the new Limmern plant to pump water back upstream, from Limmernsee into Muttssee.

With its ability to pump water back from the lower into the higher reservoir the plant acts like a huge rechargeable battery, using readily available night time power to provide a very reliable and flexible power supply that can cover peak demand during the day. The same power lines, connected to the Swiss national EHV power transmission grid, will provide the electric power required to pump back water as well as exporting the power generated by the plant when it is operating in turbine mode. This connection will be provided by Nexans' 380kV cables.

Nexans – France
Email: nexans.web@nexans.com

Fax: +33 15669 8484
Website: www.nexans.com

Inosym ships its largest reels

In December 2009 Inosym shipped its "largest ever" reels to Egypt and Malaysia. The reels were steel drums of 4,000mm and 3,600mm in diameter.

The drums were designed to carry a maximum cable weight of 25,000kg at drum twisting speeds of up to 28rpm. Inosym's engineering and logistics teams can design, manufacture and deliver worldwide a comprehensive range of reels and drums for all cable making processes.

Inosym Ltd – New Zealand
Fax: +64 3341 6668
Email: inosym@inosym.com
Website: www.inosym.com



○ Inosym's largest reels are designed to carry 25,000kg

Wire galvanising plants

Precimax Engineers Limited India has been engaged in the design, manufacture and supply, installation and commissioning of industrial galvanising plants at home and abroad since 1963.

The company has supplied a number of galvanising plants for the surface coating of structural steel and wire, and is at present supplying a complete wire galvanising plant to Sri Lanka, and a galvanising plant specifically for transmission towers to Larson & Turbo.

Precimax Engineers Ltd – India
Email: marketing@precimaxonline.com

Fax: +91 22 2754 4917
Website: www.precimaxonline.com

Payoff and take-up

Rosendahl offers two models of winders for sheathing lines – floor-traversing and portal-traversing – named RWT and RWH. These systems can handle reels with a flange diameter between 800mm and 4,000mm. Add-on equipment for the detection of deviation, clamping, traversing, transport and cutting is available.

Rosendahl's advanced portal-traversing winder for heavy reels, the RWH, is designed for reels up to 20 tons with a maximum flange diameter of 4m. The traversing unit, with the reel, moves inside a stable steel frame. This floor-mounted frame does not require any special foundations.

The recently improved floor-traversing model RWT is designed for reel weights up to 12 tons. Special amendments have been made to reduce and optimise installation, maintenance and service work on the machinery. The modular drive is by individual AC motors with fixed, 2-step or 3-step gearboxes on any line configuration.

Rosendahl's portfolio of winders covers applications on standardised reel models as well as special reel designs for payoff and take-up of fibre optic cable or automated high-speed double-reelers.

Rosendahl Maschinen GmbH – Austria

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Email: office@rosendahlaustria.com

Website: www.rosendahlaustria.com

Range of CV tube lines

Maschinenbau Scholz is a specialist in the design and fabrication of CV tubes. The product range includes vertical lines, catenary lines, horizontal lines, pressurised reversing vessels, conversions and special designs.

To future-proof the lines it is often enough to simply replace individual parts, the potential for optimisation being often in the details. For this, Scholz can provide its customers with splice boxes, main sealings, pressurised reversing vessels and non-contact sag controls (cable position controls).

By replacing only these components the production speed can be increased and machine failure can be avoided.

When developing tailor-made solutions, Maschinenbau Scholz focuses on the latest EDP.

With efficient software, achievable production speeds can be precisely calculated and the required operating parameters can be determined. Another option for efficiency enhancement is the conversion of steam CV lines into dry curing lines.

Scholz offers a comprehensive after sales service, high quality components and a constant quality control system. Maschinenbau Scholz is a holder of the DIN EN ISO 9001 certificate, and all pressure-retaining parts are made in accordance with the Pressure Equipment Directive 97/23/EG [PED] and international acceptance standards.

Maschinenbau Scholz GmbH & Co KG – Germany

Fax: +49 2541 82741

Email: info@scholz-mb.de

Website: www.scholz-mb.de

Improved spool life

A Appiani produces a comprehensive range of reels and drums. The range includes TA100 spools and B-type for steel cord, hose wire and sawing wire, now produced with a new CN welding machine. These spools have class-A welding spots, as required in many fields including automotive.

This new welding line has increased the speed of the manufacturing cycle, thus reducing the costs of the spools. Quality of the spools has also improved, showing less deformation during the winding cycle and giving longer operational life. These spools are used by Bekaert, Michelin, ArcelorMittal and Bridgestone.

A Appiani Srl – Italy

Email: info@appiani.reels.it

Fax: +39 030 938 2425

Website: www.appiani.reels.it



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GREENER CAST

生产铜和铜合金棒的Upcast®系统由芬兰公司 Upcast Oy 独家提供。提供的Upcast技术有两种组态：单炉和双炉，最大输出分别为12,000吨/年和40,000吨/年。单炉组态能容易地扩展到双炉组态。

Upcast铜棒适合于所有电力应用，而且是一种受欢迎的原料，尤其适合于：

- 细、多股 - 线材拉伸，此时对延展性能要求很苛刻
- 磁线生产，此时表面光洁度最重要
- 连续旋转挤出工艺，此时工具磨损率是关键

期望Upcast成为一种‘绿色的’技术，运行工艺时只需要电、压缩空气和冷却水，不排放有害物质。在对环境的直接影响‘实际上是零’情况下，Upcast Oy已经致力于间接影响，尤其是能源消耗，这也是一个明显的经济性能指标。

新开发的具有以上两种特征的技术是GREENERCAST技术，这些开发包括：

- 更好的耐火砖材料，以减少热损失
- 快速切换功率晶体管 (FSPT)，以降低能源消耗
- 带有特殊通道设计的双回路感应器，以增强热量和质量流通，降低感应器的冷却需求

纳入上述所有GREENERCAST特性的典型Upcast装置是去年在土耳其Vatan Kablo AS开车的装置。

这个铸造装置采用双炉组态，产能是24000吨/年，满足土耳其电缆生产商对8毫米铜棒进料的总需求。

Upcast Oy - 芬兰

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网址: www.upcast.com

改进线轴寿命

A Appiani 生产各种线卷和线鼓，包括用于钢丝帘线、软管钢丝和线锯丝的TA100线轴和B型。现在，这些线轴都用新型的CN焊机生产。这些线轴有A级焊点，满足包括汽车生产在内的许多工厂的要求。这种新型焊接设备加速了制造周期，降低了线轴成本。线轴质量也得到改进，卷绕周期内变形量降低，操作寿命更长。Bekaert、Michelin、ArcelorMittal和Bridgestone都使用这些线轴。

A Appiani Srl - 意大利

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网址: www.appiani.reels.it

弹簧钢丝产品

秦皇岛安宝金属丝网有限公司生产和出口碳钢、高碳、合金和不锈钢弹簧钢丝，表面可镀锌或磷酸盐化(不镀锌)，也可经过热处理或油回火。

安宝能提供非机械弹簧丝 (#45、#60、#70)、机械弹簧丝 (70#或65MN)、碳钢弹簧丝、油回火和乐器弹簧丝，主要按照Din17223-1、EN10270-1；ASTM A227、ASTM A228、ASTM A313；JIS G3521、JIS G3522和JIS G4314标准生产。可以按卷包装或按圈架包装，根据不同尺寸，重量可以是5公斤到1000公斤。

Anbao (Qinhuangdao) Wire & Mesh Co Ltd - 中国

传真: +86 335 3870760

网址: www.anbao.com

成型线材退火

新型Rad-Con 100% 氢气退火炉系统已在 Charter Wire 公司在威斯康星州Menomonee峡谷的新工厂开车。Charter Wire去年将它的工厂搬到一个新的地方，并请Rad-Con Inc.用最新的技术100%氢气退火取代老的批量退火设备。



Rad-Con技术在Charter发挥作用

Charter是成型钢棒和线材产品供应商，它将Rad-Con退火系统主要用于低碳拉伸线材再结晶退火。新的系统还使Charter能给合金钢退火。Rad-Con的FlexLoad™增压通风室承载各种线卷包。系统特点包括快速氢气冷却和喷淋水、Rad-Con的调节加热速率和流量的AC/APEX™环境控制。这个系统还包括Rad-Con的超高对流(H2SHC™)技术，形成极好的环境循环，给出均匀的材料性能，公用工程成本低。

Rad-Con Inc – 美国
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 电子邮件: sales@rad-con.com
 网址: www.rad-con.com

线卷和线鼓

Boxy Group (包括意大利Boxy SpA和美国Mossberg Reel LLC)提供各种用于线缆工业的钢制线卷和线鼓，包括：

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- 铸造线卷
- 重型线卷和大型电缆线鼓

公司产品包括用于线卷搬运的特种设备，例如各种类型的拆卸线卷（液压、机械、气动）、内置或地面安装的倾斜装置、机械线卷和卷盘叉车。

Boxy SpA – 意大利
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 电子邮件: boxy@boxy.com
 网址: www.boxy.com

连续硫化管

Maschinenbau Scholz专业设计和制造连续硫化(CV)管，由这家德国公司制造的350多套设备已经在全世界运行。公司的产品包括立式管、悬链线管、卧式管、加压回动管、转化和特殊设计。为了使设备更加适合于未来，常常只要更替个别部件就能满足要求。优化潜力往往在细节上。对此，Scholz能为客户提供其分线箱、主密封、加压回动管和无接触下垂控制(电缆位置控制)。仅更换了这些元件后，就能提高生产速度，避免了昂贵的设备故障。

当开发定制方案时，Maschinenbau Scholz致力于开发最新的EDP。采用高效软件后，能精确计算可达到的生产速度，并确定需要的操作参数，或者，另一种提高效率的方法是将蒸汽CV固化管转化为干燥固化管。Scholz提供综合的售后服务、高质量元件和恒定的质量控制。Maschinenbau Scholz拥有DIN EN ISO 9001 证书，其所有承压部件都符合压力设备法令97/23/EG [PED]和公认的国际标准。

Maschinenbau Scholz GmbH & Co KG – 德国
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线材镀锌设备

Precimax Engineers Limited India自1963年起就从事于设计、制造、供应、安装和试运行国内外工业镀锌装置。公司供应了许多镀锌装置，用于结构钢材和线材表面涂层。公司现在正供应整套镀锌装置到斯里兰卡，用于线材镀锌，还供应一套镀锌装置到Larson和Turbo，用于输电塔镀锌。

Precimax Engineers Ltd – 印度
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新型炉技术

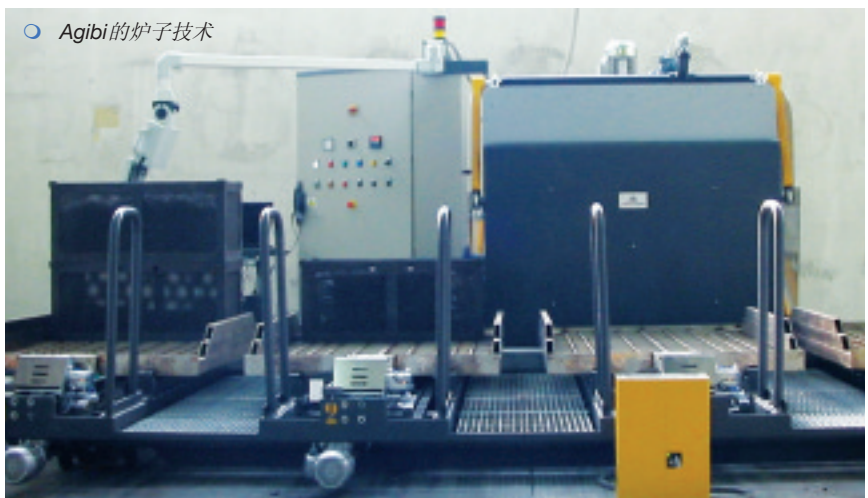
Agibi Progetti介绍其弹簧回火用新型卧式分室炉既节能又符合环保标准。Progetti专利的无烟系统完全消除了烟雾(被转成无害的空气成分)，它无需烟囱，甚至对很油的弹簧进行回火也是如此。而且，系统的维护要求很低。设备拥有自动化的四蓝系统，便于设备彻夜运行，此时，电力成本降低。

用作炉子涂层的绝缘材料由NASA研究者开发，将外部操作盘的温度维护在40°C以下，从而节约了能量。内部通风输送系统维护内部温度均匀分布，即使用4个到8个篮子装载也是如此。采用高精度微处理器控制温度，通过频率转换器来控制马达，调节到生产所需的速度。回火工艺是弹簧生产成本的一个关键，但也有环保问题——污染空气。因此，Agibi Progetti生产的弹簧回火炉都采用无烟系统。

Agibi Progetti Srl – 意大利
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 网址: www.agibiprogetti.it

Agibi的炉子技术



精密测量3

新型激光量规将扩展Sikora目前直径量规的范围，它有三种功能强大的型号，能给出更高的精度和可靠性，有效地改进生产装置的效率。2500次测量/秒提供了极高的单值精度，保证优化的装置控制，提供可靠的统计数据。采用新型量规后，电缆直径测量精度提高到0.2微米。

Sikora工程师们集成了许多实用的改进，量规开口是测量范围的2倍，保证电缆喂进。直接集入表头的是一种新型的可盲堵万用界面模块，使用于所有接头。在这个位置，它在生产期间防水、防脏污、防机械影响。量规的另一个特点是特别开发的超电压和超电流保护。

旋转表头设计源于更大的Laser Series 2000量规，表头可轻易地向上移动，离开挤出设备。测量轴的布置方式能使量规底部敞开，防止脏污和水跌入测量区。Sikora的Laser 6020 XY测量直径为0.25毫米到20毫米的产品，Laser 6040 XY的测量范围为0.5毫米到40毫米，Laser 6080 XY的测量范围为直径从1毫米到80毫米的产品。



○ Sikora 新型Laser Series 6000

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断线检测系统

Yield Management Corporation推出一种新型产品，用来检测线材在操作台和电缆铺设机上的断裂。系统用安装在设备旋转部分外侧的光学传感器来监测各个线轴旋转，并在产品行程1.5米之内检测不旋转线轴，在断裂线材到达下一部分时停止设备，以便修理断裂线材，保留了最终产品，降低了昂贵的废品。这种检测方法已被证实所有应用中都将把设备带入故障安全状态，大大改进了生产力和产品质量。

可以为大多数行星、刚性框架和行星电缆铺设装置定制产品组态，并利用Siemens硬件平台和HMI。HMI为操作员提供界面，以便初始设定和连续监测。操作员选择哪些线轴要被运行，并进入每个设备部分产品位置。一旦组态完毕，就不需要其它输入。当设备启动后，系统将连续监测每根线轴，而且不受设备速度的影响。系统不依赖于滑环或昂贵的射频传感器，使得维持和操作简便。

大多数现有线材断裂检测系统检测收集模头。在它通过成型模头后修理线材断裂将花费更长的时间，而且更加困难。YMC系统通常在线材末端到达收集模头前检测线轴旋转和检测线材断裂。在停下设备后再收集模头将使电缆修理更加有效，改进产品质量和生产率。对连续长度有最低要求的电力电缆或地下电缆制造商都报告说有最大的成本节约。其它的则包括那些卷绕非导电材料的用户，例如玻璃纤维，因为传统线材断裂检测系统都无法检测这些材料。

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○ 线材断裂检测检测器的典型布置



电缆编码和打印

Leibinger制造工业用编码系统，拥有快速无接触标记的连续喷墨技术。公司各种油墨产品包括用于黑色表面的高对比度有色油墨。

所有Leibinger喷墨打印机采用自动化喷嘴密封，即使在长期不用之后也能防止干燥或堵塞。喷嘴密封还能保证打印机启动时不需要冲洗或清洁程序。公司还提供若干其它替代设备和辅助设备，为特殊应用独立调节喷墨打印机。

Leibinger的产品包括高端打印机、JET3，它们具有特殊功能，包括各种设计的图形和字体编辑、具有产品标记最高保安等级的Matrix和Linescan照相机系统。照相机能容易地与喷墨打印机组合，从一个来源提供可靠的产品标记控制。

Paul Leibinger GmbH & Co KG

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中国生产商选择Radyne

Radyne IHWT成功完成了用于中国6套轮胎帘线扩散装置(TCD)的感应加热设备的供应、安装、试运行，每套在80DV时能运行24根线，线材直径从1.1毫米到2.2毫米。

这项装置提供给中国的一个主要生产商，上述6套装置的每一套都有预热区、最终加热区，每个区都得到IGBT电源支持，然后是两个隔热温度保持区。轮胎帘线扩散工艺是为了防止轮胎内线材腐蚀，并起润滑剂的作用，以便在后续拉伸操作中进一步降低直径。

Radyne TCD系统有许多优点和好处，例如，电效率高、无接触加热，无须加热沙之类的介质。系统操作界面友好，包括一个有Siemens HMI的控制系统，这是操作控制台不可缺少的部分，并采用Profibus DP协议与Siemens Simatic Series PLC通讯。这不仅提供诊断信息，还能使操作员能进入和控制所有设备参数。

最重要的是，Radyne TCD系统保证产品一致性，铜和锌都有完美的扩散。能在高DV下进行多线加热，而且，能简单地从一个直径切换到另一个直径。

Radyne IHWT – 英国

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Inosym发运其最大的线盘

2009年12月，Inosym向埃及和马来西亚发运其最大的线盘。线盘用直径达4000毫米和3600毫米的钢制轮鼓。

轮鼓转动速度为28rpm时，线盘设计承载能力是电缆最大重量25,000公斤。Inosym的工程和后勤团队能为所有电缆制造工艺设计、制造、并向全时间各地运送各种线轴和线盘。

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○ Inosym的最大线盘能承载25,000公斤电缆

用于United Wire Factories Co的钟形退火装置

Ebner于2009年8月收到位于沙特阿拉伯Riyadh的United Wire Factories Co的一份订单，为这家公司生产一套Hicon®N2钟形退火装置。供货范围包括2个Hicon N2机架，2套加热罩、2个冷却罩、1个控制中心和辅助设备。

装置采用氮气工艺环境来再结晶打包钢丝。每个机架有效工作负荷空间直径为3450毫米，装载高度为4400毫米，能容纳48吨净负载。

装置计划于2011年一季度开始生产。

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放线和收线设备

Rosendahl提供护套装置的两种型号的卷绕机 - 层面横动型和门架横动型 - 称为RWT型和RWH型。这些系统能处理法兰直径为800毫米到4000毫米的线盘。公司还可提供检测偏差、夹持、排线、迁移和切割的附加设备。

Rosendahl先进的门架横动型(RWH)卷绕机用于重型线盘，能卷绕20吨，最大法兰直径达4米。线盘的排线单元在稳定的钢制框架内移动。这种安装在层面上的框架不需要任何特殊的基础。

最近改进的层面横动型(RWT)卷绕机用于重达12吨的线盘，经过特殊改进后，减少和优化了设备的安装、维护和服务。模块化驱动由单个交流马达提供，可在任何设备组态上采用固定、2挡或3挡的齿轮箱。

Rosendahl线卷机系列的应用包括标准化的线盘、特殊的光缆放线和收线设计或自动高速双收线盘。

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无屑成型辊轮

无屑成型技术的精密辊轮不只是标准产品。可靠性和服务寿命取决于材质、几何形状和生产准确性。所以，对辊轮设计来说，重要的是要找到理想的材质群和适用于应用的几何形状。

Kämpfer Würz考虑了用户对轧制工具提出的更高要求，大大提高了辊轮制造的可能性。几年前，精密辊轮技术的轧具用户不得不采用最大直径只有200毫米的碳化物辊轮。现在，Kämpfer Würz投资于新的打磨技术，能够加工碳化物环冷辊轮，直径达600毫米，最大长度为2500毫米，准确度<2微米。

对于大直径碳化物辊轮制造商来说，进一步改良是很重要的，以便通过内部精密打磨这些碳化物，使辊轮底座和碳化物环之间达到最优化的复合。在此，形状的准确度是最基本的，圆柱体偏离度要小于3微米。

Modern CNC车床能加工复杂的、大尺寸几何图形和层面，使重型大辊轮具有最高的精度。Kämpfer Würz现在能生产含凸面或凹面的辊轮筒体。

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○ Kämpfer Würz Umformtechnik GmbH的无屑成型技术



水力发电项目的EHV电缆合同

Nexans获得一项价值1300万欧元的交钥匙合同，为瑞士东部新的Kraftwerke Linth-Limmern抽水蓄能水力发电站供应电力电缆，目前施工正在进行。该合同包括设计、制造和供应、安装、连接和试运行大约30公里超高压（EHV）电缆。Nexans将供应6根380千伏XLPE绝缘地下电缆，每根大约5公里长，安装在长度相当的地下隧道中。它们将平行铺设，将新的发电站接入EHV电力网，这些电缆由铜芯导体组成，单根导体横截面积为1600平方毫米。

Limmern抽水蓄能项目位于Linthal峡谷，它利用两个邻近的现有水库 - Muttsee湖（标高：2474米；新的能力：2500万立方米水）和Limmernsee湖（标高：1857米；能力：9200万立方米水） - 在两湖之间建造一个地下抽水蓄能水力发电站。白天，电力需求达到高峰时，放水通过新的Limmern发电站涡轮，为需求高峰发电。夜间，电力需求降低时，新的Limmern发电站将用电网里的大量电力，把水泵送回“上游”，即从Limmernsee湖回到Muttsee湖。在这些泵-到-涡轮操作中，将通过一个大约5公里长的地下隧道向Limmern发电站输送大约1000兆瓦电力。

发电站能够用泵将水从低标高水库送到高标高水库，发电站本身就像一个巨大的可充电电池，用夜间便利的电力提供可靠灵活、能满足白天高峰需求的电力供应。采用相同的电力电缆，将它们接入瑞士国家EHV电网，在发电站处于涡轮操作模式时，这些电缆将提供泵送水所需的电力，出口发电站发出的电。Nexans的380千伏电缆将提供这种连接。

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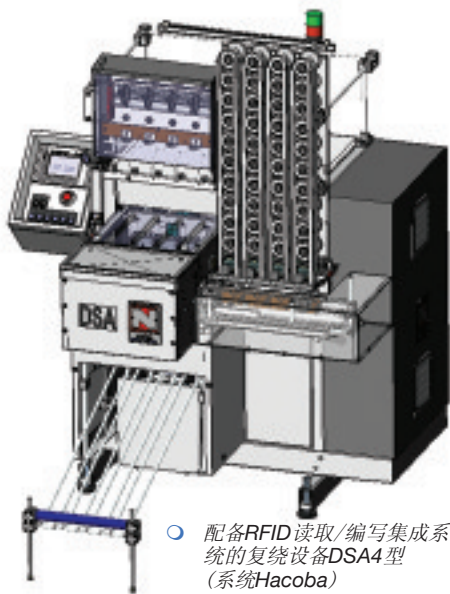
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通用线材

Nevatia Steel & Alloys Pvt Limited是获得ISO-9001认证的公司，也是印度政府认可的出口商，成立于1988年，生产不锈钢丝。公司增添新的设备，将总生产能力增加到9,000公吨/年。公司生产特殊不锈钢丝，用于编带、针织、编织以及用于冷锻、弹簧生产和一般用途线材。今年，Nevatis已开始生产它的新型MIG和TIG焊丝。线材包括各种牌号，直径从0.1毫米到10毫米。公司出口90%产品到35多个国家，包括阿根廷、澳大利亚、奥地利、加拿大、法国、德国、意大利、韩国、波兰、西班牙、土耳其、英国和美国。

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RFID用于线轴管理



○ 配备RFID读取/编写集成系统的复绕设备DSA4型 (系统Hacoba)

产品分类和生产工艺步骤记录都需要对满载线轴进行可靠的标签。Niehoff最新开发出一个基于射频识别(RFID)技术的系统，它能自动识别编带梭子和NPS线轴，帮助产品管理。这个系统将在2010年线材展上展出。Niehoff系统由Niehoff、MES软件公司Advaris、梭子制造商Steintex、Erlangen-Nuremberg大学的一个团队共同开发的。

它包括配备RFID转发器的线轴、内置于再卷绕设备的读取/编写装置、移动式读取装置组成。内置于线轴的RFID转送机能方便耐久地进行数据编码，储存比传统条形码系统多得多的信息，而且不会被擦除或无法读取。

RFID系统能被连接到配备制造执行系统(MES)的生产数据获得(PDA)系统。而且，设备操作员可配备便携式读取设备，作为一个可选项，这个读取设备能配备传统的条形码识别系统。用Niehoff合作伙伴Advaris特别开发的MES软件，可以将数据输送到主计算机，并进行后续数据处理。新型RFID系统能超越工厂边界配置数据存储，跟踪单个梭子/线轴和数据通讯。在进一步处理线轴时，设备操作员能比较线轴数据和命令数据，确认线轴是否适合于生产工艺。

所述的RFID系统也适合于其它生产工艺和机组，例如，将汽车线材卷入NPS线轴以及后续的电气配线制造。在线轴制造期间，Niehoff机组系统线轴(NPS)能配备NPS线轴制造商Astroplast提供的RFID转送器。

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新型铜线退火机

GER SA制造出新型电阻式连续铜线退火设备 - 3000A型。这种退火设备由于其本身设计和机械化，能与任何大拉机组合。它配备用于频率控制系统的22千瓦直流马达，能退火直径为1毫米到3.4毫米的铜线。

另一种新型退火设备型号是220A，用于铜线小拉机，也是独立型号，配有15千伏安变压器、120毫米直径的接触轮，处理的线材直径为0.15毫米到0.50毫米，最大速度为30毫米/秒。这种型号配备自驱动马达，也可用拉伸机的扁平带来驱动它。

GER SA - 比利时 网址: www.ger.be

多种材料挤出机

由于缺乏适当的二手挤出机，Gauder sa宣布在其销售范围中添加Mapré重型设备。Mapré挤出机尺寸范围为38毫米到150毫米、长/径比25，加工高摩擦力材料，例如HFFR和LSFOH、以及PVC、PE、XLPE、PA和PUR母料。据称，设备无须维护，而且挤出机被描述为提供“完美的熔融均化”和高线性输出。Mapré挤出机适合与现有绝缘和护套设备一体化，或者与新的或二手设备组合，可以从客户车间或从Gauder集团选择这些设备。

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A publication of



Lubricants and drawing compounds

A glass of milk with a straw, set against a blue background. The milk is white and has some foam on top. The straw is white and goes into the glass. The background is a solid blue color.

The sheer number and variety of wire drawing lubricants and compounds can challenge even an experienced lubricant technician.

Choosing among those specific to a material (difficult-to-draw titanium), a process (copper plating of steel wire), a property (water solubility, adhesive attraction) or a production challenge (dry-type lubricant powder, where parching is a threat) calls for informed decision-making.

Additional considerations include time-based preventive maintenance. And, always – throughout every production run – a perfect balance must be struck between under- ('lubricant starvation') and over-lubrication.

It is a specialism that requires a sure sense of when enough is enough and not too much.

Improved housekeeping = Increased productivity

Stuart Duff and Mike Philips offer extracts from their presentation to the Istanbul Cable & Wire 2009 conference, "New Technology for Global Markets" held in November 2009, organised by the IWMA, WAI, ACIMAF and CET.

To increase the productivity of a copper wire drawing emulsion several points need to be considered:

- Drawing lubricant technology
- Housekeeping of the emulsion system
- Performance of the drawing emulsion
- Evaluation of disposal techniques and cost

Drawing lubricant technology

It is important to understand the technology in the product. The operator who understands the physical and chemical properties, will better manage the emulsions and appreciate why precautions should be observed and procedures followed. Copper wire drawing lubricants are highly specified soluble oils designed for mixing into water at concentrations from 2% to 15% dependent on the specific application.

A soluble oil concentrate for wire drawing will typically contain the following chemical additives:

- Mineral oil (oxidation stable pure base oil)
- Emulsifiers
- Surfactant detergency additives
- Surfactant coupling agents
- Corrosion inhibitors
- Lubricity additives
- Extreme pressure performance additives
- Bactericides, biocides and fungicides
- Antifoams
- Water

Wire drawing lubricants provide both boundary and hydrodynamic lubrication. Boundary lubrication is a thin film used at slow speeds at the wire/die interface and the wire/capstan interface. Hydrodynamic lubrication is thin film lubrication used at high speeds at the wire/die interface. Wire drawing lubricants can be conventional, semi-synthetic or fully synthetic. The most common type of wire drawing lubricant for copper is semi-synthetic, where oil lubrication droplets of around 0.8 to 1 micron in diameter are suspended in water. They have a simultaneous lubricating and cleaning action.

Housekeeping of the emulsion

Storage

All soluble oil concentrates should be stored indoors and protected from extremes of temperatures of frost and direct sunlight. The drums should be stored to avoid water ingress, as this

will harm the concentrate. The ideal storage position is to place the drums on their side with bungs at the quarter to three position.

Mixing

The emulsion mixing process can also affect the long-term stability and lifespan of the wire drawing emulsion so it is vital to always add the concentrate to water rather than the other way around to avoid instability. The use of mixing units is recommended and especially the positive displacement mixing units which will inject the concentrate into the water.

Water

The water quality used for make up is important for the life and long-term stability of the wire drawing emulsion. The water should be medium hardness for emulsion make up and low hardness for emulsion top up. It is also beneficial in certain applications to use demineralised water but the use of salt softened water is not recommended.

Machine cleaning

Cleaning and preparing machines prior to emulsion fill is important for removal of debris, fines and deposits in used systems and also for removal of anti-corrosives in new machines as these can promote initial emulsion foaming.

Maintenance

It is important to protect wire-drawing emulsions from biological contamination:

- Keep the drawing emulsion above minimum recommended concentrations and use a refractometer to record the concentration
- Sterilise and clean the system before introducing a fresh emulsion
- Avoid emulsion make up using contaminated water
- Never discard waste into the emulsion
- Minimise metal fines by effective filtration
- Maintain temperature between 35°C and 45°C
- Avoid tramp oil contamination

Simple measures, together with emulsion general condition monitoring, can increase emulsion life, save costs and improve the working environment of the drawing machine resulting in cleaner drawing dies and longer die life, and increased speed and machine output.

Emulsion performance

Throughout emulsion life the factory should monitor and record production data and keep records of the emulsion condition monitoring and maintenance.

The consumption rate of emulsion can be measured and then used as a benchmark target. Data of tonnage drawn, top up rates, wire break analysis and emulsion analysis should be recorded and monitored.

Typically the consumption rate of an ideal process should be 0.1 to 0.25 litres of emulsion per tonne of copper wire drawn.

The litre per tonne value is dependent on emulsion chemistry and working practice of the factory, and every system will have its own figure.

Emulsion disposal

The cost of disposal will continue to rise so the disposal of the emulsion is as important as the product selection. All emulsions should be disposed of in accordance with local legislation in any country. Before any disposal process is adopted, every factory should evaluate its waste products and consider the likely toxic metals that may have accumulated.

One example of copper wire drawing emulsion disposal is by separating the oil and water parts of the emulsion by passing it through a membrane filter; this technique is known to reduce emulsion disposal costs by 80% to 90% hence providing significant cost savings as emulsion disposal costs are based on Volume of Emulsion and Chemical Oxygen Demand values (COD).

This separation technique, known as Ultrafiltration, is widely used in other metal working sectors.

The oil layer, of typically 10-20%, can be disposed of through a waste oil contractor and the remaining water permeate layer is further processed through a reverse osmosis system to reduce the dissolved copper level.

The resulting water is clean and pure, and can be disposed of safely in accordance with local legislation or reused in the factory for emulsion make up or treatment systems.

**Kuwait Petroleum International
Lubricants – UK
Website: www.q8oils.com**



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Furthering the borax-free cause

For many years Lubrimetal has limited the use of boron compounds in its formulations. To replace lubricants that contain borax, Lubrimetal has now developed a new series of 100% borax-free sodium lubricants.

In addition to the existing Lubrifil VA 7001, the new Lubrifil VA 7090, Lubrifil VA 7081 and Lubrifil VA 5001 are designed for drawing high carbon steel, stainless steel and for welding wires. As an alternative to the use of borax in pre-drawing treatments (borax coating), Lubrimetal has also successfully tested two new borax-free salt carriers called Steelfor ITS/21 (for all carbon steel grades) and Steelfor 7030 (for stainless steel). These salts are suitable for both in-line and batch treatments.

Lubrimetal has also developed a new generation of emulsifiable lubricants, Lubriol CU 55, CU 550 and Lubriol ALM 90, to provide low viscosity and high lubricity for aluminium applications.

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Comprehensive range of lubricants for wire

Blachford Corporation has developed and produced technically advanced powder and liquid lubricants for the North American, Asia and European markets since 1958. Chemdraw DX358 is widely used in the welding wire industry for drawing high and low carbon rod and wire. Chemdraw JL735 is also targeted for the welding wire industry. Chemdraw LWA82 is a sprayable product, said to provide outstanding arc stability as well as excellent ferrous and non-ferrous corrosion protection. Chemdraw GS368 is developed for high speed drawing of high carbon or stainless steel rod or wire. Many of Blachford's sodium-based products are available in a borax-free version. Although Blachford has focused on dry wire drawing lubricants, R&D has also developed products for non-ferrous wire drawing applications (for example Chemdraw LCD48, Chemdraw LWD58 and Chemdraw LCD39). It is said that, through the use of congruent chemistry products, substantial cost savings can be realised.

The latest product developed by Blachford's technical team is targeted for the tyre bead application. The current evaluation trials show a 30% reduction in lubricant consumption and a resultant improvement in die life. It is anticipated that this product will be available within the next few months. Blachford's strength lies in a technical group with wide experience in developing metalworking products (both fluid and dry) for diverse applications. A product specifically designed to optimise a process results in a finished wire product with consistent metallurgical properties and surface appearance. There is often the added benefit of reduced die wear.

Blachford Corporation – Canada

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0% from Traxit

The much delayed European legislation, which will classify as reprotoxic all products containing borax and boron compounds above a certain level, will start to be effective from early 2010. This will progressively affect all areas with the adoption of the global unified classification and labelling regulations (GHS).

Traxit is already able to offer a full range of dry powder drawing lubricant products completely free of borax and all boron compounds. These products are believed to offer the following

improvements over some traditional boron containing products:

- Longer die life
- Higher drawing speeds
- Fewer wire breaks
- Reduced drawing temperatures
- Less moisture pick up with sodium-based lubricants

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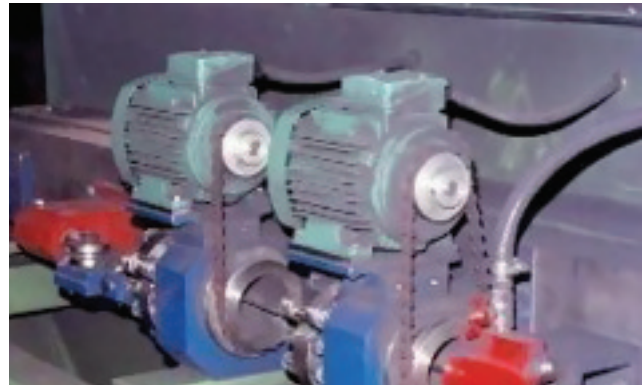
Website:

www.traxit.com, www.boraxfree.com

Lubricant viscosity control to optimise wire drawing

The acid-free DCCD (dry cleaning, coating and drawing) process incorporates lubricant viscosity control. This enables demanding wire qualities to be drawn in an economical way, at the highest speed, replacing conventional rod preparation (chemical cleaning, rinsing, wet pre-coating and drying) in all direct drawing applications from rod to wire, including 0.85-0.88%C mechanically descaled bare rod, without pre-coating chemicals. The result is lower cost, improved wire quality and environmental benefits.

The critical aspects of lubrication, friction and wear, part of the complex wire drawing mechanism, are greatly simplified and some, such as wire breaks, surface damage and excessive generation of metallic fines, are virtually eliminated. Instantaneous rod dry coating, operating with no speed limit and at zero energy consumption (self-generated by the LVC/PDH unit), enables an automatic control of crucial variables, including liquefied lubricant thermal stability, a vital parameter that prevents metal-to-metal contact at the wire-die interface. This allows high drawing speed and wear performance of 0.1–0.3 micron per ton of wire drawn.



○ Rod cleaning and wire drawing by DCCD process

Full film consistent coatings are achieved in a range from strongly adherent hard multi-coat layer for high-tensile spring wire or PC strand wire, to an ultra thin nano-coat water-soluble film for plating wire.

Benefiting from the recent development in rod dry preparation and wire lubrication mode, the DCCD process provides reliability and potential for steel wire production.

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Waspaloy

See us at
**Wire & Cable India
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Putting borax out of REACH

Condat has developed new solutions in high tech and eco-friendly lubricants. The new Vicafil and Steelskin products are constantly reviewed and reformulated to ensure compliance with the latest health and safety regulations for chemicals (such as REACH or Biocides) as and when changes occur. Regarding REACH legislation, Condat has a dedicated Products Regulatory Affairs Department that participates with several European consortiums and allows Condat to anticipate the latest R&D developments.

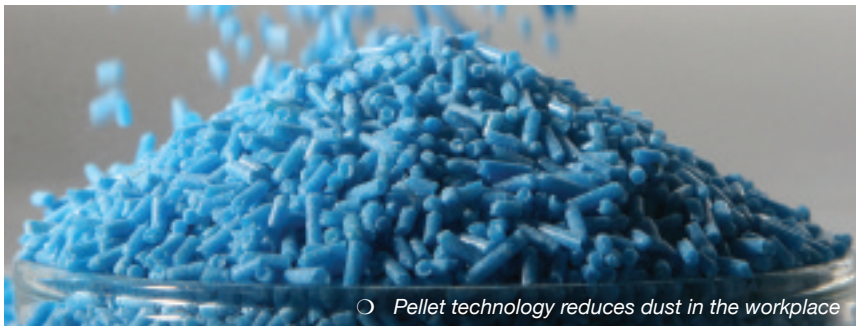
Condat is always looking for safer substitutes for potentially dangerous raw materials. As a result Vicafil SUMAC 3 is the new generation of sodium soap, developed and optimised from a technical, environmental and economical point of view. To keep pace with new regulations on borax, Condat has redesigned its most famous lubricants and offers a new, larger choice of products for direct substitution: low (Vicafil TS 7853) or zero (Vicafil TS 7101) borax surface coatings and drawing powders. An oil-based lubricants range now offers vegetable oil-based alternatives, whilst the soluble lubricants range now employs renewable raw materials.



○ Condat's Vicafil TF498

The exposure of operators to soap dust is a real concern for Condat.

The company has developed pellet technology, a specific production process to provide non-dust drawing powders from lean to rich soap formulations, calcium or sodium based.



○ Pellet technology reduces dust in the workplace

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Oil cleaning centrifuge

M/S CbS technologies has introduced what are believed to be 100% maintenance expense free wire drawing oil cleaning and material recovery centrifuge machines. The benefits of these centrifuges include:

- Reduced friction between wire and die as well as heat removal at the die for longer Ensures the maximum speed of the wire drawing machine
- Enhances the production of bright finished wire
- Reduces the consumption of lubricant oil and extends oil life
- Removal of suspended particles reduces the rate of the chemical reactions which break down the lubricants and lead to poor wire finish
- Metallic oxide present in the lubricant may cause scratching, die wear and wire breaks
- Repeat pump failures are eliminated

The portable oil cleaning centrifuge system works off-line and continuously cleans the oil.

Sludge and material accumulates inside the centrifuge bowl, which has the capacity to hold material up to 22.5kg.

M/S CbS technologies – India
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Environment-friendly lubrication



○ Tecnovo's range of lubricants for wire

Tecnolubre FM/262S is a calcium-based soap designed to draw low carbon content wire for welding (CO₂). The new lubricant was developed to meet requirements for high-speed drawing of wire rods with very smooth surfaces, which generally creates serious problems for lubricant adhesion on the first pass and consequently compromises die life and the quality of the finished wire.

Tecnolubre FM/909 is a sodium-based soap specially formulated to comply with new regulations limiting the use of borax. The product is recommended for drawing high carbon content wires for the production of springs and PC wire to provide high-speed wire drawing with the final wire surface free from black carbon residues.

Emulsifiable Sintek FL lubricants are formulated to generate emulsions that are easy to filter and so do not need to be modified for production plant and cycles currently employed. The Sintek FL series consists exclusively of compounds of animal and vegetable origin. They are consequently completely free of mineral oils and are entirely biodegradable.

This new product is recommended in all cases where a very thick film of lubricant is desired which will guarantee excellent subsequent wet wiredrawing, without compromising later electrocoating treatment.

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润滑剂和拉丝用化合物

A glass of milk with a straw is shown in the lower right portion of the page. The milk is white and has some foam on top. The straw is white and goes into the glass. The background is a solid blue color.

线材拉丝润滑剂和化合物庞大的数量和种类甚至对一个富有经验的润滑剂技术员来说都是一个挑战。在这些特定的材料间选择（很难拉拔钛材质），一个过程（钢丝镀铜），一个性能（水溶性、粘着力）或一个生产挑战（干式粉末润滑剂，而烘干在此是一种威胁）都需要做出理性的决定。

另外需要考虑的因素包括定期检修。并且，通常——通过整个生产运行——必须在润滑剂缺少（“润滑剂供应不足”）或润滑剂过多之间找到完美的平衡。这需要专门找到确定是足够而不胜过多的感觉。

在这里评论的商品和服务将会在一些供应商中找到，他们会指导这些宝贵的技巧。

增强管理和保养就等于提高生产力

Kuwait Petroleum International Lubricants的Stuart Duff和Mike Philips解释到，尽管拉丝乳剂是拉丝过程中最有可能成为成本最小的项目，但它也是对机器生产力最有影响的。

为了提高铜丝拉拔乳剂的生产力，需要考虑的几个要点：

- 拉拔润滑技术
- 乳剂系统的管理和保养
- 拉拔乳剂的性能
- 处理技术和成本评估

拉丝润滑技术

了解产品的技术是很重要的。操作者懂得物理和化学性能将能够更好地控制乳剂并领会需要注意什么以及遵守什么程序。

铜丝拉丝润滑油是高度专用的可溶性油，可以与水混合，浓度为2%到15%，根据具体的应用而定。

专为线材拉丝的可溶性油通常将包含以下化学添加剂：

- 矿物油(氧化性稳定的纯油)
- 乳化剂
- 表面活性剂去污添加剂
- 表面活性剂偶联剂
- 缓蚀剂
- 润滑添加剂
- 极压性能添加剂
- 杀菌剂、灭微生物剂以及杀真菌剂
- 止泡剂
- 水

拉丝润滑油提供边界和流体动力润滑。边界润滑是一种薄膜润滑，用于低速的线材/模具界面以及线材/绞盘界面。流体动力润滑是薄膜润滑，用于高速线材/模具界面。拉丝润滑剂可以是常见的半合成或全合成剂。最常见的铜材拉丝润滑剂是半合成的，直径0.8到1微米的润滑油滴悬浮在水中。他们同时起到润滑和清洁作用。

乳剂管理和保养

存储

所有可溶性油浓缩液可储存在室内并避免极端的冷天气以及阳光直射。桶也应

避水储存，不然会影响浓度。理想的存储位置是将桶储存在他们旁边，塞子在四分之三的位置。

搅拌

乳液搅拌过程也会影响拉丝乳液的长期稳定性和寿命，因此经常把浓缩液加入水而不是按常例，避免不稳定性。推荐使用搅拌装置，特别是容积式搅拌装置能够将浓缩液注入水中。

水

补充水的水质对拉丝乳剂的寿命和长期稳定性来说是很重要的。补充乳剂的水的硬度应为中等的，而充满乳剂的水应是低硬度的。在一些应用中使用脱矿质水是有益的，但是用盐软化水是不可取的。

机器清洗

在填充乳剂前清洗和准备机器是很重要的，这样可以除去使用过的系统中的碎片、粉末以及残留以及去除新机器中的防腐，因为这些会促进初始乳剂发泡。

维护

这对防止拉丝乳剂遭受生物污染来说是很重要的：

- 保持拉丝乳剂浓度在推荐的最小浓度之上，并使用折射计记录浓度。
- 在引入一种新乳剂前应对系统进行消毒和清洗。
- 避免使用被污染的水来补充乳剂。
- 永远都不要将垃圾抛入乳剂。
- 通过有效的过滤使金属粉末最小化。
- 温度保持在35°C和45°C之间。
- 避免杂油污染。

简单的措施，连同乳剂一般状态的监测，可以增加乳剂寿命，节约成本，改善拉丝机械工作环境，使拉丝模具更清洁以及模具寿命更长，并且增加了速度和机器产量。

乳剂性能

在乳剂整个使用寿命周期内，工厂应监控和记录生产数据并且保存乳剂状态监测和维护。乳剂消耗率可以测量出并用作基准目标。

拉丝吨数、充满率、线材断裂分析以及乳剂分析等应被记录和监控。在一个理想的过程中具有代表的消耗率应是0.1到0.25升乳剂每公吨拉拔铜丝。每公吨的升值是根据乳剂化学性和工厂工作实践决定的，并且每个系统又有它自己的数据。

废乳剂处理

处理成本将继续上升，因此对废乳剂的处理跟产品选择一样重要。

在任何国家，对废乳剂的处理应遵守当地立法。在采用任何处理工艺前，每个工厂应当评估其废弃物，并且考虑可能已积累的可能有毒的金属。

铜拉丝废乳剂处理的一个例子是通过一个滤膜器将乳剂油和水分离。大家熟知的是这项技术可以使乳剂处理成本减少80%到90%，因此可以大大节约成本，因为乳剂处理成本是建立在乳剂量和化学需氧量(COD)基础上的。

这项分离技术被称为超滤法，已被广泛应用于其他金属加工行业。通常油层10-20%是通过一个废油承包商处理的，余下的水渗入层是通过一个反渗透系统进行进一步处理的，这样可以减少溶化铜等级。

生成的水是纯净的，并可以根据当地法律安全的处理或再用于工厂乳剂补充或处理系统。

Kuwait Petroleum International Lubricants – 英国

网址: www.q8oils.com

环保型润滑剂



○ Tecnovo的线材拉丝用润滑剂系列

Tecnolubre FM / 262S是一种钙基肥皂，用于拉拔低碳含量的(CO₂)焊接线材。这种新的润滑剂可以满足高速拉丝的需求，这些线材表面非常光滑，通常在第一道次给润滑剂粘着制造了很大的问题，并且因此威胁模具寿命以及成品线材质量。这种新产品被推荐在所有需要非常薄的润滑剂膜的情况下使用，这样可以确保随后很理想的湿式拉丝，不影响后来的电涂层处理。

Tecnolubre FM / 909是一个钠基皂，专门按照限制使用硼砂的新法规配制的。该产品被推荐用于拉拔高碳含量线材，用于弹簧和预应力线材生产，可以提供

高速拉丝，且最终的线材表面没有炭黑残留。

Emulsifiable Sintek FL润滑剂用来生成乳剂，这样可以方便过滤且不需要修改目前采用的生产设备和周期。

Sintek FL系列专门包括源于动物和植物的化合物。因此他们完全不用矿物油并且是完全降解的。

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来自Traxit的 0%

大大延迟的欧洲立法，将超过一定水平的所有含硼砂和含硼化合物分为生殖毒性物质，将于2010年早期生效。这将逐渐影响所有领域采用全球统一的分类和标签条例(GHS)。Traxit已经能够提供完全不含硼砂和所有硼化合物的全套干粉拉丝润滑产品。这些产品与传统的含硼产品比较有下列改善之处：

- 模具寿命更长
- 更高的拉丝速度
- 线材断裂更少
- 拉丝温度降低
- 使用纳基润滑剂减少了水分

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推进无硼砂目标

多年来Lubrimetal公司已限制在其配方使用含硼化合物。为代替含硼甜润滑剂，Lubrimetal目前开发了新系列的100%无硼的钠润滑剂。

除了现有的Lubrifiil VA 7001，新的Lubrifiil VA 7090，Lubrifiil VA 7081以及Lubrifiil VA 5001专用于拉拔高碳钢、不锈钢线材以及焊接线材。

在预拉拔处理中作为硼砂的替代使用品（硼砂涂层），Lubrimetal已成功试验了两个新的无硼盐载体，叫做Steelfor ITS/21（用于所有碳钢等级）和Steelfor 7030（用于不锈钢）。这些盐料还适合在线批处理。

Lubrimetal还开发了新一代可乳化润滑剂，Lubriol CU 55、CU 550和Lubriol ALM 90，为铝材应用领域提供低粘度高润滑性。

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控制润滑剂粘度来优化线材拉丝

无酸DCCD（干洗、涂层和拉拔）工艺包括润滑剂粘度控制，使质量要求高的线材可以以经济且最快速的方式拉拔出，在从棒材到线材所有直接拉拔应用中取代传统的棒材准备（化学清洗、漂洗、湿式预涂层和干燥），包括0.85 - 0.88%C机械去锈的裸棒，不含预涂层化学品。这样成本较低，并且提高了线材质量和环保效益。润滑剂的关键方面，摩擦磨损、复杂的线材拉拔原理的一部分已经大大简化了和一些，如线材折断、表面损坏和过多产生的金属粉末几乎已经消除了。瞬时棒材干涂层在施

涂时没有速度限制，且为零能耗(通过LVC/PDH装置自动完成)，这样可以自动控制关键变量，包括液化润滑剂的热稳定性，这是一个防止在线材模具接触面上金属对金属接触的重要参数。这使得拉拔速度高且磨损性能能达到0.1-0.3微米每吨线材拉拔。涂膜可以达到均匀完整，从附着力强的硬多涂膜，用于高强度弹簧钢丝或预应力钢绞线，到超薄的纳米水溶性涂膜，用于电镀线材。近来在棒材干燥准备以及线材润滑模式的发展中得到的好处，使DCCD工艺为线材生产提供可靠性和潜力。



○ 使用DCCD工艺进行棒材清洗和线材拉拔

Decalub – 法国

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将硼砂放在REACH法规之外

Condat公司已开发新的用于高科技和环保润滑剂的解决方案。

新的Vicafil和Steelskin产品不断得到检查和重新修订以确保符合化学品最新的健康和安条例（如REACH指令或杀菌剂条例），尤其当这些条例发生改变时。

至于REACH法规，Condat有一个专门的产品管理事务部门参与了几个欧洲联盟，使得Condat可以提前使用到最新的研发发展。

Condat总是为具有潜在危险的原料寻找安全的替代品。于是，Vicafil SUMAC 3 是新一代的钠皂，它是从技术、环境和经济的角度进行开发和优化的。

为了跟上新法规对硼砂的规定，Condat已经重新设计其最著名的润滑剂，提供了一种新的更大选择范围的产品直接替代者：低（VicafilITS7853）或零（VicafilITS7101）硼砂表面涂层和拉丝粉。

一个油基润滑剂系列现在提供蔬菜油基替代品，同时，可溶性润滑剂系列目前采用可再生原材料。

将操作者暴露在皂尘中是Condat真正关心的问题。公司已开发了一种粒料技术，一个特殊的生产工艺，可以提供来自昂贵的钙或钠基肥皂配方的无尘拉丝粉。

Condat – 法国

传真: +33 478 07 3539

网址: www.condat-lubricants.com



○ Condat 的 Vicafil TF498



○ 粒料技术降低工作场所灰尘

Braiding, knitting and ***weaving machinery*** & equipment

Drawing on textile, nautical, and fibre techniques, these procedures have a dual background that may be unique in the wire and cable industry. More than other methods of turning wire to sophisticated purposes, they require an artisan's feel for the possibilities of materials together with an engineer's grasp of their limitations.

And they recall attention to such basics as wire gauge: too thick and it is difficult to manipulate; too thin, it will be prone to breakage. Elementary, yes, but in a braided flexible connector with a 15-inch² cross-section, a minute error in either direction could mean a breakdown in a huge power or distribution transformer.

An Internet site for jewellery designers describes knitting with wire as "the ultimate in unusual, versatile crafting." The professionals whose products and services are reviewed here would very likely agree.

RFID-assisted braiding

Niehoff's BMV series (12, 16 and 24-carrier) lever arm rotary braiding machines are designed to process bare or coated copper wire, aluminium wire and stainless steel wire with a single-wire diameter ranging from 0.05mm to 0.3mm (44–28 AWG) as well as artificial yarn and fibres. These braiders are used for a multitude of different applications including the manufacture of data, control and coaxial cables, hollow braids for battery cables, stranded braids, and mechanical reinforcements for pressure hoses and medical catheters.

The BMV braiders feature a functionally optimised design, equipped with energy saving drives, energy-optimised components and new spool carriers made of precision-machined high-grade aluminium. The machines meet the current safety regulations of the machinery directive RL2006/42/EG and feature an infinitely variable electronic control of line speed and braiding pitch as well as an automatic central lubrication system.

Optionally, an automatic empty bobbin detection system can be integrated in the machine. This accurate detection system stops the machine before a braiding bobbin is completely empty, while minimising the residual wire on the braiding bobbin.

The BMV machines can be combined with either longitudinal or central taping devices for tape application to the braided cable.



○ BMV type braiding machine

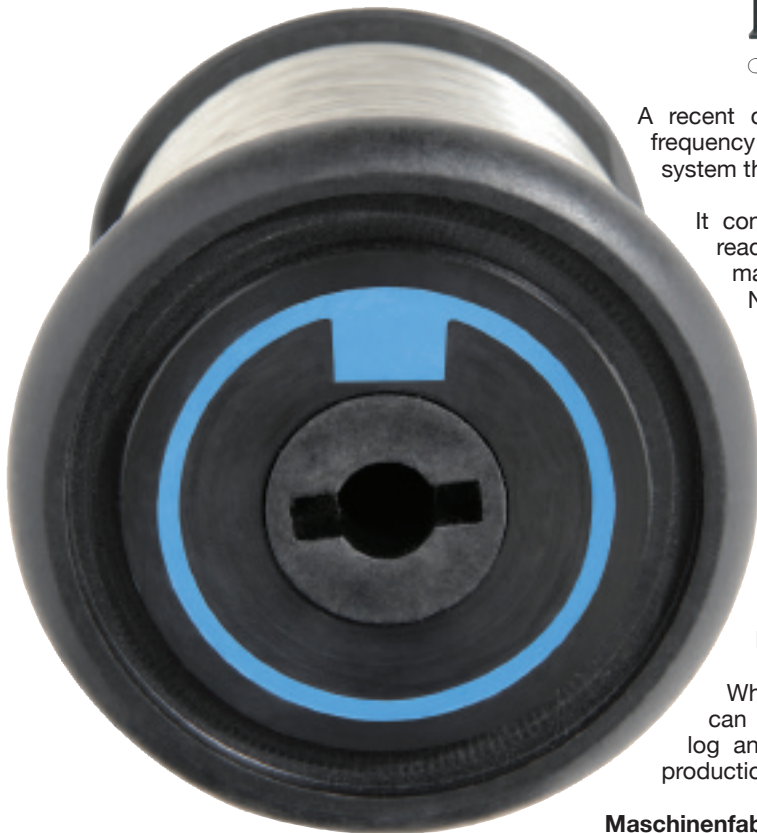
A recent development from Niehoff and its partners is a radio frequency identification (RFID) based braiding bobbin management system that simplifies bobbin tracking logistics.

It consists of bobbins marked with an RFID transponder, a read/write system integrated into the automatic wire winding machine (for example, the automatic winding machine of Niehoff's DSA series) and a mobile reading device, and can be connected to a production data acquisition (PDA) system with a manufacturing execution system (MES).

The RFID transponders carry production data. They have a higher data storage capacity, thus more information, than traditional barcode systems and cannot be erased or rendered illegible. The stored data is secure as the RFID transponder is insensitive to conventional pollutants.

The new RFID system enables decentralised data storage beyond factory boundaries, tracking of individual bobbins and data documentation.

When further processing the bobbins, a machine operator can compare the bobbin data with the production order log and identify whether or not a bobbin is suitable for the production process.

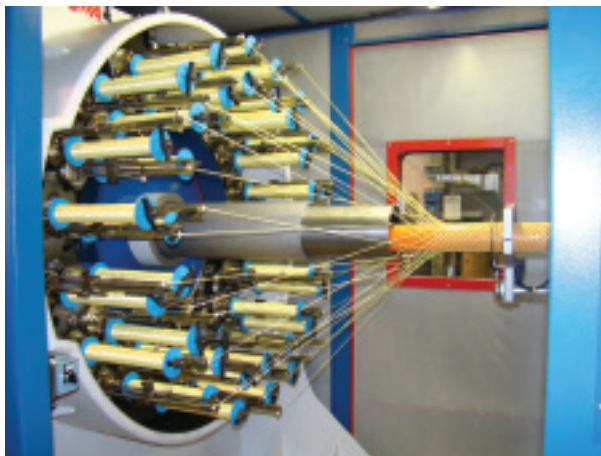


○ Braiding spool with RFID transponder

Maschinenfabrik Niehoff GmbH & Co KG – Germany
Fax: +49 9122 977 155 **Email:** info@niehoff.de
Website: www.niehoff.de

Braiding

OMA Srl offers a wide range of braiding machines suitable for armouring or reinforcing cables, cable bundles and conduits.



○ OMA 36/1-190 horizontal braider braiding umbilical cables with aramid fibres

The materials typically braided include galvanised, brass coated and stainless steel wires, bronze and copper wires.

The outer sheave of braided wires gives the product abrasion resistance and mechanical protection but with good flexibility.

Textile yarns, such as high strength aramids, are often used for reinforcement, particularly of undersea umbilicals.

They are valuable where cables or bundles are subject to high pulling forces but need a high degree of flexing. Braiding machines can be supplied in many different sizes, with either vertical or horizontal axis, depending on the coverage and flexibility of the cables to be produced.

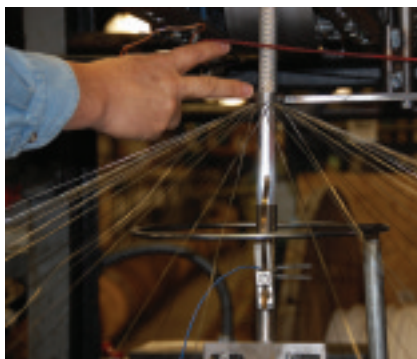
OMA also supplies the ancillary equipment required for braiding, such as bobbin winders, taping heads, payoff and take-ups.

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Cable braiding

Gladding Braided Products' harness braiding system provides a protective casing over a core set of wires. The core (hose, ground wire, fuel line, or electrical harness for example) is covered with a braided protective material.



○ Gladding's braiding equipment for cable

Gladding can supply the finished harness, the raw materials (textile coverings such as nylon, polyester, Nomex, Kevlar, fibreglass, PTFE, VN-4000S) and wire materials such as stainless steel, copper, bronze and aluminium, as well as the braiding machinery to apply the shield.

The diameter of the core wires or harness will determine the size of the braiding machine needed: a ¼" harness may use a 16 carrier machine, while a 1" diameter harness might require a 32 carrier machine.

Gladding supplies machines for all sizes. With a machine purchase, Gladding provides training at its factory. "The skill of the operator is of utmost importance," explained Sparky Christakos, Gladding president.

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Braiders and winders

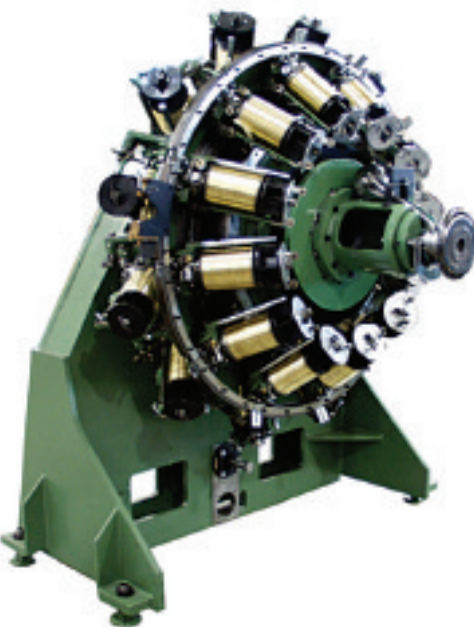
Magnatech International Inc designs and manufactures braiding, wire spiral, bobbin winding, rubber and nylon wrapping machines used in the manufacture of industrial and hydraulic hose.

The RB-2 rotary braider is described as an efficient and productive machine for braiding textiles and high tensile steel wire.

The RB-2's productivity is said to reduce manufacturing cost to less than half that of a maypole system.

The WSW-IV wire spiral winder combines high speed with the latest in computer control.

The WSW-IV's wire performing system utilises a rolling technique that allows quick re-decking and makes flexible mandrel production viable.

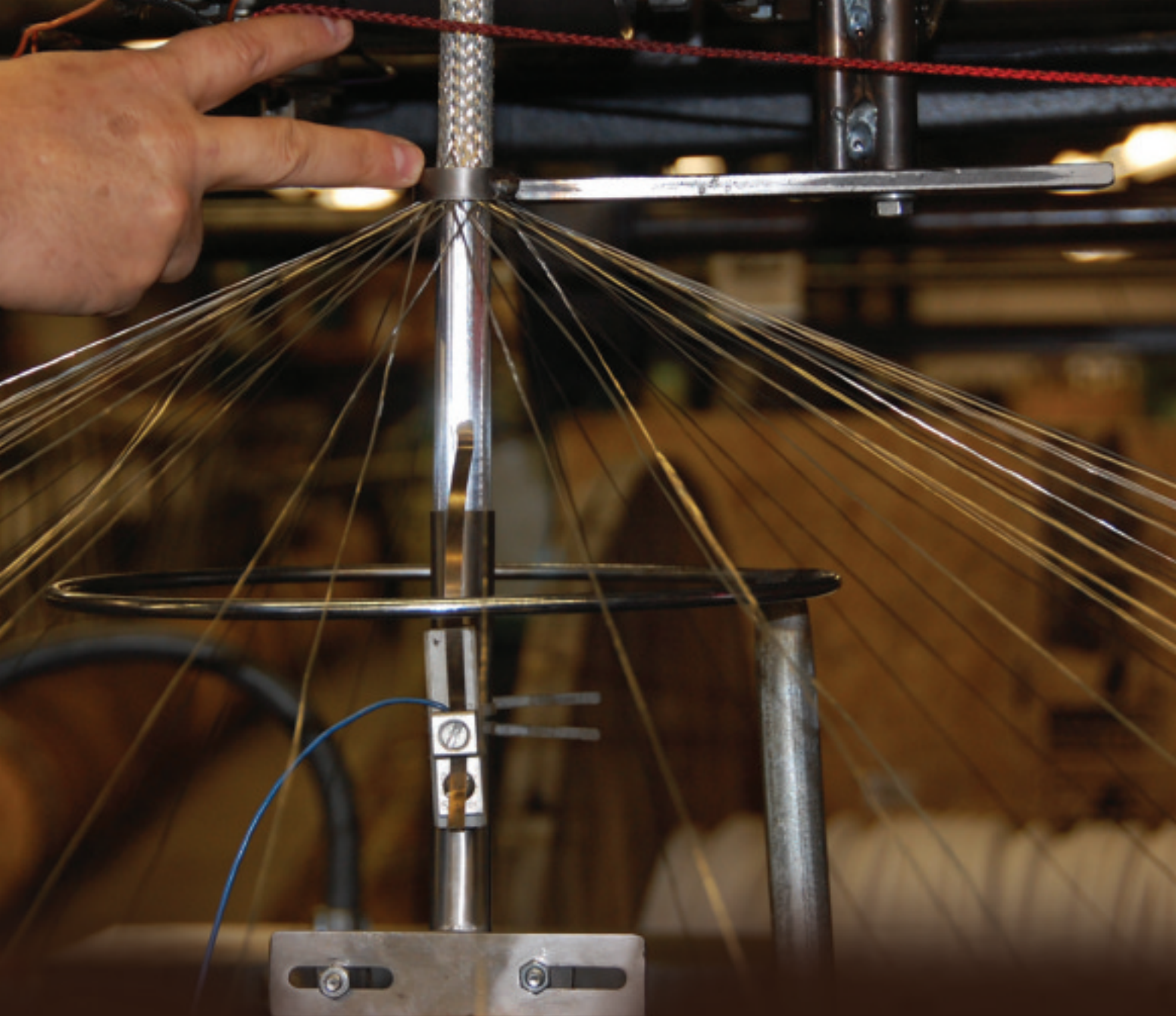


○ Braiding and winding equipment from Magnatech

In addition to the traditional stand-alone machines, Magnatech International also provides in-line manufacturing solutions for rigid and flexible mandrel-built hose.

Magnatech International Inc – USA

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编织、织网和机织

建立在纺织品、航海以及纤维技术上的拉拔，这些程序有一个双重背景，这可能在电线电缆业是独一无二的。比起其它方法，将线材转换为复杂的使用目的，这需要一个工匠对材料潜能的感觉结合一个工程师对他们的局限性的把握来实现。并且他们开始注意到线规这些基础：太粗的话很难操作；太细又很容易断裂。基本的，最好，但是在一个横截面为15平方英寸的编织的软接头里，在两个方向上的任意一点小错误可能意味着一个大功率电源或配电变压器产生故障。

一个珠宝设计师网站描述线材编织为“在各种工艺里，最不寻常的。”在这里介绍的专业公司的产品和服务的评价是得到肯定的。

RFID辅助式编织

Niehoff公司的BMV系列(12, 16 和 24个锭子) 杠杆臂旋转编织机用于处理裸线或镀铜线以及不锈钢丝, 单股直径达到0.05毫米到0.3毫米(44-28 AWG)以及人工纱线和纤维。这些编织机用于多种不同的应用, 包括生产数据电缆、控制电缆和同轴电缆; 空心编织电池线、绞合织带以及机械加固耐压软管和医用导管。

BMV 编织机特点包括一个功能优化设计, 配备节能驱动器, 能源优化的零部件以及精加工的高等级铝制成的新的绕线轴托架。该机器满足现有的机械安全法规RL2006/42/EG并拥有一个对线速度进行无限变量的电子控制系统和编结节距以及一个自动中央润滑系统。作为选择, 一个自动空线筒检测系统也可并入这台机器中。这个精确的检测系统在编织线筒完全空了的时候可以停止机器运转, 同时使编织线筒上余下的线材最

少化。BMV机器可以与纵向或中间绕包装置结合用于绕包应用到编织电缆。

Niehoff及其合作伙伴最近开发的产品是一个无线射频识别技术(RFID)为基础的编织线筒控制系统, 该系统简化了线筒跟踪物流。它的组成包括标志着RFID转发器的线筒、一个并入自动线材缠绕机(如, Niehoff的DSA系列自动缠绕机)的读/写操作系统以及一个移动阅读装置, 并能够与一个带制造执行系统(MES)的生产数据采集(PDA)系统连接。该RFID转发器带有生产数据。他们有一个高数据储存能力, 这样比传统的条码系统能储存更多的信息, 并且不能被删除或难以辨认。储存的数据是安全的, 因为RFID转发器对常见的污染物不敏感。

新的RFID系统使分散的数据储存超出工厂边界, 跟踪单个线盘和数据文件。当进一步处理线盘时, 机器操作者可以将



○ BMV 式编织机

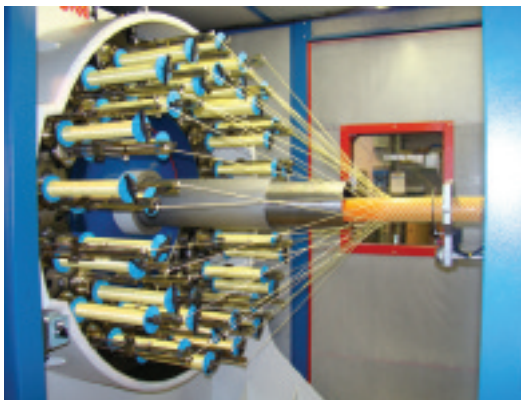
线盘数据与生产订单日志进行比较并确定线盘是否适合产生过程。

Maschinenfabrik Niehoff GmbH & Co KG - 德国

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网址: www.niehoff.de

编织

OMA Srl公司提供一系列编织机, 适合铠装电缆或加固电缆、电缆束和导管。通常的编织材料包括镀锌、镀铜和不锈钢线、青铜和铜线。编织线材的外护套给产品带来了耐磨性和机械保护, 而且具有良好的柔韧性。纺织纱线, 比如高强度芳纶, 通常用于专门加固海底连接电缆。



○ OMA 36/1-190水平编织机编织连接电缆和芳族聚酰胺纤维

当电缆或线束属于高拉力但需要高挠性时, 它们是非常重要的。编织机可提供许多不同的尺寸, 并带垂直或水平轴, 这根据生产电缆的覆盖范围和挠性决定。OMA还供应编织所需的配套设备, 如绕线器、包带头以及放线和收线装置。

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网址: www.omabraid.com

编织机和卷绕机

Magnatech International Inc公司设计和制造编织机、金属螺旋线、线盘卷绕机、橡胶和尼龙包装机用于制造工业及液压软管。



○ 来自Magnatech的编织和卷绕设备

这个RB-2旋转编织机被描述成一台高效高生产率的机器, 用于编织纺织品和高强度钢线。这个RB-2的生产率据说可以使制造成本只有不到花柱系统的一半。

WSW-IV金属螺旋线编织机包含最新的高速计算机控制系统。这个WSW-IV金属丝系统利用了旋转技术, 可以快速重新加载和使芯棒生产变灵活。

除了传统的独立的机器, Magnatech International公司还提供在线制造解决方案以及刚性和挠性芯棒法制成的软管。

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电缆编织

Gladding Braided Product公司的编织系统提供了用于一系列核心线材的保护层。这些核心线材(如软管、接地线、燃料管线或电气线束)由编织的保护材料做护套。Gladding可提供成品线束、原材料(纺织品护套如尼龙、聚酯纤维、诺梅克斯、凯芙拉、玻璃纤维、聚四氟乙烯以及VN-4000S)和线材如不锈钢、铜、青铜和铝, 以及编织机器用于提供护套。



○ Gladding的电缆编织机

这些核心线材和线束的直径将决定编织机的尺寸, 编织机需要: 1/4"护套可能需要使用 16个锭子机器, 同时直径1"的线束可能需要32个锭子的机器。Gladding提供的机器符合所有尺寸。如果购买Gladding的一台机器, Gladding会在其工厂里提供培训。“操作者的技能是最重要的” Gladding总裁Sparky Christakos解释道。

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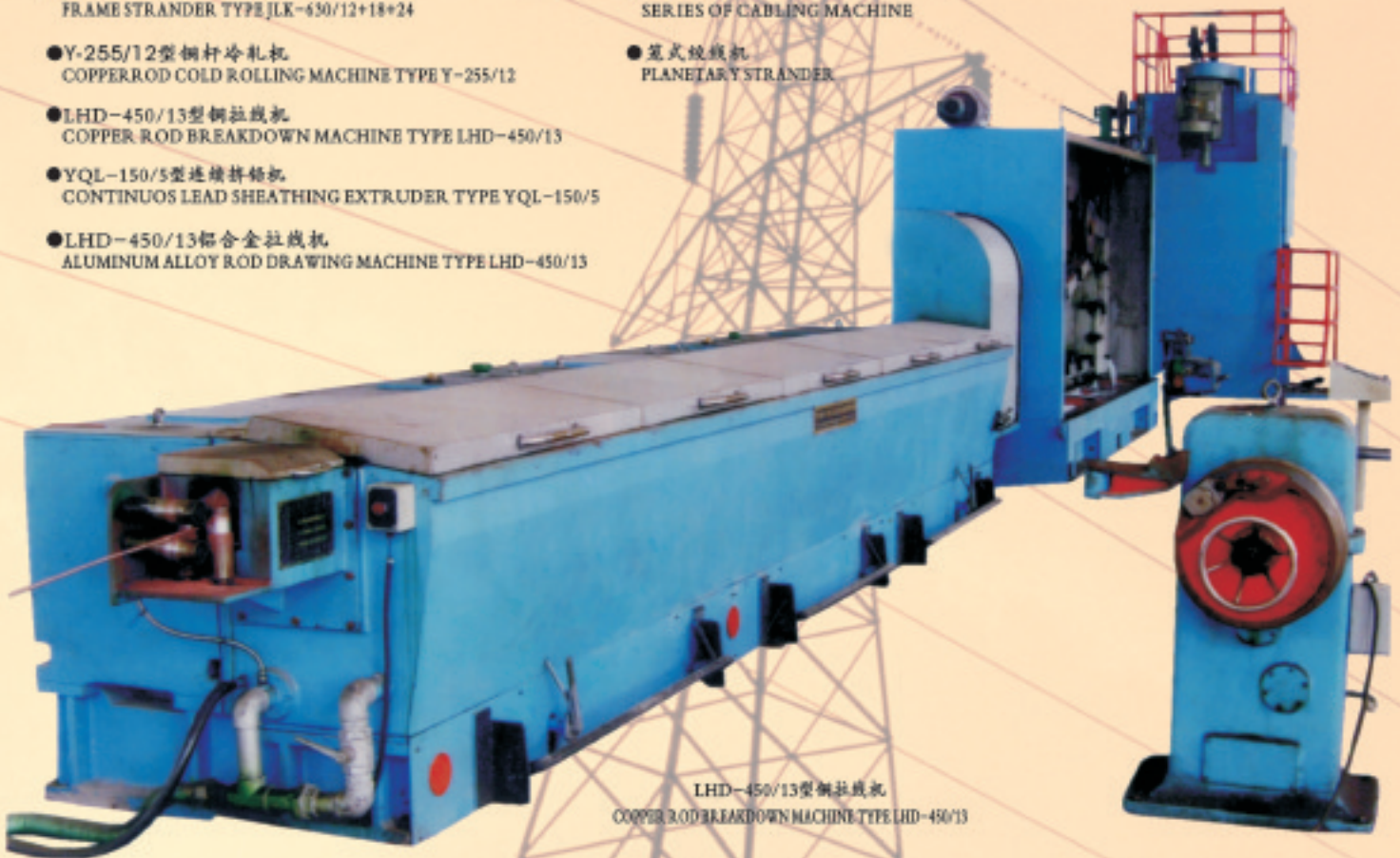
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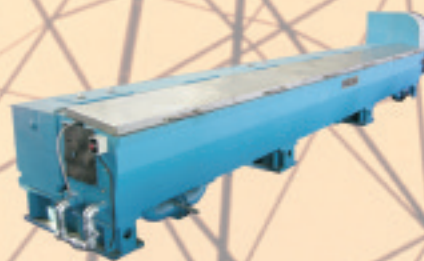
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- 上引法无氧铜杆连续铸造生产线
COPPER ROD UPWARD CONTINUOUS CASTING LINE
- 成缆机系列
SERIES OF CABLING MACHINE
- 行星式绞线机
PLANETARY STRANDER



LHD-450/13型铜杆拉线机
COPPER ROD BREAKDOWN MACHINE TYPE LHD-450/13



成缆机系列
SERIES OF CABLING MACHINE



LHD-450/13型铝合金拉线机
ALUMINUM ALLOY ROD DRAWING MACHINE TYPE LHD-450/13



YQL-150/5型连续挤铅机
CONTINUOUS LEAD SHEATHING EXTRUDER TYPE YQL-150/5



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銅、鐵、鋁、不鏽鋼棒生產設備

Brass, Iron, Aluminum, And Stainless Steel Bar Production Equipment

熔鑄設備：

上引式連續鑄機、鋁桿連續鑄機、銅桿連續鑄機

Melt Casting Equipment:

Up drawing continuous casting machine, Aluminum bar continuous casting machine, and Brass bar continuous casting machine.



↑ 倒角機
Chamfering Machine

擠壓抽伸設備：

複合式伸棒機、自動冷抽拉機、金屬束頭機、電解鍍錫機、修頭機、擠頭機

Extrusion Drawing Equipment:

Multi-type drawing machine, automatic cold drawing machine, metal and tapering machine, and electrolytic tin-plating machine, pointing machine, push pointer



↑ 壓延機
Flat Rolling Mill Machine

加工包裝機械：

連線式倒角機、吊料式倒角機、壓延機、成型機、矯直機、圓棒矯直機、異型棒材矯直機、圓棒削皮機、自動給料機

Processing & Packaging Machine:

In-line chamfering machine, material handing chamfering machine, flat rolling mill machine, shaping machine, straightening machine, round bar straightening machine, irregular bar straightening machine, round bar peeling machine, automatic feeders.



↑ 口付機
Pointing Machine

零件及週邊設備：

夾具、研磨盤環、剪切機、彎曲度檢查、剪斷機

Parts and Peripheral Equipment:

Clamping, grinding plate rings, shears, curve-radius examining machine, and cutting machine.



↑ 聯合拉拔機
Combined Drawing Machine 0, I, II, III, IV



↑ 圓棒削皮機
Round Bar Peeling Machine

省權實業有限公司

SHENG CHYUAN ENTERPRISE CO., LTD.

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