July/August 2005, No. 6

Recycling International

The on-going EU Battery Directive debate

Mobile phones: ringing the changes?

Recycling the Kiwi way

Viewpoint volgt z.s.m.

'Mining' New Zealand's scrap metals 29

By far the largest metals recycler in New Zealand, Sims Pacific Metals operates 10 scrap yards and runs the country's only two shredders. The company is the sole supplier of ferrous scrap to the Pacific Steel mill which lies adjacent to its Auckland shredder operation. Most of the company's scrap is exported to Asia, with China representing the most important overseas market.

Staying Alert in metals recycling 32

Formed 33 years ago, Alert Engineering did not manufacture any machinery or equipment of its own until 1986. However, the company has been making up for lost time ever since and now has a product range that is attracting worldwide interest. Alert is especially proud of its AGP-220 baling press for shearing, pressing and baling aluminium in 8-metre lengths and also light gauge steel. So far, Alert has sold three AGP-220s - two to Australia and one into its domestic market. Recycling International pays a visit to the company's headquarters in Auckland, New Zealand.

The EU Battery Directive: the debate continues 36

The current status of the revision of the EU Battery Directive was a dominant theme at the latest International Congress for Battery Recycling, which was staged at Sitges near Barcelona in Spain. With the second reading by the European Parliament now imminent, battery industry representatives are still concerned that the final piece of legislation may not prove to be workable across the whole of Europe. Recycling International reports on a congress which also heard about recent developments in battery sorting technology.

Mobile phones: ringing the changes? 42

The Basel Convention has established a public/private Mobile Phone Partnership Initiative to identify good management practices and to provide guidance relating to the environmentally sound management of end-of-life mobile phones. And personal computers will soon come under similar scrutiny at Basel Convention level, it was revealed at a BIR workshop entitled 'The recycling of electrical and electronic equipment', which was held during the organisation's most recent convention in Barcelona.

22 Recycling the Kiwi way

Recycling the Kiwi way

New Zealand is about the same size as the UK but has only four million inhabitants, with the result that transportation costs are a major factor for the domestic recycling industry.

The title of the document containing New Zealand's official Waste Strategy is: 'Towards Zero Waste and a Sustainable New Zealand', although 'Zero Waste' is not the government's official policy. Almost 100% of all waste in New Zealand is landfilled. The main reason is cost. Incineration can't compete with landfilling in New Zealand as it is simply too expensive. Meanwhile, recyclers and government officials are eyeing major legislative developments in Europe with considerable interest, especially those relating to end-of life vehicles and electronics.

This summer, Recycling International paid a visit to New Zealand to explore the recycling business 'Down Under'.

In this issue

Recycling International

Events

12-15 September Bilbao (Spain)
4th International Nickel Stainless Special Steel Forum
Metal Bulletin Events
Phone: +44 20 7827 9977
Fax: +44 20 7827 5292
E-mail:
enquiries@metalbulletin.com
www.metalbulletin.com

13-15 September Birmingham (U.K.)
RWM 2005
Recycling and Waste Management Exhibition
EMAP
Phone: +44 20 8277 5540
www.rwmexhibition.com

15-17 September Brescia (Italy)
Made in Steel 2005
Steel in conference
Claudio Poma
Phone: +39 030 2548 520
+39 030 2549 833
E-mail:
commerciale@madeinsteel.it
www.madeinsteel.it

21-22 September Brussels (Belgium)
Electrical and Electronic Waste 2005
WEEE 2005
Phone: +44 1892 511 807
Fax: +44 1892 544 895
marketing@agra-net.com
www.agra-net.com

3-5 October Brussels (Belgium)
European Paper Recycling Conference
GIE Media
Phone: +1 216 961 4130
Fax: +1 216 961 0364
E-mail:
mfitzpatrick@giemedia.com
www.recyclingtoday.com

3-7 October S. Margherita di Pula (Italy)
Sardinia 2005
10th International waste management and landfill symposium
EuroWaste
Phone: +39 049 872 6986
Fax: +39 049 872 6987
E-mail:
info@sardiniasymposium.it
www.sardiniasymposium.it

11-14 October Budapest (Hungary)
Ökotech
5th International trade fair for environmental protection and municipal technology
Hungexpo
Phone: + 36 1 263 6443
Fax: + 36 1 263 8086
okotech@hungexpo.hu
www.okotech.hungexpo.hu

20-22 October London (U.K)
Foundry International London 2005 Exhibition
Modern Media Communications
Phone: +44 1273 453 033
Fax: +44 1273 453 085
E-mail: johnclarke@mmcpublications.co.uk

24-25 October Milan (Italy)
BIR Autumn Convention
Bureau of International Recycling
Phone: +32 2 627 5770
Fax: +32 2 627 5773
E-mail: bir@bir.org
www.bir.org

25-26 October Sheffield (U.K.)
LARAC Conference 2005
Emap Conferences
E-mail:
laracconference@emap.com
Phone: +44 845 056 5626
Fax: +44 20 7505 6001

26-29 October Rimini (Italy)
Ecomondo 2005
International trade fair on material & energy recovery and sustainable development
Phone: +39 0541 744 492
Fax: +39 0541 744 475
E-mail: a.astolfi@riminifiera.it
www.ecomondo.com

27-28 October Orlando (U.S.)
E-Scrap 2005, The North American Electronics Recycling Conference
Resource Recycling Magazine
Phone: +1 503 233 1305
E-mail: sarah@resource-recycling.com

13-15 September Birmingham (UK)
RWM 2005 - the Recycling and Waste Management Exhibition

More than 6000 trade buyers are expected to attend this year's Recycling and Waste Management Exhibition (RWM), which will be held in Halls 17 and 18 at the National Exhibition Centre in Birmingham, UK.

The show is likely to attract over 300 exhibitors. According to organisers, these long-established RWM events represent excellent showcases for exhibitors as research conducted at previous shows suggests around 80% of visitors are personally involved in selecting, buying or recommending equipment, machinery and services.

Some companies have already booked space in the popular outdoor exhibition area at the NEC: for example, Wright Engineers will be demonstrating the Pegasus car baler and the Sierra SLK 505 car baler with shearing facility. The organisers of RWM 2005 confirm that 'green' and construction waste demonstrations are also planned.

In addition, RWM 2005 will feature a free seminar programme at which leading experts will discuss hot topics of the moment. Each of the three days of the show will have its own seminar theme: legislation; local authority issues; and health & safety. And for the first time, the RWM show will feature a so-called Legislation Zone - sponsored by the UK government's environment department - where civil servants will be on hand to answer questions about current regulatory issues.

For further information, contact organisers at EMAP via the UK hotline telephone number +44 870 429 4408, Fax: +44 208 277 5128, E-mail: rwm05@emap.com www.rwmexhibition.com

8-11 November Shanghai (China)
World Recycling Shanghai 2005
International conference & exhibition on cars, electronics & battery recycling
ICM
Phone: +41 62 785 1000
Fax: +41 62 785 1005
E-mail: info@icm.ch
www.icm.ch

17-18 November Mexico City (Mexico)
INARE 2005, International Recycling Congress
E-mail: inare@att.net.mx

29 November – 2 December (Paris) France
Pollutec 2005
Reed Exhibitions France
Fax: +44 1 4756 2120
E-mail:
ilse_dapper@reedexpo.fr
www.pollutec.com

7-8 December Bremen (Germany)
Waste to energy
International exhibition & conference for energy from waste and biomass
HVG
Phone: +49 421 35050
Fax: +49 421 3505 340
rohde@messe-bremen.de

2006

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5th International electronics recycling congress
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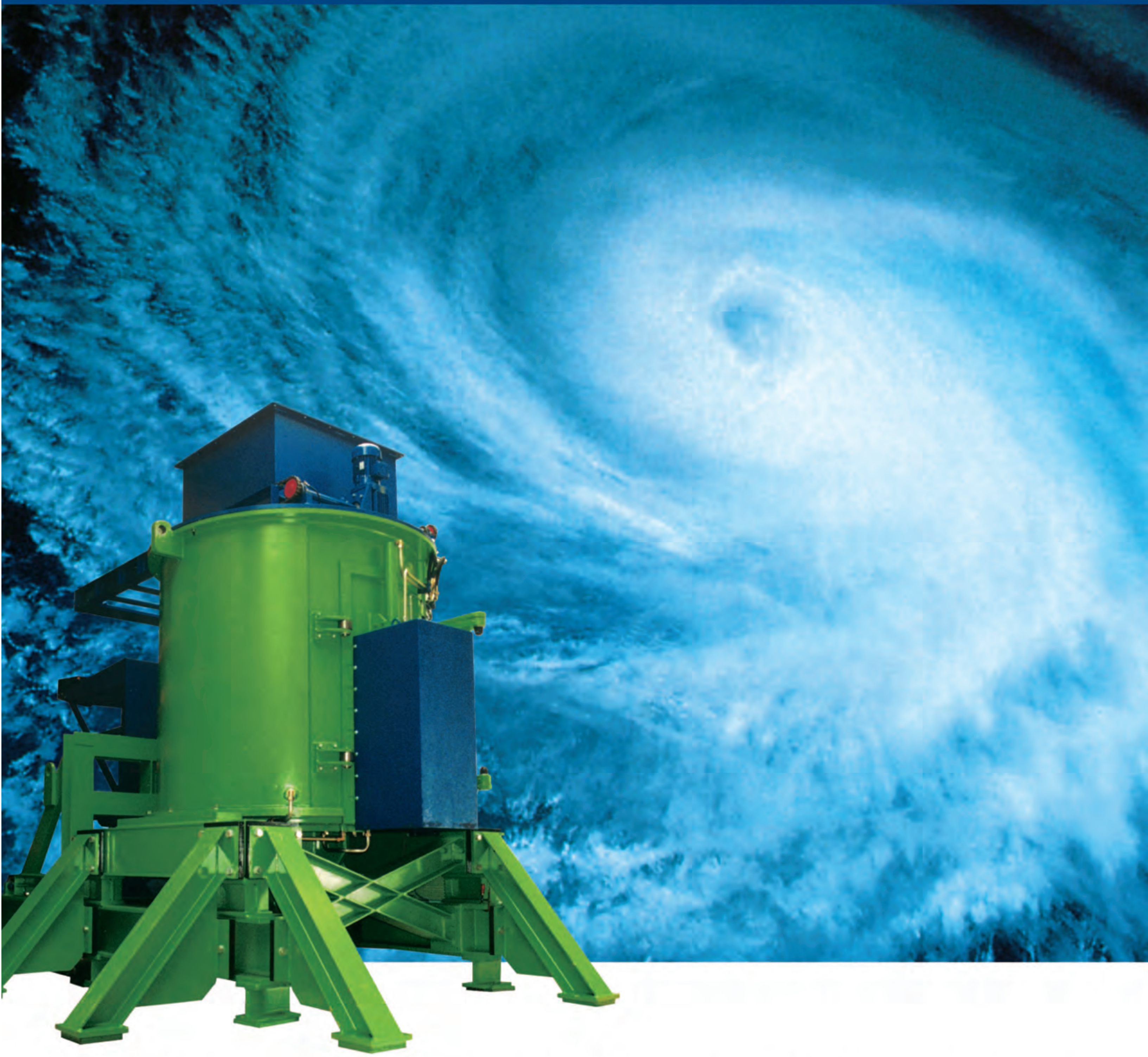
E-mail: info@icm.ch
www.icm.ch

The Hurricane.



Universal-Querstromzerspaner UNI-CUT® QZ - Revolutionary technology from MeWa. The principle: acceleration tools rotate with enormous power, producing a vortex within the machine. Used as an integral part of MeWa's Fridge and WEEE recycling systems. The QZ can be programmed in a number of ways to suit various applications. Heavy-duty construction combined with low operating costs makes MeWa the right choice.

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Sims facility at Redwood City on the west coast of the USA.

Sims Group acquires Hugo Neu Corp.

Australia-based Sims Group - the world's largest metals recycler with companies in Australia, New Zealand, Europe and the USA - has announced an agreement to merge its metal recycling operation with New York City-based Hugo Neu Corporation. The merger, which is expected to be completed by the early autumn, follows the dissolution of a joint venture arrangement between Hugo Neu and Schnitzer Steel.

The combined company will go by the name Sims Newco and, according to Sims, will be the largest metal recycler in the world based on market capitalisation. Under the terms of the merger agreement, existing Sims Group shareholders will receive a 74% interest in the new Sims Group company, while Hugo Neu Corp. will hold a 26% interest and become the largest single shareholder worldwide. The merger values Hugo Neu Corp. at approximately US$ 500/€ 416 million.

The US management team will be headquartered in New York City with key senior management from Sims USA and Hugo Neu. The merger will also create a new division - Hugo Neu Recycling - to handle post-consumer recycling operations, including New York City's landmark metal, glass and plastic recycling programme.

Sims Group's Chief Executive Jeremy Sutcliffe will become Chairman of the US division - Sims Hugo Neu Company LLC - while former Hugo Neu Corp. Chairman John L. Neu will serve as Vice Chairman of the US operations; Mr Neu is also to be Vice Chairman of Sims Group worldwide. President of Hugo Neu Corp. Donald W. Hamaker becomes Chief Executive Officer of the combined US operations while Sims USA's President Rick Jansen becomes President and COO for the combined businesses. Jeffrey P. Neu remains as General Manager of Sims Hugo Neu Company's Los Angeles operation.

Hugo Neu is one of the largest US scrap exporters, handling around 20% of all the ferrous scrap shipped from the nation's deep-water ports. Hugo Neu operates two large deep-water ports - one in the Los Angeles area and the other out of the New York/New Jersey port area. In addition, the company has 15 scrap metal collection and processing facilities. According to a press announcement from Sims Group, privately-owned Hugo Neu had sales of around US$ 1.35 billion last year.

Sims Newco will have more than 120 physical operations around the world handling a combined volume of more than 9 million tonnes of scrap. Earnings by operating region are given as follows: USA and Canada, 60%; Australia and New Zealand, 25%; and the UK and Europe, 15%. It is estimated that export sales account for 65% of the total and domestic sales 35%.

Sims Group's core business is metal recycling, with an emerging business in recycling solutions. Headquartered in Australia, Sims Group currently earns around 60% of its revenue from international operations in the UK, North America, New Zealand and Asia. Sims has over 2400 employees and an annual turnover exceeding A$ 2.5 billion (US$ 1.9/€ 1.6 billion).

International Electronics Recycling Congress: call for papers

The 5th International Electronics Recycling Congress (IERC) will be held in Hamburg, Germany, on January 18-20 next year.

According to the preliminary programme, sessions will feature: reports on international trade in metals and plastics; reports on manufacturers' take-back and recycling activities; major challenges and solutions for the industry; country reports from the US, Asian and European markets; collection programmes relating to electronics waste; and data on waste streams and recycling costs. There will be special presentations covering the 'impact of China on the waste business', legal implications of transboundary movements of waste, and the influence of material prices on recycling markets.

The congress will include a networking dinner, a 'Meet your consumers and clients' night, and a visit to an electronics recycling plant, sorting plant and copper smelter.

ICM, the Swiss organiser of IERC 2006, has launched a call for papers and is inviting interested authors to submit their proposals before the end of August.

For more information contact: International Congress & Marketing (ICM), Jeanette Duttlinger, Birrwil, Switzerland, Phone +41 62 785 10 00, Fax +41 62 785 10 05, E-mail: info@icm.ch, Website: www.icm.ch

Thermo Electron ships its 5000th ARL 3460 spectrometer

Switzerland-based Thermo Electron Corporation has shipped its 5000th ARL 3460 Optical Emission (OE) spectrometer. The landmark order was placed by the Gerdau Group for its Araucária plant in Brazil.

According to Thermo Electron, the ARL 3460 'has become a benchmark for metals analysis with customers regularly purchasing or upgrading to new models, a testament to their trust in the instrument's quality and reliability'. Continued technological innovations and refinements have driven customer demand and the instrument's longevity, it adds.

Launched in 1982, the ARL 3460 OE spectrometer was designed for fast and accurate metals analysis in primary plants, foundries, forges, mini-mills and casting mills. At launch, it revolutionised the way analyses were performed and has since provided customers with expert

design and manufacture. Also, it has been kept abreast of latest technological improvements.

Thermo was recently presented with two Omega NorthFace ScoreBoard awards for excellence in customer service. According to the company, this award-winning customer service coupled with expert technical support has also helped ensure that customers are able to adapt and exploit the ARL 3460's capabilities to their best advantage.

www.thermo.com/elemental

Ben Sacco's Joke of the Month

Nun the wiser

Sitting in the back of a taxi, a nun notices that the cabbie is staring at her. 'I don't want to offend you,' he says, 'but my fantasy is to be kissed by a nun.'

'Well, all right,' says the nun, 'but you have to be Catholic and single.'

The cabbie says he is, so the nun plants a lingering passionate smacker on his lips. The man is momentarily ecstatic, but then starts crying.

'What's the matter?' asks the nun.

'Forgive me, Sister, but I have sinned. I lied to you: I'm married and I'm Jewish.'

The nun says: 'Oh, that's OK. My name's Trevor and I'm off to a fancy dress party.'

EU investigates illegal plastic bag imports

The European Commission has initiated anti-dumping and anti-subsidy investigations into imports of polyethylene plastic bags from China, Malaysia and Thailand.

The move was in response to complaints filed by more than 30 EU producers of polyethylene plastic bags.

The investigations will examine unfair dumping and subsidisation of imported vest carrier, refuse, fruit & vegetable, freezer, retail and other similar polyethylene plastic bags. The complaint alleges that these plastic bags are being dumped in the European Union at margins of over 70% and are being subsidised by a margin exceeding 30%. It is claimed that these trade practices are causing a significant increase in imports from China, Malaysia, and Thailand and are severely damaging EU producers.

As a result of unfairly-priced imports, numerous EU producers have already been forced out of business, according to John Persenda, President of the European Federation of Plastic Films Producers (EuPC). 'Others have abandoned Europe and moved their jobs and facilities to Asia,' he adds. 'We believe in free and fair trade, but we also consider that action is necessary when unfair dumping and subsidisation are destroying our industry. The imposition of duties consistent with EU and global trade rules will provide a critical remedy to address these unfair trade practices and ensure the security of our companies and their workers.'

In July 2004, the USA imposed anti-dumping duties of up to 122% on imports of polyethylene plastic bags from China, Malaysia and Thailand. These duties were imposed following determinations by the US Department of Commerce and the US International Trade Commission that dumped imports were causing material injury to the US industry.

According to EU rules, provisional anti-dumping and anti-subsidy duties may be imposed within the next nine months and final duties may be imposed within 15 months. The final duties would last for a period of five years.

For more information visit:
http://www.eupc.org/release.htm

UN and phone makers work out recycling plan

According to news agency Reuters, the United Nations is working towards a world agreement on the recycling of metal-intensive mobile phones that could also have an effect on the cost of manufacturing the devices.

The United Nations, the recycling industry, mobile phone makers and operators such as Nokia and Vodafone are working together as part of the UN Basel Convention on the control and disposal of waste. The accord could expand agreements already in place in Europe, North America and Japan in the lead-up to a key conference in Africa next year. According to the Bureau of International Recycling (BIR), a comprehensive worldwide framework is needed to collect, process and dispose of such waste. 'In practical terms, we hope that any projects set up become sustainable and that these become established routes for bringing electronic waste back into recycling and recovery,' Reuters was told by BIR's Environment and Technical Director Ross Bartley.

Mobile phones contain valuable metals such as platinum, gold, copper, aluminium and magnesium, as well as plastics. An increased number of discarded home appliances are disguised as ordinary household waste and traded internationally to extract rare metals and expensive components from them, according to industry figures. The remaining parts are often dumped illegally. 'Those (disposal) routes have to be properly established and maintained,' Mr Bartley said. 'Without them, people will keep storing mobile phones at home, feeling that they might be worth something, before belatedly releasing them into the waste stream.'

The EU's WEEE Directive is due to come into effect shortly, while some parts of the USA and Japan have similar legislation.

China set to open e-scrap recycling plant

An electronic waste treatment and recovery centre, the first of its kind in north China, is scheduled to come on stream in the Tianjin Economic Development Area (TEDA) by this autumn. All of north China's electronic waste will be converted into useful materials and recycled at the centre, according to sources at TEDA.

The facility, which is costing around US$ 12/€ 10 million, will treat electronic waste and extract various metals while waste residues will be used for building materials.

China abolishes yuan-dollar peg

In a long-awaited but unexpected move, China announced on July 21 that its currency will no longer be pegged to the US dollar. From now on the exchange rate of China's yuan, orrenminbi, will be made in reference to a basket of currencies, the People's Bank of China (PBOC) said, adding that it marked the introduction of 'a more flexible mechanism for the exchange rate's formation.' However, the PBOC did not specify what currencies would be in the basket.

The central bank strengthened the exchange rate of the renminbi to 8.11 to the dollar, up from 8.28, where it had been fixed for years. The change amounts to a 2% appreciation of the renminbi. The reform is 'in the interests of the country's long-term, fundamental interests', the central bank said in a separate statement.

Pursuing a more flexible, market-based foreign exchange system has been on the agenda for China's economic reform. A more flexible exchange rate system will be important in improving the country's macro-economic adjustment system and in giving the market more influence in allocating resources, the central bank said. In the short term, the move could have some negative effects on economic growth and employment. But the bank believes the overall benefits will outweigh any disadvantages.

The US dollar's exchange rate with the yuan will be allowed to fluctuate by 0.3% in the foreign exchange market. Fluctuation of other foreign currencies' rates towards the yuan will also be limited within certain ranges. The central bank would adjust fluctuating ranges according to the development of the foreign exchange market and the economic and financial situation, it said.

The United States praised China's decision to move to a more flexible currency system.

'I welcome China's announcement today that it is adopting a more flexible exchange rate regime,' Treasury Secretary John Snow said in a statement.

Immediately after the move, Malaysia said it was also unpegging its currency, ringgit, from the US dollar and replacing it with a managed float. But Hong Kong said it would retain its currency peg with the US dollar. 'The government has no intention at all of changing the Linked Exchange Rate system, which has served Hong Kong well for more than 21 years and has been the anchor of our economic stability,' the city' acting financial secretary Stephen Ip said.

European PET bottle recycling record

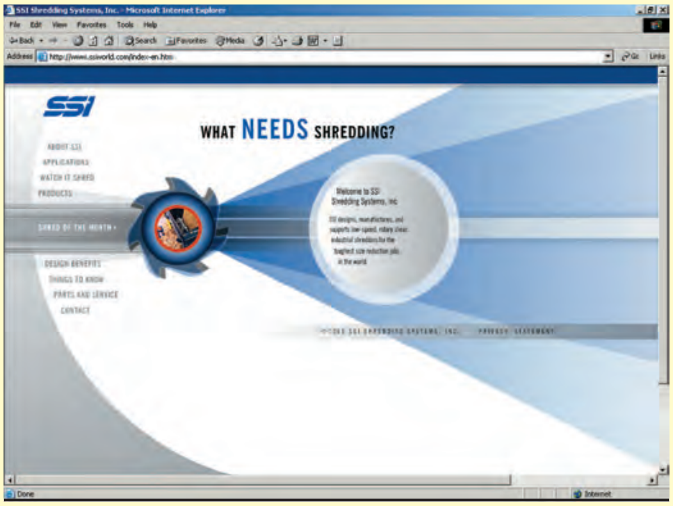
European collections of post-consumer PET plastic bottles reached a record high of 650 000 tonnes in 2004 - an 8.5% increase over the previous year. Germany, France and Italy continued to collect the bulk of PET with a combined share of 60%, according to Brussels-based PET containers recycling Europe (Petcore), a non-profit association fostering the use and development of PET containers and facilitating both PET recycling and the development of recycled end material.

Statistics for last year also reveal significant growth in Ireland, Poland and Spain. Petcore expects that, by 2010, more than 1 million tonnes of Europe's PET will be collected and recycled.

Exports of empty PET bottles to the Far East had increased rapidly to reach 22% in 2003 but this rise was halted last year. In 2004, Europe exported 125 000 tonnes of post-consumer PET to South East Asia, which is equivalent to 18.8% of all collected PET.

European markets for recycled PET are gradually moving towards high-quality applications. More than 90% of polyester strapping is nowadays made of recycled PET, using 11% of the collected bottles. Packaging material such as thermoformed polyester and PET containers accounted for 23.2% of the market compared to 18.6% in 2003.

For more information visit: www.petcore.org/news_press_01.html.



Shredding as entertainment

When you spend your whole life doing one thing, you often forgot how interesting it might be to other people. This is what happened to SSI, a 25-year old industrial shredding company in Wilsonville, Oregon, USA.

Last year, SSI updated its website and, aside from the general re-design, added a new feature - namely movies. Go to the site (www.ssiworld.com) and you can select from scores of short films showing everything from boats to refrigerators being chewed up by shredders the size of an Abrams tank.

In the first few months after the new site came on stream, the attraction worked well. Site visits nearly quadrupled as people began to forward the link to friends and colleagues. This followed the mathematical growth pattern of a typical website and, in effect, the new site was doing its job.

But then something unexpected happened. The shredding movies attracted the attention of bloggers and, through them, a popular cable TV show called *Screensavers*. On March 8, *Screensavers* ran a feature on the SSI site and showed some of the movies of couches, washing machines and computers being chewed up. The show's host pronounced the site to be 'cool' while his female co-host asked: 'What is it with guys and destruction?'

In the few days following the airing of the show, the SSI site got hundreds of thousands of hits: by the end of March, it had logged up to a half a million visits! The trend has continued unabated as more and more bloggers have added the link to their own sites, exponentially increasing its visibility to search engines across the Web.

A cynical salesman might scoff that these half-million people do not qualify as leads. Admittedly, most of them are likely to be teenage boys who merely think it's cool to watch things being destroyed. However, one huge benefit to having a half a million freeloaders drop in for the show is that this level of attention makes your site more interesting to search engines. Before the new site was launched, a Google search for 'industrial shredders' did not bring up SSI before page eight or nine of the search result. Now, the same generic search query flags up SSI first to teenagers and recycling tycoons alike.

If there is a lesson in all this it is that you should never underestimate what can be interesting to so many people. It was certainly not the intention of SSI to increase its market visibility on the back of adolescent males. But in the age of the Internet, it was certainly the firm's intention to share the common shredding demonstrations that SSI conducts on a daily basis. And by sharing this entertaining spectacle with the world, SSI also happened to attract the attention of valid leads.

VW-SiCon shredder residue plant for BST

At its Kallo deep-water port location to the north of Antwerp, Belgian Scrap Terminal (BST) is currently commissioning the first increment of its shredder light fraction recycling operation based on the VW-SiCon process. The plant has a capacity of 8000 tonnes per year and will be successively extended. In a further move, BST will integrate another process step in order to recycle plastics from electrical and electronic scrap.

One of Europe's leading scrap processors and a user of modern, high-capacity machinery, BST processes and markets more than 1 million tonnes of steel scrap at its two locations. A third location near Liège in Belgium is currently under construction.

The new scrap processing plant is based on the pilot facility that has been operated by SiCon at BST in Willebroek for the last six years. Over this period, the process engineering has been thoroughly tested for use on an industrial scale and different recycling channels have been successfully established. Further plants in Europe are currently being engineered and are scheduled for installation during 2006.

SiCon is a technology leader in the field of shredder light fraction recycling. The VW-SiCon process is claimed to be the first industrially-viable mechanical recycling process ensuring treatment of shredder residue to the greatest possible extent.

For more information visit: www.sicontechnology.com

World Recycling: Shanghai 2005

From November 8 to 11 this year, Swiss congress organiser ICM is staging its first international conference and exhibition on car, electronics and battery recycling at the Hotel Shangri-La in Shanghai, China. During the three-day event, leading experts from the recycling chain - including manufacturers, collectors, recyclers, steelmakers, legislators and policy-makers from around the world - will meet to discuss, among other issues:

* car, electronics and battery manufacturers' activities relating to recycling;
* latest developments within the recycling industry;
* best available technologies, plants and processes;
* collection and take-back programmes;
* new laws and regulations.

For further information, contact: ICM AG, International Congress & Marketing, Birrwil, Switzerland, English contact: Jeanette Duttlinger / Chinese contact: Ying Liu, Phone: +41 62 785 10 00, E-mail: info@icm.ch, Website: www.icm.ch

Sold!

* J.McIntyre Machinery

UK-based TARDIS manufacturer J.McIntyre Machinery Ltd is currently putting the final touches to its ninth and tenth machines for Aluminium Bahrain. The two units will bring the total number of TARDIS aluminium dross cooling and pressing systems operating worldwide to 182. Also recently, the Nottingham-based firm has won an order for a second TARDIS for Alcoa Swansea in Wales. Over the past year, J McIntyre has invested heavily in new product development and has also expanded into other areas within the aluminium industry. The company is now able to offer quality casting machines and automatic extrusion shears.

www.jmcintyre.co.uk

* AXO Shredders

AXO Shredders of Wellington, New Zealand, has sold one of its WM408 model Mobile Shredding Trucks to Katana of Geneva, Switzerland. Fitted to a Renault Midlum Cab and Chassis, the WM408-16 can handle one tonne per hour of waste office paper. It boasts an unloading time of less than one minute and a low-weight design which allows greater payloads. Each of the two shafts of the slow-speed, high-torque shredder is independently driven to reduce overloading in a common gearbox. The shafts and cutters are also milled from a single piece of steel, making them very robust, eliminating shaft breakage and improving throughput. To cater for different security levels, AXO offers various cut sizes. Should a greater throughput be required, AXO can also provide the WM608 model which is capable of processing waste office paper at a rate of well over 2 tonnes per hour. Several of these machines are currently on order for the European market.

AXO Shredders claims to be the largest manufacturer of mobile document shredding trucks outside North America and also the largest supplier to the Japanese market. AXO supplies the European market from its office in Bedford, UK.

www.axo.cc

Erratum

In the article 'Scrap and radioactivity - avoiding the road to Whoville' on page 38 of the May issue of Recycling International, it could have been inferred that the photo showed a radioactivity gate detection system from Exploranium. In fact, this was a picture of a vehicle monitoring system from RadComm of Toronto, Canada which Recycling International took in September last year at the scrap yard of AIM in Montreal, Canada.

For more information, visit: www.radcommsystems.com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X-MET3000TXR analyser for RoHS compliance

UK-based Oxford Instruments has launched the new X-MET3000TXR - a lightweight X-ray tube-based analyser for fast, reliable and non-destructive RoHS compliance screening. The hand-held device is designed specifically for measuring heavy metals in plastics, solder materials and printed circuit boards.

The EU Directive on the Restriction of the use of certain Hazardous Substances (RoHS) came into force on July 1 and severely restricts the presence of lead, mercury, cadmium, Cr6+ and Br (PBB & PBDE) in electrical and electronic equipment. In order to ensure product compliance, manufacturers, suppliers and even recyclers must carry out verification testing on all components.

Hand-held XRF is the best measurement technique for screening for RoHS compliance, observes Oxford Instruments. The X-MET3000TXR provides quick quantitative analysis of all elements whose presence is restricted under the directive. Various different materials can be measured with one instrument including cable, PCBs, components, plastic housings, solder material and fasteners. X-MET can also be used as a quick on-site quality control tool to analyse various other elements such as silver, copper and bismuth in solder and also chlorine, titanium, calcium and zinc in plastics.

RoHS screening using the X-MET yields immediate results and avoids delays generally associated with laboratory analyses. Fast results allow a large number of samples to be tested. Measurement data are easily transferred to a PC via wireless connection for further inspection and report generation if needed.

Oxford Instruments Analytical, High Wycombe, UK, Phone: +44 1494 479371 (Lynn Sheperd), E-mail: info@oxinst.fi, www.oxford-instruments.com

Bollegraaf single-stream sorting system for Welsh capital

Netherlands-based Bollegraaf Recycling Machinery has signed an agreement with Cardiff for the delivery of a single-stream sorting system worth € 3 million, thereby assuring Wales' capital city of one of the most advanced recycling installations in the world.

Bollegraaf Recycling Machinery is currently busy building the large single-stream system and also a baler. On 1 December this year, the work is scheduled to shift to Cardiff itself, beginning with the installation of the sorting system; this automatically separates paper, cardboard, plastics, iron and aluminium at an average processing capacity of 15 tonnes per hour. If all goes according to plan, the sorting system in Cardiff will be operational on March 1 next year.

At the heart of the Bollegraaf sorting systems are Star Screens from Bollegraaf Holding subsidiary Lubo Screening & Recycling Systems. These not only separate cardboard from recovered paper but also rounded materials (plastics, glass bottles and cans) and flat material (newspapers and magazines).

According to Bollegraaf's General Managing Director Heiman Bollegraaf, the sorting system bought by Cardiff County Council 'signifies once again a big step forward in the area of recycling because now recyclable waste can be processed directly'. He adds: 'This seems to bring to an end the era in which households had to collect recyclable waste separately and we needed a different truck for each type of waste. With the new system, we need to use only one truck which transports the different types of waste. This has three big advantages: it is cheaper, it is more efficient, and it is much better for the environment.'

Bollegraaf Recycling Machinery, Appingedam, The Netherlands, Phone: +031 596 654333, E-mail: m.kremer@bollegraaf.com, www@bollegraaf.com

Weima's quick-change screen for four-shaft shredders

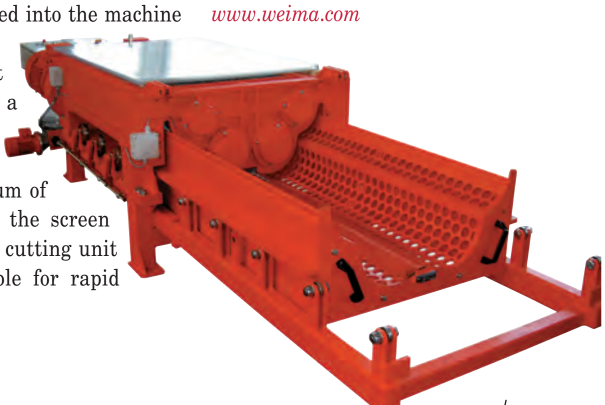
The new Series ZMK-X four-shaft shredders manufactured by WEIMA Maschinenbau of Ilsfeld in Germany feature a special screen changeover device for lowering the screen and pulling it out sideways.

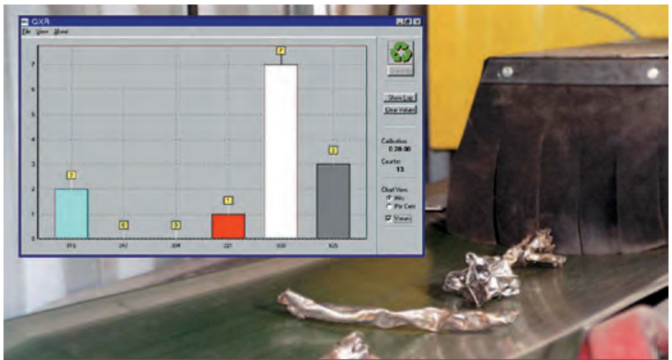
This facilitates rapid, easy cleaning of the whole cutting unit/screen after shredding contaminated or aggressive materials such as hospital waste, plastic packaging with residual contents, and saline substances. Furthermore, a variety of screen configurations can be adopted to suit the specific task.

Compact in design, the Series ZMK-X four-shaft shredders are suitable for general size reduction of hollow bodies, car bumpers, etc. The screen is located below the cutting unit and is held against the machine housing from below by means of a toggle interlock, eliminating the need for screws. As a result, it can be released by one person onto a frame integrated into the machine housing, and then pulled out on rollers onto a lateral retention device with a minimum of effort, leaving the screen and the entire cutting unit easily accessible for rapid cleaning. The four-shaft shredder is deactivated by a safety limit switch once the screen is lowered. It is consequently possible to handle the screen - which weighs approximately 100 kg - even when the four-shaft shredder is mounted above conveyors.

The screen perforations measure between 15 and 80 mm in diameter, although customised screens can also be supplied. The cutting unit is available with two electric motor drives with ratings of between 18.5 kW and 30 kW. The speed of the shafts is around 23-25 RPM. The rotor shafts rest on bearings that are stepped from the machine housing; as a result, the bearings cannot be damaged by material ingress.

WEIMA Maschinenbau GmbH, Ilsfeld, Germany, Phone: +49 7062 95 700, Fax: +49 7062 9570 92, E-mail: info@weima.com, www.weima.com





System sorts metals automatically

Austin AI has introduced the QXR-M, a fully automated metal separation and sorting system designed to ensure maximum recovery and highest re-sale value of scrap materials.

The QXR-M rapidly and accurately sorts and separates metals from non-metallic materials while simultaneously sorting and separating alloys according to general classification. The unit uses a specialised camera that first detects the position of metals moving on a conveyor belt and then initiates analysis. After the type of metal is determined, the results are processed by the system's electronics and computer. The next step is to send the data to a programmable logic controller or linear product separation mechanism to segregate the products into respective collection bins.

The QXR-M's continuous on-line system is based on proven non-destructive, energy-dispersive X-ray fluorescence technology that brings speed, accuracy, reliability and safety to the process. The QXR-M can process more than 6 tons an hour, sort up to 15 different metals by grade, recover the maximum amount of scrap, improve quality, reduce labour costs, and make a return on investment in six months. All QXR-M systems are customised, with the option to integrate radiation detection equipment to detect and isolate hazardous scrap material.

Austin AI, Austin, Texas, USA, Phone: +1 512 837 9400, Fax: +1 512 837 9434, E-mail: info@austinai.com
www.austinai.com

Thermo Electron improves elemental analysis of steel

With the ARL 4460 high-performance optical emission spectrometer from Thermo Electron Corporation, steel producers can now achieve improved analysis of carbon, nitrogen, oxygen, phosphorus and sulphur at very low levels. The increased sensitivity of this metal analyser permits the cost-effective manufacture of cleaner steels, it is claimed

The ARL 4460 can rapidly detect extremely low levels of gaseous elements in steel, with results available typically within 55 seconds after just two runs. Such performance allows manufacturers to reduce production and operating costs significantly. Detection limits obtained - 0.4 ppm for carbon, 1.5 ppm for nitrogen, 8 ppm for oxygen, 0.3 ppm for phosphorus and 0.7 ppm for sulphur - represent a considerable improvement in quantitative analysis, according to Thermo.

Higher levels of accuracy, stability and precision are also achieved with the new spectrometer, it is contended. For example, precision is 0.4 ppm at 10 ppm C and 0.8 ppm at 20 ppm N. These analytical results are all the more significant, says the company, given the pressures on the steel industry to improve quality control systems and processes.

Thermo's metal analysers have already been deployed in hundreds of plants around the world and routinely measure important trace elements. They are constantly being upgraded to offer better levels of detection.

Thermo Electron Corporation, Boston, Massachussetts, USA, Phone: +1 561 688-8700, E-mail: analyze@thermo.com
For Europe, Thermo Electron Corp., UK, Phone: +44 1606 548-100, E-mail: jenny.rowland@thermo.com
www.thermo.com/elemental

Lead paint analyser

NITON's new XLp 300 Series lead analyzer represents the first all-new breakthroughs in lead analysis in more than 10 years, the company says.

Billerica, MA –NITON LLC, internationally recognized as the worldwide leader in portable Xray Fluorescence (XRF) technology, is pleased to announce the introduction of an all-new generation portable lead analyzer; the XLp 300 Series Lead Analyzer. Building on the success of the company's award winning XL-300 Series analyzer: the XLp 300 charts new territory in speed, accuracy, precision, ergonomics and ease of use. These revolutionary analyzers provide fast, accurate lead analysis for inspections, risk assessment and screening with unmatched portability, ease of use and advanced reporting and data integration tools. The new XLp 300 dramatically enhances inspector productivity - providing dependable results in seconds – even at or near action levels.

The XLp 300 features an integrated touch-screen display and advanced, intuitive user interface along with a built-in barcode scanner, virtual keypad and optional BlueTooth TM wireless PC communication. These are only a few of the features that make the NITON XLp 300 Series analyzer the only choice for lead inspection.

NITON revolutionized the lead paint remediation industry in 1992 with the introduction of the first ever, one piece portable XRF analyzer, the XL-309, which has been the mainstay of the lead remediation industry for more than 10 years. NITON is also a two-time winner of the prestigious R&D 100 Award for technical innovation for introduction of products considered as being among "the 100 Most Technologically Significant New Products of the Year" in both 1995 and 2003.

Like its predecessor, the award winning XL-309, the all new NITON XLp 300 Series analyzer provides fast, dependable on-site analysis for the following lead applications:

- Lead Paint- HUD-compliant testing (New PCS available)
- Dust Wipes- Complies with OSHA OSS 1 and proven proficient in EPA ETV and ELPAT testing
- Airborne lead-Complies with NIOSH Method 7702 and OSHA OSA 1
- Soil Testing- Fast, in-situ or ex-situ results for soil testing and remediation

NITON LLC, Billerica, Massachusetts, USA, Phone: 1 978-670-7460, E-mail: sales@niton.com.
www.niton.com

Magazine Round Up

A magazine for the recycling industry is published in many countries. Although these publications mainly cover news of the domestic markets, many of them also signal international trends. Recycling International rounds-up items from these magazines which are of interest to the international recycling industry.

The magazines we co-operate with in publishing extracts from their editorial pages are:

- Scrap (USA)
- Recycling Today (USA)
- Recycling magazin (Germany)
- Magazine Recycling Benelux (The Netherlands/Belgium)

www.recyclingtoday.com

China considers steel investment barriers

Critics of China's approach to free markets may have new ammunition made of steel. According to a report on the *China News Daily* website, the world's leading steel-producing nation will soon 'forbid foreign steel producers from taking controlling stakes (51%) in existing domestic steel companies'. The policy was reportedly announced by Qi Xiangdong, Deputy Secretary General of the China Iron and Steel Association.

Additional restrictions being put in place by the Beijing government will require foreign steel producers to 'have independent intellectual property in steelmaking technologies and have an annual output of 10 million tonnes', Mr Qi is quoted as telling the website.

Chinese leaders are reportedly reacting to multi-national steel companies such as Mittal Steel and Arcelor speeding up their merger and acquisition activity in China. Analyst Tian Shuhua from China Galaxy Securities Co. Ltd was quoted by *China News Daily* as providing the following bluntly nationalistic appraisal of the situation: 'The steel sector is one of backbones of China's steadily-growing economy. Therefore, it should not be controlled by foreigners.' The move would probably help the government manage its reported plans to exercise central control over the merger of many of the fragmented sector's 850-plus steel producers.

Statistics for the first half of 2005 would seem to indicate that there is room in the Chinese market for competition. According to an Agence France-Presse report, China's steel output rose 32% to 165 million tonnes in January-June 2005, putting the country on track to produce more than 320 million tonnes of steel this year - an increase of more than 30% over the record-breaking 2004 figure.

Battery recycling success story

Chicago-based Battery Council International (BCI) in the USA has released a report claiming that more than 99% of used lead-acid batteries were recycled between 1999 and 2003. 'This high recycling rate for battery lead is the result of a successful collaboration among members of the battery industry, retailers and consumers,' says BCI President Randy Hart. 'It proves that a workable infrastructure helps boost consumers' participation in recycling.'

He adds: 'The lead-acid battery recycling structure has been proven to be efficient and highly successful, and no other battery chemistry comes near the recycling rate of lead-acid batteries.' The recycling rate of battery lead has also consistently ranked higher than that for other recyclable commodities, he adds.

The BCI 1999-2003 National Recycling Rate Study and historical lead recycling data can be viewed at: www.batterycouncil.org

www.recyclingmagazin.de

China's steel strategy

The Chinese national development and reform commission has disclosed that the number of steel producers in the country will drop considerably over the years to 2010. In five years from now, China's ten largest steel mills are expected to be responsible for more than 50% of the country's steel output.

The reason behind the consolidation process is that, over recent years, a large number of smaller steel mills have been producing low-grade steel. As a result, the number of high-quality steel producers in China has been falling at a time of considerable demand for high-grade steel from car and electronics producers. As a first step in its latest steel strategy, the Chinese government has put a halt to subsidies and to the financing of small enterprises operating outdated technology.

Rise in Russian aluminium production

Russian aluminium giant Rusal, one of the world's top three primary aluminium producers, raised its production to 1.35 million tonnes in January-June 2005 - an increase of 1% compared to the same period of 2004. This growth was the result of modernisation of a number of foundries and of long-term contracts that Rusal has clinched with customers in Germany, Italy, Turkey and Japan.

Rusal is responsible for 75% of Russia's primary aluminium production and for 10% of world output. In the first half of this year, Rusal's turnover totalled US$ 3 billion - an increase of 14% over that for the same period of last year.

The SUAL group, Rusal's parent company, comprises 19 companies with a combined annual production of 4.4 million tonnes of bauxite, more than 2 million tonnes of aluminium oxide, 890 000 tonnes of aluminium and 50 000 tonnes of silicon.

www.mrb-uitgevers.nl

Dutch lead the appliance recycling race

The Netherlands is leading the way in Europe when it comes to recycling electrical appliances. Last year, the Dutch collected and recycled 4.7 million appliances through shops and municipal recycling centres - equivalent to 4.3 kg per capita. By comparison, collection of appliances in 1992 amounted to 2.2 kg per capita.

The Netherlands' NVMP collection scheme, an initiative involving producers and importers of white and brown goods, is based on a recycling and collection fee levied on each appliance sold through retail outlets. This money is deposited into a fund from which the NVMP finances the collection and environmentally-friendly recycling of The Netherlands' end-of-life appliances. Now six years old, the NVMP system is claimed to be the longest established and most efficient collection and recycling system of its type in the world. Referred to in Europe as the 'Dutch model', many of its features have been adopted in the EU Directive on Waste from Electrical and Electronic Equipment (WEEE).

Self-dissolving plastic bottle

French scientists have developed a plastic bottle that completely dissolves after only three months. The bottle, called 'Neosac', is made from polyethylene and dissolves through the reaction of additives to light, oxygen and warmth. What eventually remains is water, carbon dioxide and organic material.

The French government is meeting 50% of the costs of the Neosac project. By promoting this innovative bottle, the government aims to put an end to the mounting volumes of plastic bottle waste: it is estimated that, each year, more than 15 billion plastic bottles are sold in France - 80% of which end up either in the waste stream or dumped in the environment.

Worms eat contaminated sludge

Researchers at the Department of Environmental Technology within The Netherlands' Agricultural University of Wageningen have discovered that worms of the species *Lumbriculus Variegatus* can be used to process contaminated sludge.

In a pilot project, it has been proved that these worms can halve a volume of sludge simply by eating it. Unfortunately, the process requires enough worms to match the volume of sludge and, furthermore, the worms secrete part of their 'food'. There is also the additional problem of what to do with the replete worms once they have finished their 'meal'. Tests have proved that the satiated worms can be processed into glue although this a very expensive process. It is also possible that the worms could be converted into a flow-control agent for plant protection fluids.

Thirty billion UBCs recycled in 2004

US company Novelis, the Cleveland-based global leader in aluminium rolled products and aluminium can recycling, recycled more than 30 billion aluminium used beverage cans (UBCs) in 2004, maintaining its position as the world's largest recycler in this field.

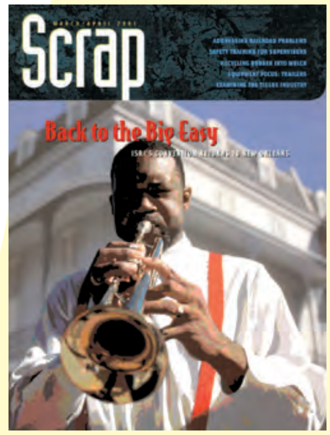
Novelis expanded its educational efforts and partnerships with community groups over the course of the year, including a 'Cans for Cash' challenge to US cities in conjunction with the US Conference of Mayors. The initiative resulted in the recovery of 60 million UBCs in a two-week period. 'Novelis is very encouraged that the joint efforts we have under way with the aluminium industry and our partners are starting to pay off, proven by the upward trend in the North American aluminium can recycling rate,' stated Tom Walpole, Vice President of Novelis Global Can Products. 'We are definitely moving in a positive direction.'

In Brazil, meanwhile, Novelis sponsored an environmental curriculum for 17 000 elementary students which, among other efforts, resulted in a 6.7% increase in the country's recycling rate. Novelis recycles 68% of the 9 billion UBCs recovered in Brazil.

In the USA, Novelis is aggressively promoting aluminium beverage can recycling to help boost the overall recycling rate. As a national sponsor and promoter of Cans for Cash City Recycling Challenge, America Recycles Day (November 15) and Cans for Habitat, Novelis is building grass-roots awareness that 'it pays to recycle aluminium'. According to the company, aluminium is the only recyclable material that covers the costs of its collection and processing; furthermore, recycled aluminium retains nearly 100% of its quality, making it infinitely recyclable.

'Recycling is a fundamental element of our corporate sustainability commitment to society and the environment,' said Gary Wygant, the company's Director of Recycling. 'We will continue to build on the momentum established and forge ahead to increase aluminium can recycling through Novelis programmes, sponsorships and education.'

Novelis operates seven recycling facilities worldwide. In North America, the firm operates aluminium can recycling plants in the following places: Berea, Kentucky; Oswego, New York; and Greensboro, Georgia. Novelis' Berea recycling facility is the largest in the world devoted exclusively to recycling used beverage cans. Other recycling operations are located in Brazil, Korea, Italy and the UK. □



Recycling the Kiwi way

New Zealand is about the same size as the UK but has only four million inhabitants, with the result that transportation costs are a major factor for the domestic recycling industry. Meanwhile, those same recyclers are eyeing major legislative developments in Europe with considerable interest, especially those relating to end-of life vehicles and electronics. This summer, Recycling International paid a visit to New Zealand to explore the recycling business 'Down Under'.

Transport and handling are the biggest problems facing the recycling industry in New Zealand.

Trevor Munro of Christchurch-based Metalcorp NZ Ltd is also President of the Scrap Metal Recycling Association of New Zealand.

By Manfred Beck

What would you think are the biggest problems facing the recycling industry in a large but sparsely-populated country like New Zealand? Any idea? No? Well, the answer is transport and handling.

Trevor Munro of Christchurch-based Metalcorp NZ Ltd, who is also President of the Scrap Metal Recycling Association of New Zealand (SMRANZ), explains: 'In our country, many towns are small and the distances between them are very large. As a result, scrap companies' road transport costs are very high. Those costs have to be calculated in the price we can pay our customers for the material they sell us.' He adds as an aside that, since April of this year, all scrap dealers have been required by law to carry an identification card.

Another problem in New Zealand is the shortage of qualified staff. The country has a low unemployment rate of around 3.9%, while economic growth is projected to reach 3.2% this year. As a result, it is very hard for the industry to hire qualified people, especially truck drivers. In an attempt to solve this problem, New Zealand's transport operators have been looking to lure truckers from, among other countries, Germany and the UK to work in New Zealand. The project has been successful so far - one company has already hired 56 drivers from Europe.

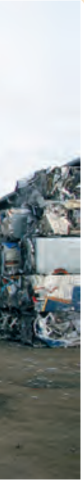
Metals recycling

Since New Zealand is a country the size of the UK but with only four million inhabitants, the vast majority of metal recycling companies are small or medium-size businesses which normally handle both ferrous and non-ferrous scrap. New Zealand has four independent exporters of bulk steel: SimsPacific Metals, Scrap Metal Recyclers, Macaulay Metals and Resource Recycling.

When asked to estimate New Zealand's annual scrap arisings, Mr Munro says with a smile: 'The total volume we handle in our whole nation is basically the same as for one huge scrap yard in the USA or Europe. I think we handle about 400 000 tonnes of ferrous scrap per year, both for local consumption and for export, and about 55 000 - 60 000 tonnes of non-ferrous metals.'

Mr Munro reckons the total turnover of New Zealand's scrap industry to be approximately

View from Hotel Rydges Lake Resort in Queenstown, where this year's annual meeting of the Scrap Metal Recycling Association of New Zealand was held



NZ$ 600 million to 1 billion (US$ 414-690/€ 336-559 million). 'That includes the turnover of both the metals recycling and metals processing industries,' he underlines.

New Zealand has two electric arc furnace-based steel mills in Auckland, some foundries such as A W Fraser that produce for export markets, and also some small casting-type foundries whose products are destined for the local market.

New Zealand's scrap metal exports are destined almost exclusively for Asia - notably China, India, Korea, Pakistan and Indonesia - while speciality products are also sent to Australia.

Recycling and the environment

According to Mr Munro, New Zealand 'has a lot of legislation and regulation on environmental issues, for instance, the Resource Management Act'. Although he acknowledges that 'our environmental legislation is not yet up to European standards', he is convinced that 'we will eventually end up with similar legislation as that in Europe, for instance, on ELVs and electronics'. But he adds with a smile: 'We will iron out the mistakes the European Union has made. Keep making legislation in Europe and we'll keep modifying it.'

SMRANZ's President also has forthright views on the problem of a definition for waste. 'In New Zealand, we should first define clearly what wastes are to be labelled hazardous and what are not,' he says. 'We should have that organised before there is a law regulating it.'

In the Auckland region, the recycling association and the regional council which administers the Resource Management Act have jointly created an 'Environmental Code of Practise' for the metals recycling industry. 'In the past, something like that would have been drawn up without us,' comments Mr Munro. 'We have now been involved in the actual development of the Code, in making it a workable document. I think that legislation should follow the industry, instead of the industry following the laws. For that, it is very important that the recycling industry establishes a formal relationship with the Ministry of Environment.'

The Environmental Code of Practise contains, among other things, best practice guidelines for metal recycling yards. It states the environmental effects of materials; problems and answers; and guidelines for a scrap yard lay-out such as recommendations relating to concreted surfaces. 'We hope that, in time, this document will be adopted by the Ministry of Environment for the whole country,' says Mr Munro.

Governing Director Eugene Storck (right) and General Manager Lucien Jorna of Scrap Metal Recyclers.

The company's new baling press from Italian manufacturer Colmar.

Scrap Metal Recyclers wins Green Ribbon Award

In 2005, Auckland-based Scrap Metal Recyclers received New Zealand's highest environmental award for business, the Green Ribbon 'Business Caring for the Environment' Award. The company won the award for the work it does to protect the environment from the effect of its business. Scrap Metal Recyclers has been hailed by the jury as 'a leading example of how businesses can help protect their local surroundings while continuing to make a profit'. During recent years, the company has carried out a series of initiatives that have heavily reduced the environmental impact of its business. Among other things, it has halted its smelted operations and moved to alternatives that require less energy and do not produce air pollution. In addition, the recent commissioning of a large press from Italian manufacturer Colmar to compact lighter gauge metal and cutting equipment that reduces the need for gas cutting. Several years ago, the company already put an end to burning off plastic coating from copper wire, although this was still allowed in New Zealand until the beginning of this year.

Another award-winning circumstance was the fact that Scrap Metal Recyclers has concreted its entire yard and has constructed its own drainage system with retention pits to prevent run-off into storm water drains Scrap Metal Recyclers, which is ISO 9002 certified, is the largest privately owned metal recycler in New Zealand, with operations in Auckland and Hamilton. With a workforce of about fifty people, it handles between 80 000 and 90 000 tonnes of ferrous and some 10 000 tonnes of non-ferrous per year. It exports material to among others China, Korea and India.

In recent years, Scrap Metal Recyclers has done many investments in technology and machines. It is one out of two New Zealand companies that has Bicron radiation detectors at the gate and, in addition, it has a Harris baler, six Liebherr material handlers and an Alert Engineering can baler.

It is estimated that New Zealand's metal scrap recyclers handle about 400 000 tonnes of ferrous scrap and some 36 000 tonnes of non-ferrous metals per year.

New Zealand – Facts & Figures

New Zealand was discovered in about A.D. 800 when the Polynesian Maori reached the islands. In 1840, their chieftains entered into a compact with Britain, the Treaty of Waitangi, in which they ceded sovereignty to Queen Victoria of England while retaining territorial rights. In that same year, the British began the first organised colonial settlement. A series of land wars between 1843 and 1872 ended with the defeat of the native peoples. The British colony of New Zealand became an independent dominion in 1907 and supported the UK militarily in both World Wars. New Zealand's full participation in a number of defence alliances lapsed by the 1980s. In recent years, the government has sought to address longstanding Maori grievances.

New Zealand's surface area is 268,021 sq km/103,474 sq mile, which is roughly the same size as the state of Colorado in the USA or the UK. It has a coast line of 15 134 km/9 398 mile.

It has a climate with sharp regional contrasts and the country's highest point with 3754/11 144 ft is Aoraki-Mount Cook in the New Zealand Alps on the South Island.

There are two official languages, English and Maori, and, as a result, many signs are bi-lingual. The country has a population of 4,035 million, of which about 80% lives in cities. Auckland on the North Island is the only city with more than one million inhabitants. The capital is Wellington and other major cities include: Christchurch, Dunedin, Invercargill, Queenstown and Hamilton.

Over the past 20 years New Zealand has transformed from an agrarian economy to a more industrialized, free market economy that can compete globally. Per capita income has risen for six consecutive years and is now more than US$ 23 000/€ 18.500 in purchasing power parity terms. New Zealand is heavily dependent on trade - particularly in agricultural products - to drive growth. Exports are equal to about 20% of GDP. GDP composition by sector: agriculture: 4.6%, industry: 27.4%, services: 68%. The 2004 GDP growth rate 2004 was 4.8%

Agricultural products include: wheat, barley, potatoes, pulses, fruits, vegetables; wool, beef, lamb and mutton, dairy products and fish. The main industries are: food processing, wood and paper products, textiles, machinery, transportation equipment, banking and insurance, tourism and mining. The country's export commodities are mainly dairy products, meat, wood and wood products, fish, machinery, while its main export partners are Australia 19.6%, USA 14.3%, Japan 11.4%, China 6.3%, UK 5.1%.

Auckland is New Zealand's only city with more than one million inhabitants.

Baling of aluminium at SimsPacific Metal's operation in Auckland.

Recycling station in Christchurch's main shopping street.

Simon and Lynette Westgaard of Auckland-based stainless steel recycler Commercial Metals. Since 1999, Lynette has been painting what she calls 'abstract portraits of scrap' through which she gives expression to 'the contrast between the hardness of metal scrap and the softness of a painting'. For more information, contact Lynette Westgaard at: westgaards@xtra.co.nz

Waste management policy

The title of the document containing New Zealand's official Waste Strategy is: 'Towards Zero Waste and a Sustainable New Zealand'. However, 'Zero Waste' is not the government's official policy. 'As a government, we have not advocated zero waste, as we're not in a position to do so because we don't control the infrastructure,' explains Chris Purchas, Senior Adviser - Sustainable Industry of the Ministry for the Environment (or Manatu Mo Te Taiao in the Maori language). 'However, at a local level, about 50% of the councils have committed to a zero waste target which they see more as an aspirational goal.'

According to Mr Purchas, the value of the Zero Waste strategy/targets is that 'they make people think a bit differently about waste issues' while also 'encouraging people to come up with creative plans about how to minimise waste'.

There is also a 'Zero Waste New Zealand Trust', which was founded some six years ago and is based in Auckland. Although the trust receives some funding from the New Zealand government, most of its income comes from the Tindall Foundation.

Meanwhile, the New Zealand initiative has become a movement with international branches in Australia, the UK, India and South Africa. It is considered to be an informal consultant group think-tank.

Landfilling versus incineration

Almost 100% of all waste in New Zealand is landfilled, leading Mr Purchas to explain why the country has no incineration plants. 'The main reason is cost,' he says. 'Operation of an incinerator is quite volume dependent - you need large volumes of waste to make it cost effective. As New Zealand is a long and "skinny" country, transport costs would be very high. Furthermore, there is enough landfill capacity in New Zealand for the foreseeable future. Incineration can't compete with landfilling in New Zealand as it is simply too expensive.'

Local councils or private companies operating

New Zealand's approximately 100 landfills can set their own fees but, in general, dumping costs are very low. Differing from region to region, they are between NZ$ 30-120 (US$ 21-83/€ 17-67) per tonne.

The second reason for the absence of incineration plants is that obtaining the approvals for such facilities would prove very difficult. 'I think there would be fierce opposition,' says Mr Purchas. 'Many people would say "Not In My Backyard" on the assumption that air emissions of hazardous substances would be very high.'

Levels of government

The problem of gaining consent is linked to New Zealand's administrative structure in terms of waste management responsibilities. There are three levels of government: the central government in Wellington, whose Ministry for the Environment provides policy advice and writes national environmental standards on the effects of certain materials on the environment;

16 regional councils write legislation for activities which entail an effect on the environment, such as landfills and composting operations; and there are also some 80 district councils whose responsibility is to ensure that waste management is provided for their area. These district councils offer varying levels of service - from household collection and recycling/transfer centres to landfill operation. Other councils have contracts with private companies to take care of their waste, usually on a cost-recovery basis. Citizens must pay for refuse and/or recycling bags.

Chris Purchas, Senior Adviser - Sustainable Industry of the Ministry for the Environment

Fullcircle

Auckland-based Fullcircle is New Zealand's largest recovered paper and waste management company. It forms part of Carter Holt Harvey (CHH), one of the country's leading conglomerates with diverse interests and a total of 17 businesses operating across a wide range of markets, including wood and fibre products. The company owns 330 000 hectares of sustainably-managed radiata pine, of which around two thirds is retained to meet the strategic fibre needs of the company's own paper mills at Kinleith, Penrose and Whakatane.

New Zealand's leading paper recycler, Fullcircle collects annually more than 200 000 tonnes of recovered paper for use in the manufacture of new paper products at CHH's own mills. Fullcircle has achieved its current status in the paper recycling market by

Recycling International's youngest fan

Just before setting off for New Zealand, Recycling International received an e-mail which read:

Dear Mr Beck,

My name is Finn Harris and I just turned two years old. I really like looking at all the pictures of the scrap handlers in your wonderful magazine. Attached is a photo of me looking at your magazine.

My Dad, Jeff Harris, the owner of Macaulay Metals in Wellington and Vice President of the New Zealand Scrap Association, is looking forward to catching up with you in Queenstown!

Have a safe trip to New Zealand.

Regards,
Finn (and his Dad!)

Well, we guess that young Finn must surely be Recycling International's youngest reader. Keep reading, Finn, and one day your Dad might give you your own subscription.

Two-year old Finn Macaulay reading his favourite magazine

Metalcorp

Metalcorp N.Z. Ltd is one of four metal recycling companies in Christchurch, the largest centre of population on New Zealand's South Island. And so competition in the area is fierce.

In 1989, at the age of 39, Trevor Munro started up Metalcorp after a career in the military that took him all over the world. When asked about his reasons for founding a scrap metal business, he replies: 'In 1989, I was in Europe - in Denmark, to be exact - when a friend sent me an article from a New Zealand newspaper which said that the only company on South Island that was collecting car wrecks had shut up shop. So I looked at some scrap yards in Denmark, The Netherlands and some other countries around the world and decided that it was a lucrative business. Once I was back in New Zealand, I opened up a scrap yard.'

In common with most metal recyclers in New Zealand, Metalcorp collects, processes and sells both ferrous and non-ferrous metals. It has a workforce of 16 and runs six trucks of its own as well as another on full-time hire - mainly because it is almost impossible to hire enough truck drivers.

The company sources its material from all over South Island. Once in the yard, material is sorted and processed using hand guillotine shears or a LaBounty shear, put in containers or baled, and then sold. The main recipient is SimsPacific Metals but, in the past, the company has also engaged in bulk exports.

Metalcorp is a real family business: Trevor Munro and his wife Anni run the business with assistance from their daughter Korina and son-in-law James.

Trevor Munro and his daughter Korina in front of the car flattener they designed and built by themselves.

Brian Seaton, Procurement Manager of the Kinleith paper mill in Rotorua (right), and Plant Manager ....

providing economic collection and reuse solutions, as well as by building successful partnerships with many local councils and business organisations.

Operating in all main centres, Fullcircle owns or has exclusive contracts with a network of collection and baling facilities. The service is complemented by long-term supply agreements throughout the country.

In recent years, Fullcircle has extended its recycling expertise from paper to other recyclables, including glass, tin, plastics and aluminium. These materials are traded in New Zealand but are also exported to Asian countries such as Indonesia, Korea, The Philippines and China.

Operating a unique structure, Fullcircle owns its plant/equipment and customer base, and contracts out operations, thereby achieving the freedom to respond quickly to changing market conditions.

Fullcircle also analyses waste volumes and provides different organisations with tailored recommendations relating to waste management - from the use of paper collection trays on desks to office wheelie bins, through to steel cages for flattened cardboard or shrinkwrap. □

For more information, visit: www.fullcircle.org.nz

Louisa Palmer, Full Circle's Regional Manager for Lower North Island.

SMRANZ

The Scrap Metal Recycling Association of New Zealand (SMRANZ) was founded 37 years ago and, since then, the membership has grown from 46 to 80. In effect, some 60% of New Zealand's 130 metal recycling companies - according to the listings in the New Zealand Yellow Pages - belong to the association.

Trevor Munro of Christchurch-based Metalcorp New Zealand has been President of SMRANZ since 1998. 'I got appointed without me knowing it,' he recalls. 'The evening before the Annual Meeting, I had a really late night and got very little sleep. So when the meeting started, I dozed off and by the time I woke up they had elected me President!'

The association's functions are to: promote the interests of the industry; to work with government on policies affecting recycling, secondary materials and goods; to inform the public; and to promote co-operation between members to solve common problems. Each month, SMRANZ sends out a newsletter edited by Korina Munro (who happens to be Trevor's daughter) which provides latest information on occupational health & safety and environmental issues, as well as on any relevant government measures. 'As an association, we have started to take an active role in communicating with the Ministry of Environment and other bodies relevant to our industry,' says Mr Munro. 'We don't want decisions and legislation to be made without us. We want to be a partner in the decision-making process. The problem is funding the expenses for these activities.'

Each year in June or July, SMRANZ holds it Annual General Meeting and invites key speakers to talk on topics of interest to its members. In 2006, the meeting will be staged in the Fiji Islands!

For more information: SMRANZ, Trevor Munro, Phone: + 64 33443 006, E-mail: metalcorp@xtra.co.nz, Website: www.scrapmetal.org.nz

Kinleith paper mill

The Kinleith paper mill is located near Tokoroa on New Zealand's North Island and produces softwood kraft pulp and a range of linerboards used in packaging. In 2004, Kinleith mill produced a best-ever 581 704 tonnes of market pulp and containerboard - an increase of 49 614 tonnes over the previous record set in 2002. The mill's input material divides evenly between wood chips from saw mills, pulped wood and recovered fibre.

The Kinleith mill is 75% self-sufficient in energy thanks to a newly-commissioned, NZ$ 75 million co-generation plant which produces steam and electricity from wood waste, together with the steam generated from the chemical recovery process.

Caring for the environment is part of Kinleith's corporate policy. 'We are pursuing a Zero Waste strategy,' says Procurement Manager Brian Seaton. 'Over the last three years, we have managed to reduce the amount of waste that has to be landfilled from 100 000 tonnes in 2001 to 30 000 tonnes in 2004.'

Last year, the Kinleith mill established a recycling centre on its premises, operated by ...., because it wants to reuse and recycle more materials. Kinleith itself is meeting the project costs of around NZ$ 5000 (US$ 3500/€ 2800) because, as Mr Seaton puts it, 'our management team is very dedicated to the environment'.

The Kinleith paper mill near Tokoroa.

‘Mining’ New Zealand’s scrap metals

SPM’s ferrous scrap operation in Auckland is located next to the electric arc furnace of Pacific Steel.

Since it was founded in 1992, SimsPacific Metals has grown to become the largest metals recycler in New Zealand and operates the country’s only two shredders. In total, the company runs 10 scrap yards across New Zealand’s North and South Islands.

By Manfred Beck

SimsPacific Metals Ltd (SPM) was formed in 1992 as a joint venture between two companies: Pacific Metal Industries, whose interests lay in ferrous recycling; and Simsmetal Industries, which was engaged mainly in recycling non-ferrous metals. Over the ensuing 13 years, SPM has become the largest metals recycler in New Zealand and today has a workforce of around 160 people.

A joint venture between Australia-based Sims Group and the Fletcher Challenge Group, SPM runs 10 scrap yards across New Zealand’s North and South Islands while operating the country’s only two shredders - in Auckland and Christchurch. SPM also encompasses a demolition division and a can recycling division.

Ferrous scrap

Ferrous scrap from SPM’s yard in Auckland is destined mainly for the electric arc furnace of Pacific Steel, which is located adjacent to the shredder operation and which produced around 250 000 tonnes of billet steel last year. Most of the scrap handled by SPM on South Island is destined for export, mainly to Asia. In this context, it is interesting to recall that, between 1959 to 1989, New Zealand maintained a ban on exports of ferrous scrap in order to protect its domestic steel industry.

SPM’s ferrous scrap supplies consist mainly of end-of-life vehicles (ELVs), consumer goods, industrial offcuts, railway stock, and also obsolete plant and equipment. The company collects ELVs from all over New Zealand using mobile car flattener/baler combinations; scrap is also shipped to SPM’s yards in its own fleet of trucks and bins, while further supplies are sourced through contractors.

SPM has its own fleet of trucks.

In operation since 1997, the SPM shredder in Auckland is a TSI 80-104 dry process plant from US manufacturer Texas Shredder and this is fitted with eddy current downstream equipment from German manufacturer Steinert. Shredder fluff is destined for controlled landfilling, with the tipping fee in the Auckland region being around NZ$ 60-70 (US$ 41.60-48.50/€ 33.60-39.20) per tonne.

Non-ferrous scrap

SPM’s non-ferrous metals trading division buys a wide range of material from a number of sources, including manufacturing offcuts and stampings, spent automotive batteries, insulated copper cables, household appliances, obsolete equipment and aluminium cans. The scrap is processed using a variety of techniques - including dismantling, shearing, plasma cutting and baling - before being sorted/graded to ISRI and other recognised standards. Around 25% of this non-ferrous metal is sold locally for resmelting while the remainder is exported, mainly to Australia and Asia.

SPM also sells a range of copper, brass, aluminium and lead ingots into the domestic market. □

SPM’s General Manager Rod Brown (right) and Non-ferrous Trading Manager A. ‘Solo’ Solimenme.

Martin Ripley, Operations Manager for SPM’s ferrous plants.

Staying Alert in metals recycling

The AGP-220 baling press in operation at Cableco in Hamilton, New Zealand.

Formed 33 years ago, Alert Engineering did not manufacture any machinery or equipment of its own until 1986. However, the company has been making up for lost time ever since and now has a product range that is attracting worldwide interest. Recycling International pays a visit to the company's headquarters in Auckland, New Zealand.

Alert Engineering's Marketing and Sales Manager Trevor Turnock (left) and owner and President Alan Lewis.

The AGP-220 can be fitted with a feed table of up to 8 metres/315 inches in length.

By Manfred Beck

Alert Engineering was founded in 1973 by owner and President Alan Lewis. In the early years, the company would engineer/produce absolutely anything although it focused mainly on jobbing work, machinery repair and some structural steel work. Mr Lewis also designed and built freezers and meat processing plants which he sold to abattoirs in Iceland, Sweden, the UK, Australia and the USA.

In 1986, as part of a bid to expand the business, Mr Lewis designed a quick-coupling system for excavator attachments - the first of the company's own products and one that is still made and marketed today. 'These systems are made to suit every brand of excavator of which there are 600 different models around the world,' says Mr Lewis. 'We also developed a boom stick hatchet for excavators which we market all over the world but mainly in New Zealand, Australia and Japan.' Well-known customers include Komatsu.

In 1994, Mr Lewis bought RamJet International - a manufacturer of hydraulic equipment, including metal presses and shears for the metals recycling industry, as well as refuse trucks to the customer's specific design. Since then, Alert has gradually expanded the range of machines it offers to the scrap metal and waste management industries.

Product range

These days, Alert Engineering designs and manufactures: refuse collection and compacting equipment; ferrous and non-ferrous scrap metal shearing and baling equipment; cable coilers; and hydraulic systems and components. In addition, the company carries out general engineering and contract manufacturing for third parties.

Currently, around 30% of Alert's turnover is generated by metal recycling machines. The company builds a wide range of standard production alligator shears, from the small 14-50 model up to the largest 26-85. Alert's range of shearing balers includes - but is not limited to - machines with compacting forces of 100, 130 and 218 tonnes. Its array of can balers ranges from the manual Mini Baler to three fully-automatic Midi Balers while the company also manufactures special-purpose presses, eg for aluminium swarf.

Another 30% of company sales comes from the waste management sector. Alert is the New Zealand dealer for, among others, Elgin and Ravo road sweepers as well as for Guzzler and Vactor vacuum loading equipment. A further 30% of Alert's turnover is derived from the design and manufacture of custom-built machinery while the remaining 10% is attributable to its servicing arm.

Worldwide marketing

Although based in New Zealand, Alert's major market is Australia. 'About 60% to 70% of our metal recycling machines are exported to Australia,' explains Marketing and Sales Manager Trevor Turnock. 'Our second biggest market is New Zealand, followed by the USA and the Pacific

Islands, ranging from the Fijian islands to Hawaii. In addition, we have sold some machines to Singapore, Hong Kong and Taiwan.'

Mr Turnock has been with Alert since 1996. Before that, he spent 17 years with BP Oil as an airport manager in Auckland and later in BP's sales and marketing organisation. After leaving this multi-national giant, he devoted more than 12 years to sailing around the world. 'That was my version of a career readjust programme,' he says about the trip.

Most of Alert's sales and marketing is done from the New Zealand office, although in Singapore the machines are marketed through several scrap metal companies. 'We would rather sell direct,' explains Mr Turnock.

Asked about the company's future plans, he says: 'I think we will continue to expand our presence in Australia. Furthermore, we want to push our big AGP-220 metal baling press overseas because we think that there is a market for that unique machine in Europe and the USA.'

Unique metal baling press

Alert Engineering is very proud of its AGP-220 baler press combination - also called a briquetting press. This 218-tonne guillotine press for the scrap metal industry has three distinct stages: the first is a side loader with programmable increments for feeding product into the chamber. With its high-accuracy reader, the press knows exactly the location of the 'pusher' during cycles. The second stage is an inclined guillotine shear with a top-end shear force of more than 220 tonnes which cuts material to size. During this process, a material hold-down which forms part of the automatic cycle helps to prevent longer extrusions from 'kicking' and facilitates cutting. And the third stage of the AGP-220 is a declined bale compression with a massive 218-tonne force to create high-density bales.

Providing 220 tonnes of shearing force and 220 tonnes of baling force, the machine can process both non-ferrous metals and light-gauge ferrous material with a maximum length of 8 metres/26 feet. 'Switching from ferrous to non-ferrous material and vice versa is simple and fast,' says Mr Turnock.

Powered by a 110 kW three-phase electric motor, the AGP-220 can produce bales measuring 600 mm x 300 mm x variable (24 inch x 12 inch x variable) which are easy to stack in 20- or 40-foot containers. On average, the AGP-220 produces one bale every 35 seconds although this depends on the material being processed. Mr Lewis comments: 'It is the largest press Alert has built to date. We have designed it with a distinct focus on productivity, high-speed cycles, very high density and user-friendliness.'

The AGP-220, which costs approximately US$ 860 000, can be fitted with a feed table of up to 8 metres/315 inches in length which enables the machine to process long aluminium extrusions - items that are notoriously difficult to handle.

Lubrication system

A unique feature included as standard on the AGP-220 is a fully-automatic lubrication system for the baling chamber which regularly greases more than 40 points on the sliding surfaces of the press in order to control and reduce wear. Another patent-pending feature is a door whose design is intended to prevent material blockages; this is constructed in such a way that the geometry of the guillotine lid versus the door exit opening provides for a free-flowing process, thereby eliminating bale jams in the door.

The baling press comes with a modem telephone unit installed as standard to enable Alert's technical staff to communicate with the PLC 24 hours a day, seven days a week from anywhere in the world. Using the informative and easy-to-program machine console, the operator can control all machine functions such as bale size, estimated weight upon selecting material, bales per day, previous day's bales per day, and volume per day in cubic metres. The console also informs the operator about system functions such as pressure, temperature, filter alarms, hydraulic fluid levels, and bale lubricant and grease levels. 'If the customer wants it, we can fit the machine with an on-line diagnosis device and help-service on all our balers,' adds Mr Turnock.

The baling press can be fed by either a material handler or a fork-lift fitted with a rotator. It can be operated either from the platform or from a control panel inside the cab of the material handler. 'In the latter case, it becomes a one-man operation, so you can save on personnel costs,' explains Mr Turnock. 'A good operator can easily bale 3 tonnes of aluminium extrusions or 10 to 15 tonnes of light gauge per hour.'

In-house design

Alert has built three AGP-220s to date: the first one went to Adelaide in Australia; the second to Cableco in Hamilton, some 80 km south of Auckland; and the third is destined for a customer in Melbourne, Australia.

The AGP-220 now being operated by Cableco was commissioned in December 2004. 'Cableco wanted to shear, press and bale aluminium in 8-metre lengths and also light gauge steel,' recalls Mr Lewis. 'We looked into it and found out that most companies were shearing the material and then conveying it to a press. We decided that it would be better and more economical to build a machine that could do it all in one place so Cableco could speed up production using less equipment. It cuts and bales all in one pass because of the very big hopper.'

The AGP-220 is designed and built in-house by Alert's team of three engineers, including the hydraulics, cylinders, valve blocks and programming equipment. 'We want to make sure that it can withstand the rigours of the application; after all, scrap is a very harsh environment for every machine,' concludes Mr Lewis. □

Alert's RJ 100 tonne semi-automatic shear/press.

Alert's 14-50 model alligator shear.

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The EU battery directive: the deb

The current status of the revision of the EU Battery Directive was a dominant theme at the latest International Congress for Battery Recycling, which was staged at Sitges near Barcelona in Spain. With the second reading by the European Parliament now imminent, battery industry representatives are still concerned that the final piece of legislation may not prove to be workable across the whole of Europe. Recycling International reports on a congress which also heard about recent developments in battery sorting technology.

Dr Raynald Dallenbach: '...a more realistic and pragmatic approach.'

Mike Takao: '...introduction of the familiar Mebius loop.'

Andreas Krebs: '...lithium batteries present risks with regard to transportation and handling.'

The draft Council text of the new EU Battery Directive represented a 'considerable improvement compared with the results from the (European) Parliament first reading' - not least because it adopts 'a more realistic and pragmatic approach', according to Dr Raynald Dallenbach of the Belgium-based European Portable Battery Association (EPBA). Nevertheless, the Council text still contained 'flaws and unclear wording' and 'several key aspects are not yet fulfilled to create the conditions for an efficient and successful implementation'.

Speaking at the 10th International Congress for Battery Recycling (ICBR) which was held in June at Sitges near Barcelona, Dr Dallenbach went on to insist: 'The Council proposal ... is not sufficient to make the Battery Directive surely workable across Europe.'

Looking at the proposal in further detail, Dr Dallenbach said the battery industry agreed with the aim of collecting all batteries so long as proposals were: realistic, measurable and achievable within a reasonable timeframe; economically sustainable in all EU member states; and mindful of the different social and cultural conditions within the enlarged EU.

While agreeing with the mercury limits set down in the Council draft, Dr Dallenbach reiterated EPBA's belief that a ban on other heavy metals such as cadmium and lead should be introduced 'only when justified on the basis of a risk assessment and proper scientific evidence'. The Council proposal rejected the lead ban put forward by the European Parliament but still called for the 20 ppm maximum limit on cadmium with possible exemptions for emergency/alarm systems, medical equipment and cordless power tools.

Ambitious but acceptable

The speaker said the Council target of collecting 25% of three previous years' sales of portable batteries was 'ambitious but acceptable' given the timeframe of four years after the finalisation of the implementation period. However, Dr Dallenbach rejected as 'not achievable' the Council's second target of 45% of sales after eight years, adding that this was not based on experience gathered in several EU member states. He suggested that results collated from the EU-25 should be reviewed after the first four years to assess the plausibility of achieving this second target and that, in the meantime, the figure of 45% 'should be considered as an indicative target only'. He argued: 'A key element to make the directive workable is to pay attention to existing collection schemes without extrapolating unrealistic goals.'

The EPBA had supported the European Commission proposal to measure collection targets in grammes per inhabitant per year. Noting that the majority of EU member states appeared to be in favour of a target expressed in per cent versus sales, he said the battery industry 'regretted the lack of certainty' but was prepared to accept the latter measurement option.

On the vexed issue of financing, the Council had proposed that battery producers meet any net costs arising from collection, treatment and recycling, and that a requirement should be introduced for registration and financial guarantee. According to Dr Dallenbach, EPBA agreed with the principle of registration and insisted that 'no exception should be allowed even for small producers'. And he added: 'The industry continues to advocate a permanent transparent collection/recycling fee for portable batteries - and not only for a transition period to cover historical waste.'

Questionable penalties

Dr Dallenbach concluded by urging the avoidance of non-measurable mandatory targets for recycling 'as they will generate questionable and unacceptable penalties'. He also called for the adoption of an appropriate marking system. 'Since all types of batteries are to be separately collected, their marking should be used to alert consumers on mercury, cadmium and lead present in specific battery systems,' he said. 'In this case, the marking is appropriate on the battery with the crossed out dustbin and the chemical symbol, as it is today.'

eb ate continues

By Ian Martin

Many delegates paid a visit to the ICBR exhibition area.

Dr Dallenbach's presentation had earlier provided delegates with an update on the scale and make-up of the European portable battery market. Combining figures from 16 countries, he stated that market size in 2002 was equivalent to some 5.5 billion units, or 155 000 tonnes. Statistics for 2003 had yet to be finalised but the speaker believed the total volume had risen to nearer 160 000 tonnes. In terms of both the number of units and total weight, the market had been 'quite stable' for a number of years, according to Dr Dallenbach. There was growth in sales of alkaline, rechargeable and lithium batteries whereas carbon-zinc units were in decline.

Jacques David, President of the European Battery Recycling Association (EBRA), used the opportunity of the latest ICBR event to reiterate his own organisation's position on recent legislative developments. The association was calling for a minimum collection rate to be fixed for each EU member state: this should be 30% three years after the adoption of the directive and 50% two years later. EBRA accepted the 50% target on recycling efficiency for primary batteries and 70% for nickel-cadmium batteries, but it also argued that this efficiency should be calculated on a 'raw state, as-received basis'. Mr David added: 'Use for energy must not be considered at this stage of the calculation. Recycling batteries should be organised in a way to preserve natural resources.'

Efficiency monitoring

An earlier keynote address from Timo Makela, Director for Sustainable Development and Integration within the European Commission's DG Environment, explained the need for an updated directive by pointing out that current EU regulations applied only to hazardous batteries and that there were no collection or recycling targets at EU level to monitor the efficiency of national schemes. 'Many batteries still end up in the environment - in 2002, 45% of the total amount of portable batteries sold in the EU-15,' he stated.

According to Mr Makela, the main issues still to be agreed upon by the Council and the European Parliament were: the scope of a restriction on the use of cadmium and lead in batteries; the level of ambition of the recycling targets; and also the level of ambition of the recycling requirements. Having noted that the Council had conducted an impact assessment on a possible cadmium ban, the speaker described as an 'open issue' whether the European Parliament would also make such an assessment in its second reading, which was scheduled for September this year.

Experience in Japan

The other keynote speech at this year's ICBR was delivered by Mike Takao, Section Manager with Japan's Sanyo Electric Co. Ltd, Mobile Energy Company. He explained that his country had introduced a regulatory amendment in March 2001 demanding that recycling and collection markings be placed on the different types of portable rechargeable battery, including nickel-cadmium, Ni-MH, lithium-ion and lead. Also in 2001, the Japan Rechargeable Battery Recycling Center (JBRC) was established by the Battery Association of Japan.

Over the ensuing four years, said Mr Takao, the JBRC had become an independent entity with more than 200 members - all of whom pay a membership fee based on the volume of rechargeable batteries shipped in the domestic market. The total amount of batteries collected under the auspices of the JBRC had risen from 795 tonnes in 2001 to 1162 tonnes last year; collection of nickel-cadmium batteries alone had jumped from 628 tonnes to 975 tonnes over the same period, while the 2004 collection totals for Ni-MH, lithium-ion and lead batteries were, respectively, 110, 67 and 10 tonnes.

Mr Takao confirmed that the Battery Association of Japan was planning to propose the introduction of the familiar Mebius loop plus chemical symbol as the international recycling mark. The issue was dis-

In 2002, the market size of the European portable battery market of the 16 EU countries was equivalent to some 5.5 billion units, or 155 000 tonnes.

The 10th International Congress for Battery Recycling was staged at Sitges near Barcelona in Spain.

cussed at OECD level in the 1990s, he said, but no clear decision was taken at that time and so a range of marks were still in use. Standardisation would 'help battery and appliance manufacturers to solve the lack of space for the various marks on the battery, and reduce the many costs of design, production, storage, etc,' the speaker suggested.

Key European developments

Khush Marolia, UK-based Environmental Affairs Manager - Europe for Duracell Batteries, the Gillette Company, updated delegates on Europe's portable battery collection and recycling infrastructure, starting with a review of key developments in 2004. He noted, for example, that collections of all types of battery had begun in Portugal and that organisations had been created in Greece, Hungary and Turkey with a view to the commencement of collection operations during 2005.

According to the speaker, battery collection was now available to some 260 million Europeans - equivalent to 45.7% of the combined population of 30 key countries (the EU-25 plus Bulgaria, Norway, Romania, Switzerland and Turkey). Noting that 53.8% of batteries sold in these countries were covered by collection laws, he added that the total weight of batteries collected by industry-driven collection and recycling organisations had risen by 6.4% last year from 23 224 tonnes to 24 709 tonnes. This compared to just 7562 tonnes in 1998 and to 18 962 tonnes as recently as 2001.

That said, Mr Marolia argued that the collection targets proposed by the Council were 'ambitious' and that 'continuous improvement is a better measure of progress than arbitrary targets'. He noted that, against the advice of industry and the results of a risk assessment, the Council's Common Position was proposing a limited ban on portable batteries and accumulators containing more than 0.002% cadmium. Meanwhile, European experience indicated that collection of all portable batteries resulted in increased collection of portable nickel-cadmium batteries. The speaker went on: 'Provisions within the Council Common Position will lead to increased collection of portable Ni-Cds. This result is independent of the collection target for all portable batteries. Mandating unattainable collection targets for all portable batteries will add high costs without returning a proportional benefit.'

Mr Marolia concluded his presentation by outlining the following industry recommendations for the sustainable collection of batteries:

* define the most appropriate national collection infrastructure via pilot studies in one or two cities lasting at least one year;
* set up collection programmes in large cities;
* gradually expand the collection network to cover the whole country over a number of years;
* wherever possible, integrate the logistics relating to batteries with other recyclables such as waste from electrical and electronic equipment (WEEE), packaging or glass to minimise transportation impacts and to optimise costs;
* maximise use of the established infrastructure for collection from consumers;
* allow producers to recover their collection and recycling costs from the distribution chain.

A local battery collection and processing perspective was provided at ICBR 2005 by Eduard Marquez of the Waste Agency of Catalonia. He explained that a battery collection system had been established in the region as far back as 1992; private company Pilagest SL was in charge of shipping the batteries from municipal collection points to the battery/fluorescent lamp treatment centre, which was established seven years ago at El Pont de Vilomara i Rocafort in the geographical centre of Catalonia.

According to Mr Marquez, there was a spike in the volume of standard batteries treated at the centre during 1999 and 2000 to clear the backlog of cells collected between 1992 and the start-up of the facility. Last year, collection and treatment volumes were both just short of 600 tonnes.

Advances in technology

Andreas Krebs, Managing Director of Batrec Industrie AG in Switzerland, spoke in Sitges about his company's recycling process for both primary and secondary lithium batteries and noted that current processing capacity was 200 tonnes per annum. He

Khush Marolia: '...battery collection is now available to some 260 million Europeans.'

Jacques David: '...a minimum collection rate should be fixed for each EU member state.'

Jesper Cramer: '...sorting nickel-cadmium batteries from mixed battery waste at better than 99% accuracy.'

Julien Van Damme: '...economic drivers will determine how fuel cells stacks are treated.'

Corroded batteries are very hard to recycle.

explained that lithium batteries were considered to present risks with regard to transportation and handling owing to the presence of hazardous chemicals and 'the high density of energy'; for example, metallic lithium reacts with water. At the same time, the valuable raw material content made these batteries interesting from a recycling perspective, he pointed out.

Achieving 'high recovery rates', the Batrec process involved fast and controlled transformation of the lithium batteries into an inert granulate 'which can be treated in a normal atmosphere'. This granulate was then separated into its various reusable fractions of iron, non-ferrous metals, cobalt, manganese oxide and plastics. An efficient cleaning system prevented emission of hazardous waste gases to atmosphere, he added.

In another technology-based presentation, Julien Van Damme of Honda Motor Europe informed ICBR delegates about his company's fuel cell stacks, the latest of which can operate at temperatures as low as -20 degC and as high as +95 degC. A fuel cell contained a significant amount of precious metals, thus making it worthwhile to remove it from an end-of-life car for separate treatment. While acknowledging that economic drivers would determine how the cells were treated, the speaker personally believed that the fuel cell should be removed from the car as part of the de-pollution process, thereby allowing the precious metals to be recovered economically and energy to be derived from the plastics.

Demonstration plant for sorting batteries

Results from a demonstration project formed the backbone of a presentation entitled 'Battery sorting by element characterisation' from Jesper Cramer of FORCE Technology, which has its headquarters at Brondby in Denmark. His company claims to have developed a non-contact sensor based on prompt gamma neutron activation analysis (PGNAA) which is being used to sort nickel-cadmium batteries from mixed battery waste at better than 99% accuracy. According Mr Cramer, its non-destructive Element Analyser analyses in depth - not only the surface - and is both cost-effective and reliable thanks in part to the complete absence of moving parts. Results are not impaired by the level of corrosion or deformation of the batteries analysed by it.

With this technique, a neutron source emits fast, high-energy neutrons which a moderator slows down such that they become reactive with the nucleus of elements in the object in the detection field. The gamma detector picks up the specific gamma spectrum emitted by an element; a computer analyses the various spectra and estimates the content of the elements. 'The technology does not need a database of specific battery characteristics,' it was pointed out. 'The sensor is only using knowledge about the content of relevant elements in the main types of batteries.'

Mr Cramer went on to explain: 'A conveyor belt transports objects separately within the sample channel, through the moderator. If the object is a "bad guy" - eg, a nickel-cadmium battery - the computer calculates when the battery will be positioned in front of the nozzle and activates a magnetic valve at the right instant.' Mr Cramer suggested that the conveyor belt solution is 'inherently inefficient' as only 20% of available time can be utilised for measurements. 'For an industrial solution,' it was suggested, 'batteries should be force-fed through the sensor so as to ensure a higher time efficiency - 80-90% is probably easily achievable.'

Capacity depends on mass

The capacity of the sensor is lower for sorting NiMH and lithium batteries 'because of the inherently lower sensitivity of the method to nickel and lithium', noted Mr Cramer. 'Furthermore,' he added, 'capacity of the sensor depends on mass of the battery - the smaller the battery the lower the detection speed and the longer time is necessary to achieve sufficient significance.'

In terms of industrial use, the speaker observed that the actual capacity of the Element Analyser would be custom-designed for specific battery types and size distributions. According to FORCE Technology, the flexibility of the plant is such that it is easy to switch from detecting nickel-cadmium batteries to, for example, PCB capacitors. Further development of the analyser would enable users to sort zinc-carbon and mercury-containing alkaline batteries into separate fractions. The company has also combined the Element Analyser with X-ray based systems to produce an integrated multi-sensor battery sorter. □

Flamenco dance show during the Networking Dinner.

Proceedings for sale

Copies of the proceedings of the International Congress for Battery Recycling 2005 can be obtained from international congress and marketing organisation ICM AG of Switzerland, Phone +41 62 785 10 00, Fax +41 62 785 10 05, E-mail: info@icm.ch. An order form is also available on the organisation's website: www.icm.ch

The proceedings can be sent by normal post at a cost of € 340 or by express delivery for € 360.

Mobile phones: ringin

The Basel Convention has established a public/private Mobile Phone Partnership Initiative to identify good management practices and to provide guidance relating to the environmentally sound management of end-of-life mobile phones. And personal computers will soon come under similar scrutiny at Basel Convention level, it was revealed at a BIR workshop on 'The recycling of electrical and electronic equipment' which was held during the organisation's most recent convention in Barcelona.

By Ian Martin

'The fastest-growing waste stream in the world' is how Dr Pierre Portas, Deputy Executive Secretary within the Secretariat of the UN-EP Basel Convention, described waste from electrical and electronic equipment (WEEE). This type of material had been caught up in the 'huge increase in illegal traffic' - notably to Asia - and so would be a focal point for the Basel Convention over the coming years, he told a special BIR workshop in Barcelona.

The Basel Convention is currently developing its Mobile Phone Partnership Initiative designed to identify good management practices and provide guidance relating to the environmentally sound management of end-of-life mobile phones. The workshop learned that this was likely to be only the first of a number of similar initiatives that would have implications for the recycling industry. 'The next step will be personal computers,' Dr Portas told delegates, although he acknowledged that this would be a more complex exercise than that for mobile phones.

Dr Pierre Portas, Deputy Executive Secretary within the Secretariat of the UN-EP Basel Convention.

Guest speaker at BIR's Media & Metal Separation Committee meeting was Prof Ir Wijnand Dalmijn of the University of Technology in The Netherlands.

Easily understood item

Indeed, as Dr Portas explained, the Basel Convention had chosen to start its product initiatives with mobile phones precisely because this represented an easily understood item. Begun in 2002, the project had involved gaining the co-operation of 12 leading phone producers who had subsequently set up a working group and developed a work programme. In the first instance, they had been looking to devise guidelines on refurbishment, reuse, recycling, collection, design for recycling and transboundary movements. The last of these subject areas was particularly awkward, according to the speaker, because it related to classifications, definitions and national legislation. The manufacturers had also sought to involve other interested parties such as telecoms companies and recyclers.

At the International Environment Council (IEC) meeting held during the same BIR convention in Barcelona, the world recycling organisation's Environmental & Technical Director Ross Bartley pointed out that two project groups had been formed as part of the Basel Convention's Mobile Phone Partnership Initiative - one dealing with collection and transboundary movement, and the other with the recovery and recycling of end-of-life mobile phones. He also noted support for pre-processing of mobile phones rather than charging them direct to a smelter and thereby losing the opportunity to recover recyclable materials such as non-ferrous metals.

At the WEEE workshop, meanwhile, IEC Chairman Alvaro Rodriguez Martinez underlined the importance to the recycling industry of working with the UN-EP Basel Convention since, on issues affecting the recycling industry, the United Nations often established a lead that was subsequently adopted by other international bodies.

Demonstration project

Jose Perez Garcia, General Manager of Asimelec, informed the WEEE workshop of the early results from Spain's Tragamovil demonstration project for the collection and recycling of mobile telephone waste.

g the changes?

It had been discovered, for example, that technical service centres represented the most effective phone collection points, although mobiles were also being collected in stores, universities and elsewhere. 'At present, the Tragamovil initiative has over 300 recovery points at which the mobile phone user can deposit his obsolete or end-of-life phone,' the speaker noted.

Financed by major phone producers such as Motorola, Nokia and Siemens, the Tragamovil initiative involves the crushing and shredding of phones and chargers, as well as the dispatch of batteries to a waste management company for special treatment. Almost 75 tonnes of mobile phone waste was recovered and treated last year under this programme. However, Mr Garcia argued that the initiative should not be evaluated solely in terms of the volumes collected and processed; it should also be judged by the amount of awareness it had created among ordinary people and public bodies regarding the management of 'these new technological wastes', he insisted.

The Basel Convention is currently developing its Mobile Phone Partnership Initiative designed to identify good management practices and provide guidance relating to the environmentally sound management of end-of-life mobile phones.

Market-based approach

The workshop was also told about Spain's Ecolec non-profit initiative involving large and small household appliances, as well as electric tools and dispensing machines. According to the organisation's General Manager Jose Ramon Carbajosa, data gathered from 24 shredder installations and 14 pilot projects had indicated that 85% of used appliances were being picked up via the distribution system while the remainder were being obtained by municipalities through door-to-door schemes and at collection sites.

The study revealed that Spain had no record-keeping or tracking systems in place. Ecolec had been particularly concerned to discover that 'dangerous' waste was not being treated and so the organisation was planning to retrieve this from the market and ensure its safe treatment. □

Fall in ferrous scrap price takes its toll

After a prolonged period of strength, the fall in ferrous scrap prices leading up to the latest BIR convention had had a substantial impact on the media and metal separation sector, it emerged at the world organisation's Media & Metal Separation Committee meeting.

The report from Andreas Wahl of Newell Recycling of Atlanta Inc. in the USA reflected the experience of many other delegates from around the world. He explained that strong ferrous scrap prices in late 2004 and the first few months of 2005 had resulted in healthy flows of residues to media plants and therefore to high production rates. However, a drop in scrap prices in May this year had led to a sizeable reduction in volumes.

Reporting on the Chinese market, David Chiao of Uni-All Group Ltd in the USA said the release of containers since early May had led to excessive material supply at a time of rising costs. He also noted that Chinese customs officials at Ningbo were operating a black list which could lead to total inspection of a shipment at very high cost. Names on the list had not been released to date, he told delegates. Nico Rosseel of NV Galloometal in Belgium added that containerised exports to China were being delayed by CCIC certification procedures in Europe.

Stuart Cottam of Sims Group in Australia confirmed that his domestic shredder industry was busy but that a new export tax had badly affected overseas sales of aluminium ingot and secondary material. Meanwhile, his Sims Group colleague Kevin Fitzpatrick reported that the UK aluminium market had been hit by the collapse of the Rover car group.

According to Ralf Boecker of Indra Recycling GmbH in Germany, prospects in his own country were being clouded by a new law which came into force on June 1 this year which banned the landfilling of organic waste. In similar vein, Christian Müller Guttenbrunn of Müller-Guttenbrunn GmbH in Austria revealed that, since 2004, his domestic industry had been suffering the effects of high disposal charges. He also noted that his own company had formed a joint venture with US-based MBA Polymers to separate plastics and make new products from them rather than send them for incineration. Production was expected to commence in 2006.

From left to right: Ion Olaeta of Deydesa 2000, Spain, David Chiao of Uni-All, USA and Andreas Wahl of Newell Recycling of Atlanta Inc., USA


Recycling
International
UK battles to make up lost recycling ground
Attractive returns from dry sorting techniques
Recycling
International
Recycling
International
The gold-digger approach to car recycling
Crusher adds value for Norwegian recycler
Automatic sorting of construction and demolition waste

Ferrous

Wild ride on the summer roller-coaster

It has become obvious that steel mills all over the world were responsible for an excessive reduction in May/June scrap prices. Predictably, scrap collection stagnated and traders were not willing to sell at such low levels during the summer months. Scrap-hungry steel mills in the southern EU and Turkey then panicked and offered prices US$ 30-60 per tonne higher than in early June. Their scrap needs were duly met and, within two to three weeks, they had dropped their prices by a further US$ 10-30. Since mid-July, the see-saw has come to rest at between US$ 185 and 200 fob West European and Eastern US ports for HMS I. Meanwhile, shipping freight rates have continued to fall. In early August, fob Rotterdam prices stood at US$ 195 per tonne for 80/20 HMS I/II, US$ 200 for shredded, and US$ 185 for the 60/40 mix.

Closed: August 6 2005

By Alfred Nijkerk

After declining steadily throughout much of the first half of this year, US automobile bundles have taken another wild ride on the price roller-coaster. At the end of June, factory bundles auctioned by the major three US manufacturers stood at US$ 158 per long ton but, by the end of July, the price had climbed to US$ 196. The US Composite price, meanwhile, advanced from US$ 122.84 on July 4 to US$ 157.67 at the end of the month.

Positive factors for the scrap trade were fast-falling ocean shipping freight rates and rising prices for pig iron and hot briquetted iron *(see 'Competing Commodities' section)*. Furthermore, EU traders were able to profit from a somewhat stronger US dollar in relation to the Euro.

Export yards on the US East Coast and in Western Europe saw a sudden flurry of orders from Turkish and Southern European steelmakers in mid-July and, as a result, they have been bidding up domestic prices of heavy melt grades and shredded scrap. In Germany, sudden demand from, in particular, mini-mills in Northern Italy pushed prices up by some US$ 30-70 per tonne as scrap processors were unwilling to sell at the depressed June prices - especially as scrap collection had diminished and was expected to be significantly lower during the summer months.

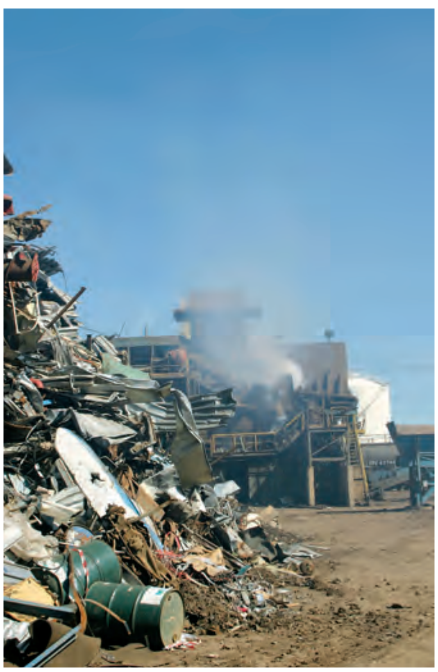
On August 1, Turkish mills were offering US$ 215-220 cfr for the 80/20 mix of HMS I/II, which converts to a price of US$ 195 fob Rotterdam or UK harbour, and US$ 190-195 fob US East Coast. Spanish and Italian mills have quickly followed suit for fear of missing out altogether.

A negative factor for the scrap trade has been the low price of pig iron. This material normally attracts a premium over scrap of around US$ 40-50 per tonne but it was lagging behind in early July as many mini-mills, especially in the USA, still had high stocks of expensive pig iron bought for over US$ 300 a tonne at the end of 2004. Nucor and SDI, for instance, refused to pay more than US$ 205 cfr New Orleans in June; but with Brazilian producers announcing a severe curtailment of production in the summer months and scrap prices rising again, pig iron climbed to around US$ 245 cfr at the end of July. HBI followed suit and rose to US$ 215 after having dwindled to below US$ 200 cfr in the previous month.

Seeking too much compensation

Virtually all large steel mills have been desperately trying to find compensation for the explosion in iron ore, coking coal and oil prices in the first half of this year, especially as the steel market confounded the expectations of all the major steel producers by falling rather than rising in early 2005. Initially, mills in the USA and Western Europe in particular attempted to repair their loss of margin by imposing sky-high 'scrap surcharges' on their steel sales; but when the scrap market began to tumble in the first quarter, various steel mills hurriedly changed their tactics and swapped the appellation 'scrap surcharges' for 'raw material surcharges'. These surcharges were as high as US$ 175 on every tonne of steel offered in January and were only grudgingly accepted by stockists and consumers such as those in the automobile industry.

In the second quarter, the next move by mills in the Western and Eastern world was to pretend that they were not interested in buying scrap, with the result that prices fell on a weekly basis. Some scrap traders saw this as a worldwide conspiracy to achieve lower scrap prices, but this seems unlikely.



Finally, it became clear during the course of the second quarter that the steel market was not recovering but, on the contrary, was declining still further due to falling demand and over-production in China and elsewhere. As a result, these scrap surcharges were cut in half and, more recently, the two main US minimills - Nucor and SDI - have announced that they will refrain from imposing scrap surcharges on August deliveries. In Europe however, Arcelor and Peine Salzgitter doubled surchargers for August deliveries.

Panic among mills

Panic has been particularly apparent among Turkish, Spanish and Italian mills given that their stocks had dwindled in the expectation that steel production would have to be curtailed and that scrap traders would sell at any price. But the scrap industry has grown accustomed to the game of squeezing the price of their product; contrary to virtually all other raw materials used in steel production, scrap is a short-term commodity and traders had earned enough in 2004 to sweat it out. So on this occasion the scrap trade said: 'Here and no further - we will hold our sales until the price has improved markedly, which we expect it to do at the end of the usual summer lull.'

In addition to all this, the Ukraine, Russia and Kazakhstan were curtailing their exports of scrap following the dramatic fall in domestic collection volumes. Meanwhile, Italy faced scrap import stagnation due to another slug of incomprehensible environmental measures from its local authorities who adopted a strict interpretation of an obscure Italian law which designates scrap as a (hazardous) waste, thereby virtually blocking sea-borne imports of scrap. Italy is the world's fifth largest scrap importer on around 6 million tonnes per annum and this situation meant that the group of mini-mills around Brescia faced a substantial scrap shortage. A ship carrying 9000 tonnes was refused permission to unload at the port of Marghera on the Adriatic Sea and had to be re-routed to Slovenia. Italy had to resort to southern Germany for its scrap but the rail route from Bavaria via Switzerland is very expensive. The scrap price in that part of Germany subsequently rose by no less than € 50 (US$ 60) in the space of a few days at the end of June, dragging the EU price level along with it.

In the final week of June, Turkey ventured to buy larger volumes of scrap (over 1 million tonnes, it was rumoured) from the USA, Western Europe and CIS countries, paying around US$ 215 cfr Turkish port or around US$ 30 per tonne above the price of a few weeks earlier. This converted to an 80/20 HMS I/II scrap price of US$ 190 fob for EU shippers facing a freight rate of around US$ 20 per tonne. However, once the Turks realised they had bought too much, too fast and at too-high a price, they withdrew from the market and the price fell back to around US$ 180 fob. However, there was a US$ 15 upward correction at the end of July.

In the Far East, China and South Korea also showed some renewed interest in buying scrap at around US$ 245 cfr. However, with freight rates of around US$ 70 per tonne from the US East Coast and Western Europe, these regions were - and still are - unable to compete with US West Coast shippers. It should be remembered that China, the world's second-largest scrap importer after Turkey, sources around a third of its scrap requirements from Russia and Kazakhstan, and about a fifth each from the USA and Japan. This leaves only 25% to be supplied by all other countries combined and little of this comes from Europe nowadays.

Competing commodities

As mentioned above, prices of pig iron and HBI did not follow the upward trend in scrap prices during the early days of July. As a consequence, the market witnessed the disappearance of the familiar US$ 40-50 per tonne gap between these primary and secondary commodities. But then, also in early July, Brazilian and other pig iron producers simply refused to sell at these low prices of around US$ 205 cfr New Orleans since this meant they were losing money given steep increases in iron ore and energy costs since the start of this year. Their next step was an announcement to curtail production of

pig iron by no less than 70%; and at almost the same moment, the Chinese government announced it was to implement a 20% duty on all exports of pig iron from August 1. These two factors turned the market around, with pig iron and HBI prices then rising broadly in line with scrap values. DRI - which is lower in quality than its briquetted form HBI and more difficult to transport overseas given that reaction with water can lead to fires in vessel holds - achieved only a slight increase to around US$ 200 delivered.

Of course, this upward price adjustment among iron ore-derived commodities, pig and HBI was good news for the scrap trade since it could now be sure that higher prices for its product would be generally accepted worldwide.

Steel

The scrap trade can derive more good news from the evident bottoming-out of steel prices which have been in gradual decline since the start of the year. Scrap prices improved because it became apparent that steel prices would fall no further; and steel prices - especially those of scrap-derived long products - improved when it became clear that scrap traders would refuse to sell any more product at prices they considered to be unreasonable. This was perhaps a chicken-and-egg situation, but it worked in favour of both steel and scrap prices.

Prices of the majority of steel products stabilised during early July following the heavy falls sustained during the first half of 2005. Some long products - such as electric arc furnaces' typical output of wire rod, re-

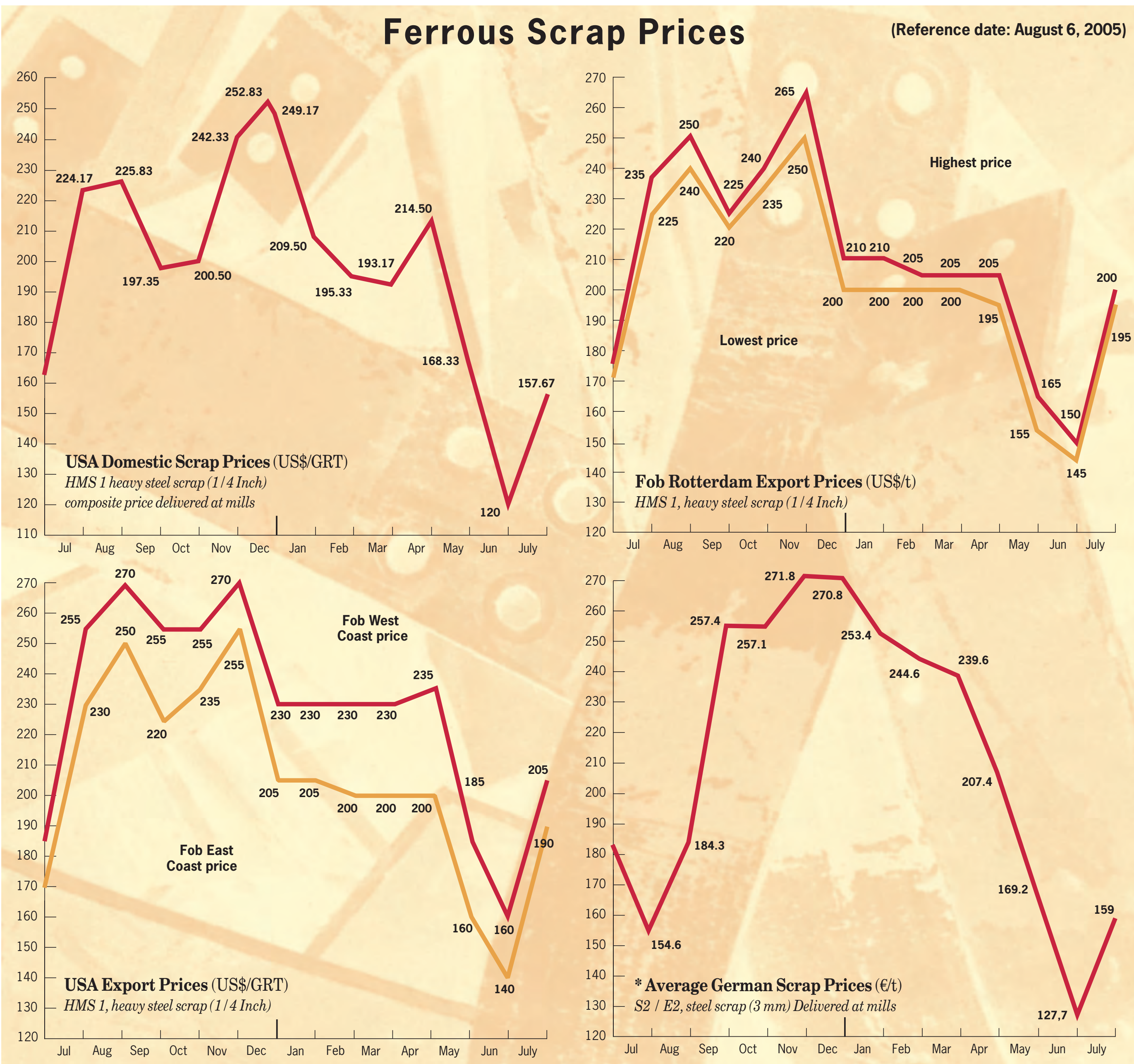

LYNXS

bar and sections - have even managed small price increases of the order of US$ 25-50 per tonne as buyers have cautiously returned to the market. Production cutbacks by major mills in the USA - including Mittal and some of the larger mini-mills - and in Europe (Arcelor and TKR among others) seem to be contributing to a better balance of supply and demand. Stocks of steel are continuing their slow decline and the end of the current destocking phase appears likely to be reached before the end of this year.

Construction activity is also, finally, picking up in some European countries and in the USA, thereby boosting most long product categories. Demand for flat products remains weak but prices have stabilised as sellers appear to realise that lower prices will not produce any extra business. Coil prices in the USA and Europe also stabilised in July at US$ 475-505 per tonne for hot rolled coils and US$ 595-615 per tonne for cold rolled, although these levels are way below those of US$ 675-700 seen in January. In contrast to US mills, some European producers have even announced that they will be increasing scrap surcharges on long products by up to € 30/US$ 36 and more per tonne in August. There are indications that some steel producers are planning to announce price increases for the fourth quarter. The only reason for concern is ever-growing steel production in China, which increased by no less than 28% or 36 million tonnes in the first half of 2005 - equivalent to almost all the world growth in steel production of 39 million tonnes recorded over the same period.

Conclusion

The steel and scrap markets remain fragile at the start of August although both appear to have bottomed out and it seems unlikely they will fall again in the coming months. Favourable factors for the scrap trade include somewhat lower transatlantic shipping freight rates, improved prices for long steel products, higher prices for pig and hot briquetted iron, and - for European exporters - the strengthening of the US dollar in relation to the Euro. The current level of around US$ 200 fob for HMS I appears reasonable; it is not in the interest of the scrap trade or, looking longer term, the steel mills for these to fall again. □



Nickel & Stainless

Falling prices, falling stocks

Generally weak market conditions have dented prices of stainless steel scrap and special alloys. Fears of overproduction in China have adversely affected the cold rolled coil market although producers in that country have now undertaken to curtail output.

Closed: August 1 2005

By Alfred Nijkerk et al

The weakness of the global stainless steel market is reflected in low prices for flat products and a still-depressed nickel price.

As illustrated by the graph from SMR, the nickel price rose from around US$ 13 000 per tonne at the start of the year to over US$ 16 000 in March and the ensuing two months, before finally falling back below US$ 14 000 during the summer months. Meanwhile, LME nickel stocks have even gone below 7000 tonnes compared to 25 000 tonnes earlier in the year.

The market for cold rolled coil has been hit by a sharp downturn in demand and fears of over-production in China. Many producers of new stainless steel reduced production in the second quarter of this year and are planning further cutbacks for the third quarter. These production cuts are obviously aimed at removing surplus material from the market so as to restore greater balance to the supply/demand situation. Even producers in China have now agreed to rein in their production and prices in an attempt to revive weak demand and sluggish global consumption. The limited 2.1% revaluation of the Chinese Yuan will have only a minimal impact on the country's export markets.

Stainless steel scrap prices have also suffered the adverse effects of the depressed stainless steel and nickel markets. On August 1, the Rotterdam 18/8 (304) scrap price stood at a meagre US$ 1300 per tonne (compared to the US$ 1600 quoted in the June issue of Recycling International) while the 316 price was at US$ 2000. The ferritic 430 (17% Cr) price was around US$ 300 per tonne - down US$ 70 from June - while 409 (13% Cr) was around US$ 260.

Special alloys

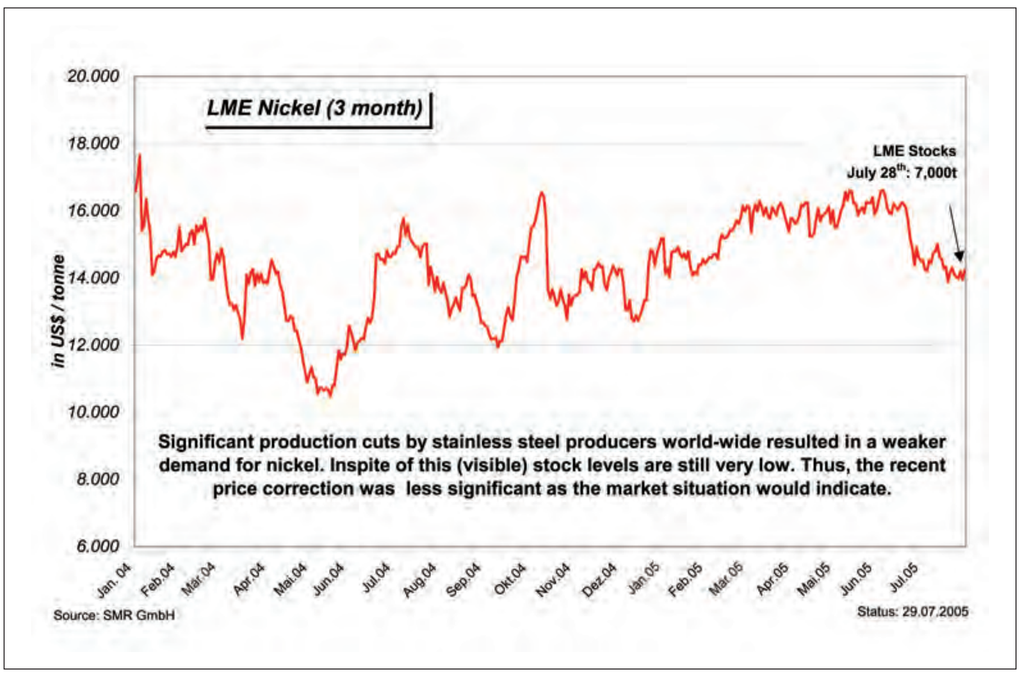
The so-called 'noble' molybdenum, tungsten and vanadium alloys have also suffered the effects of lower demand from the stainless steel industry and trade has come almost to a standstill during the summer months.

Ferro-molybdenum prices in Europe were stabilising in July; the price of duty-paid material fell to below US$ 80 per kg delivered European steelworks - some 20% below the level of late May. Ferro-vanadium prices remained well below US$ 55 per kg, with respite only likely to be provided by the extended summer shutdowns announced by most leading producers. Vanadium has lost no less than half of its value in recent months due to plunging demand from stainless mills.

Ferro-tungsten slumped from US$ 35 to around US$ 27.50 at the end of July. Cobalt had witnessed a persistent downward trend since May but it is now on the increase again to just above US$ 13.50 per lb. Chromium has also firmed recently as Japanese buyers are back in the market. Lower-grade cadmium is currently yielding around US$ 2 per lb but is expected to rise markedly as a result of increased demand from Asia.

Europe

Although prices are still at high levels, nickel now appears to be sailing in smoother waters. LME three-month nickel prices dropped from US$ 14 530 in early July to US$



13 950 on July 29, with analysts attributing this fall to the following two factors: firstly, low demand has meant that prices of steel and stainless steel have sustained considerable falls after the boom in the first six months of this year; and secondly, the market has responded to the behaviour of the speculative hedge funds. Although nickel remains in short supply, analysts point out that nickel prices had risen far more than market fundamentals justified. Obviously, the market is now seeing a slight correction.

The global shortage of nickel becomes evident from an examination of stocks in LME licensed warehouses: these were down to around 7000 tonnes at the end of July compared to almost 25 000 tonnes some 18 months earlier.

It is rumoured that even the world's largest nickel producer - Norilsk-Nickel of Russia - is currently having problems in satisfying demand. Since new mine starts are expensive in terms of both time and money, experts do not expect physical supply to increase substantially in the near future.

Asia & Pacific Rim

Chinese stainless steel production has recorded a steady increase and some recent reports suggest that the country will replace Japan as the world's largest consumer of the metal in around 2008. Based on proposed stainless steel expansion projects in China, the country's production may reach 10 million tonnes by the year 2010 compared to less than 3 million tonnes in 2004.

During July, nickel prices remained weak at average levels of below US$ 14 500 per tonne. Due to poor demand for stainless steel finished products and the drop in scrap prices in Europe, there has been a sharp increase in supplies of Sabot (17/7 stainless steel scrap) and higher grades into Asia, resulting in considerably lower prices compared to June.

North America

There has been palpably lower demand from the stainless steel sector, with a number of mills electing to take extended downtime during the summer. LME nickel stocks are very low and latest International Nickel Study Group figures indicate that global mine output of the metal has increased by less than 1% in 2005.

According to statistics for the first five months of this year, US exports of stainless steel scrap were 33% higher than in the corresponding period of 2004 at 257 149 tonnes while overseas shipments of alloy scrap were up 18% at 759 273 tonnes. □

Growth in stainless steel production

According to statistics from the Brussels-based International Stainless Steel Forum (ISSF), stainless crude steel production in the first quarter of 2005 totalled 6.5 million tonnes, an increase of 7.4% over the same period in 2004. Growth was strongest in Asia where production reached 3.3 million tonnes in the first quarter - 14.2% higher than in the first three months of last year. The driving forces behind this increase were China and India where new capacity is in the commissioning phase. South Korea and Taiwan also showed strong growth rates whereas production in Japan was flat.

Stainless steel production in the Western Europe/Africa region was 2.4 million tonnes - the 2.6% increase reflecting losses in the first quarter of 2004.

Production in The Americas fell by 1.1% to 0.7 million tonnes in the first quarter of 2005, partly as a result of the cessation of stainless crude steel production in Canada. Production in the Central and Eastern Europe region stood at 55 000 tonnes in the first quarter of this year, or 21.1% lower than in the corresponding period of 2004.

ISSF expects global stainless steel production to grow by 5% to 25.8 million tonnes in 2005. This is in line with a forecast released during ISSF's annual general meeting in May.

www.worldstainless.org

Non-Ferrous

Energy prices take their toll

The raw material boom continues to buoy the non-ferrous metal markets, with demand from Asia remaining very high. By contrast, Europe's processors are ordering solely against short-term needs and are declining to build up their inventories. Exporters have been cheered by confirmation from the Chinese government that it was removing the 5% export duty on secondary aluminium. Meanwhile, latest statistics confirm a substantial increase in US aluminium scrap exports in the January-May period of this year, with China the leading recipient.

Closed: August 1 2005

Europe

Plant to be idled

Aluminium

Early last month, three-month LME high-grade aluminium prices improved considerably to reach US$ 1820 by July 13, while aluminium alloy prices were being quoted at around US$ 1588. LME high-grade aluminium stocks continued to fall whereas the aluminium alloy inventory increased slightly during the first half of the month.

The European aluminium market has been dominated by the news that Germany's Hydro Aluminium Deutschland is to idle the Hamburger Aluminiumwerke processing plant at the end of this year. Hydro attributed the decision to the fact that energy prices in Germany are still at very high levels; owing to the Eco Tax, it was barely possible for energy-intensive companies to turn a profit, the company maintained. Hydro's CEO has called for a German and European energy policy which takes into account international circumstances in order to protect European industry.

An analyst from Barclays Capital has suggested that more primary aluminium capacity might be shut down because of these high energy levels. Meanwhile, it is understood that the French government is looking to finalise a deal to cut energy costs for large consumers, including those in the aluminium and chemical industries which had demanded lower energy prices.

In Germany, primary aluminium 99.7 prices rose by US$ 90 to US$ 1992 around the middle of last month, while aluminium wire scrap (Achse) was trading at US$ 1718 and aluminium turnings (Autor) at US$ 1194. Developments in the UK mirrored those in Germany: commercial pure cuttings were recently fetching US$ 1395-1468, while commercial turnings were yielding US$ 918-927.

Copper

LME copper prices have attained new all-time highs during the summer months. By mid-July, LME three-month grade A prices had risen to US$, 3368 due partly to the fact that stocks in Exchange warehouses were continuing to fall.

Most market experts expect copper to remain in short supply over the coming months, with the result that prices may well remain at high levels. Europe's copper industry is operating at full capacity and demand continues to be buoyant, especially from non-European countries. Supply of copper scrap remains problematic: although most companies appear to have enough material at present, traders fear that the supply situation might worsen during the second half of this year.

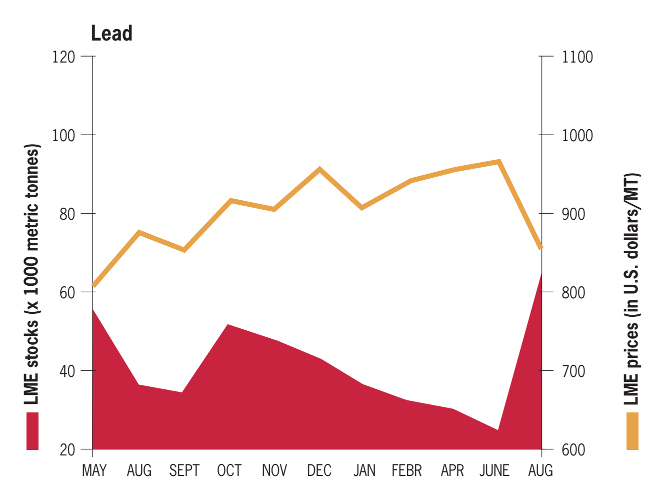
In Germany, the price of bright wire scrap (Kabul) had risen from US$ 2961 to US$ 3289 by the middle of July, while copper granules 1 (Kasus) jumped by some US$ 300 to stand recently at US$ 3338. The non-alloyed bright wire scrap (Kader) price has also risen to US$ 3155. In the UK, the level of increases was less pronounced: by mid-July, No 1 bright wire (Ordinary) was fetching US$ 2826-2918 while copper granules 98% were yielding US$ 2606-2661.

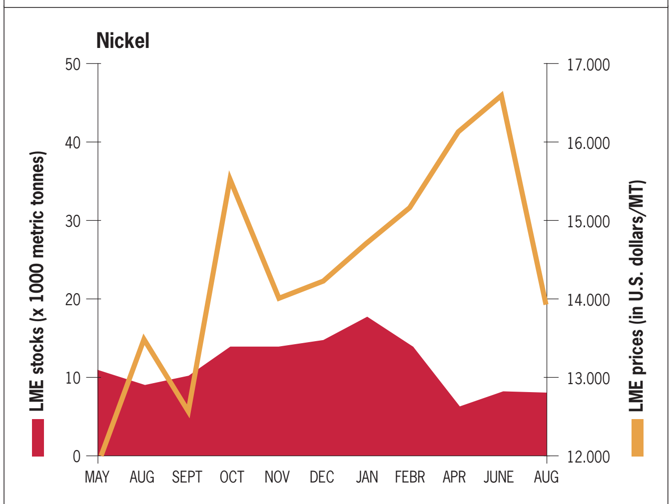
Lead & Zinc

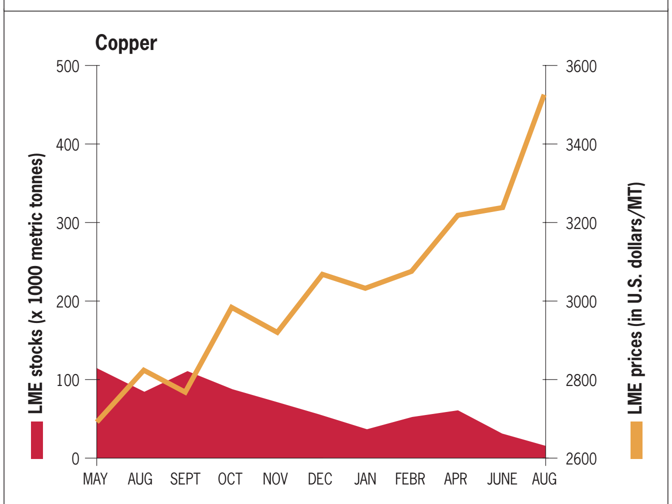
A summer lull has meant little recent movement in the European zinc market. Demand has been very slow and most companies appear to be ordering only for the coming three months. LME three-month prices fell by around US$ 70 to trade at US$ 1207 in mid-July at the same time as LME stocks were posting an increase.

Remarkable news came from Eastern Europe where at least one major zinc producer has cut back its production because of a lack of zinc concentrate. In spite of the quiet summer conditions, European traders are reporting an increasingly short supply of zinc scrap with the result that market expert are predicting that prices could well rise again over the second half of the year.

High-grade zinc prices in Germany recently stood at US$ 1334, while old zinc scrap was nearer US$ 798.







Argentina halts copper exports

The government of Argentina has announced that it is suspending copper scrap exports for 90 days. The decision, announced by Economy Minister Roberto Lavagna, is designed to halt the widespread theft of electrical copper cables. According to reports, close to 4000 miles of copper cable - mostly in the form of electrical and telephone transmission lines - have been stolen in the last year. The government has also announced a suspension of scrap aluminium exports in response to the large volumes of metal being stolen from both public and private sources.

In 2004, Argentina exported around 763 000 tonnes of scrap with a value of close to US$ 1 billion.

Asia & Pacific Rim

Duty cancellation

Aluminium

The secondary aluminium market remains very weak in China due to poor demand as well as a domestic surplus of primary aluminium. Compared to last year, China's primary aluminium production during January-May 2005 showed an increase of around 15% to just over 3 million tonnes; exports remained strong over the same period and were approaching 590 000 tonnes - equivalent to a year-on-year increase of almost 50%.

China has finally confirmed the anticipated cancellation of the 5% export duty on secondary aluminium, thereby offering a respite to exporters, although it is considered that the revaluation of the yuan could provide a small setback.

Although aluminium scrap imports increased by almost 86% to 612 000 tonnes during January-May 2005, prices have been weak in China for secondary and high-grade scrap. Market conditions for other grades of aluminium scrap throughout the rest of Asia have not been much brighter, with discounts widening significantly at current aluminium prices for grades such as extrusions.

Despite these generally poor market conditions for secondary aluminium scrap, prices for some grades such as Zorba are at record highs. Demand continues to be very strong and customers are willing to buy well into the future, not least because of the duty advantages for this material in South China.

Copper

While the debate continues as to the likely effect of the recent revaluation of the Chinese yuan on metal prices, there is increasing speculation that copper prices will rise even higher in the short term. Defying many experts' expectations, LME copper prices have continued to soar during the last month or so to hit record highs of almost US$ 3700 per tonne. Prices on the Shanghai Futures Exchange have also increased sharply on the back of short-covering by many traders. Based on current market conditions, it would appear that the revaluation will do more to restrict metal exports from China than to increase metal imports into China. However, this remains to be seen.

At least as far as scrap is concerned, underlying demand would appear to remain sound despite evidence of a recent slow-down in purchasing activity due to high levels of market volatility. Statistics for the first five months of this year reveal that copper scrap imports rose to 1.88 million tonnes - an increase of around 34% compared to the same period last year. Ever-rising LME prices, however, have made the markets nervous and most buyers are proceeding with extreme caution for fear of a sharp correction. Discounts for high-grade as well as No 2 copper scrap have continued to widen with Birch/Cliff prices at around 85% of cash levels.

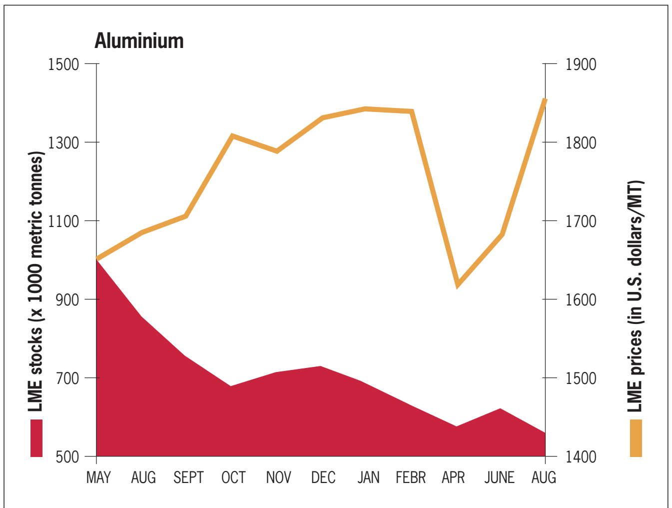
Demand has remained sound for brass scrap in China and the rest of Asia although prices appear to have hit a ceiling; they have made no further gains of late despite the large increases in underlying metal prices.

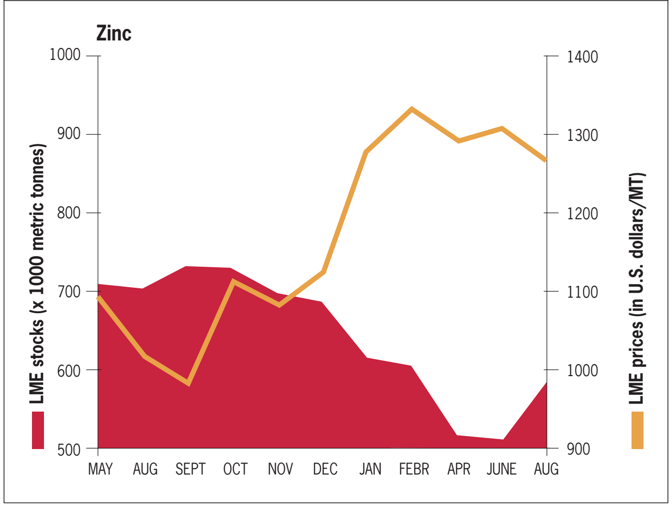
Lead & Zinc

China is continuing to face a shortage of zinc concentrates. The country's imports are expected to remain steady at around 600 000-700 000 tonnes per annum; during the first five months of this year, China's concentrate imports reached 254 000 tonnes while its receipts of refined zinc ingots jumped by around 55%.

Although LME zinc prices have fallen by almost US$ 100 during the last month, domestic prices in China have remained strong due to high energy and increased feed costs. In Singapore, in-warehouse premiums for primary zinc have also remained steady over the last few months at around US$ 60-70 per tonne.

LME lead prices have also fallen by around US$ 100 per tonne over the last month and stocks in the Exchange's warehouses are still high. During the first five months of this year, there were declines in China's refined lead imports and exports. With the drop in primary lead prices, premiums for secondary lead have also come under pressure although demand from battery manufacturers in South East Asia has remained reasonably steady.





North America

Increased US exports

Aluminium

Towards the end of July, secondary smelters were paying around 53 and 54 cents for, respectively, old sheet and cast, whereas turnings and siding were fetching around 53-55 cents and 55 cents. MLCs were being priced in the range 58 to 59 cents while UBCs were nearer 63 cents picked up.

In the first five months of this year, US aluminium scrap exports were some 67% higher than in the corresponding period of 2004 at around 400 000 tonnes, with China accounting for over half of the total volume. Indeed, Chinese statistics suggest that the country imported almost 770 000 tonnes of aluminium scrap from all sources during the first half of this year - an increase of some 80% compared to the first half of 2004.

Despite a reasonably plentiful supply of aluminium at present, analyst SG predicts global deficits for the metal in 2005 and 2006 of, respectively, 400 000 tonnes and 650 000 tonnes. Another analyst - Macquarie Research - has reacted to latest statistics by cutting its 2005 LME cash average for aluminium to 81.4 cents per lb, rising to 90 cents in 2006.

Copper

Cathode premiums were firming towards the end of July in the face of mounting supply concerns. China has remained a solid buyer of copper scrap although figures for the first five months of this year indicate a 9% reduction in US exports to this South East Asian giant. US copper scrap shipments to all countries fell by 11% over the same period from 297 775 tonnes to 265 689 tonnes.

According to the International Copper Study Group, the global refined copper market was 150 000 tonnes in deficit after the first four months of this year. This and the other bullish factors dominating the copper market have prompted leading analysts to make upward revisions of their price forecasts. For example, Cochilco of Chile has altered its average for 2005 from US$ 1.33-1.37 to US$ 1.44- 1.48 per lb, while forecasting an average of US$ 1.18-1.22 for next year. And following a recent survey of brokers, Reuters volunteered an average copper price of US$ 1.436 for this year, which compares to the US$ 1.23 offered by the same analyst at the start of 2005. For its part, UBS Investment Research is predicting US$ 1.55 for this year and US$ 1.33 for 2006.

As for longer-term predictions, Codelco's Executive President Juan Villarzu believes copper prices above US$ 1.00 will be sustainable for the next 10 to 15 years, while analyst Macquarie Bank reckons copper prices could average US$ 1.165 between 2004 and 2010.

Lead & Zinc

The immediate prospects for the two metals are likely to be influenced by a strike at Teck Cominco's Trail smelter which began on July 19 and which, according to analysts, has the potential to remove 25 000 tonnes of zinc and 7000 tonnes of lead from the marketplace each month. Since most observers expect zinc to record a deficit this year, a prolonged dispute at the smelter could certainly result in firmer prices.

According to latest statistics from the International Lead & Zinc Study Group, global production and consumption of refined zinc in the first five months of 2005 reached, respectively, 4.339 million tonnes and 4.391 million tonnes. Over the same period, global refined lead experienced a shortfall of 33 000 tonnes given a production total of 3.020 million tonnes and consumption of 3.053 million tonnes. □

Contributing to the Non-Ferrous Metals Market Analysis:

- * Ralf Schmitz, German Non-Ferrous Trade Association VDM (Europe)
- * Kumar Radhakrishnan, General Manager, International Division of Simsmetal Ltd, Australia (Asia & Pacific Rim)
- * Ian Martin, Recycling International's Editorial Consultant (North America)

Paper & Pulp

Closed: August 1 2005

Summer-time stability

Faced with sluggish economic conditions, European mills have attempted to lower their purchasing prices in June and July but, in general, they are still having to meet levels similar to those prevailing on the wider export market. Meanwhile, some mills in Asia are said to have reduced their recovered paper orders and are running below capacity.

Europe

Slow economic activity

Recent weeks have been characterised by a reduction in volumes of lower grades and slow economic activity. European mills have attempted to lower their prices in June and July but, unofficially, they are still paying prices more or less equal to export market levels. Decent Asian demand has been dominated by China and India.

Export prices for de-inking material have been similar to domestic European levels. Demand has been reasonable from Europe and the Far East. Indeed, Far Eastern demand improved slightly in June and July.

Increasing tonnages of middle grades are being shipped to Far and Middle East destinations, and to India in particular, while demand from European mills has been relatively good. From the price perspective, the market can be considered stable.

Price stability has also been evident in a higher grades market which has witnessed a lower volume of recovered fibre entering processors' yards, with the result that stocks have declined markedly. Demand for some of the higher grades has shown signs of improvement.

North America

Stable markets

The domestic market was quiet in July and no price changes were noted. Generation of brown grades/OCC was slower than usual although, domestically, there has been no demand for additional supply lines. The export market remained stable with China buying small volumes but on a steady basis despite the fact that the country's linerboard sector is in the doldrums.

News grades are holding up well from the domestic perspective but buying prices have weakened, notably to China.

The higher pulp substitute grades are still moving better domestically compared to the export market. The

Pulp Market Trends

End-of-month price tussle

European buyers have been eating into their pulp stocks as they barter with suppliers for price reductions. Some manufacturers were expected to relent by the turn of the month although several buyers have said they are prepared to delve further into their inventories to achieve their aims.

Most eucalyptus producers plan to take some maintenance downtime during the third quarter - a move which would help to keep supply tight. However, buyers claim they are already starting to feel the impact of some of the new capacity in the marketplace.

Insiders suggest that several European producers have agreed to bring their bleached hardwood and softwood kraft pulp prices down by US$ 10 per tonne due to the strengthening of the US dollar in relation to the Euro. In a sign that northern bleached softwood kraft exports could soon improve, Chinese buyers have been asking producers for significant volumes of late.

Arauco has told customers that its August radiata pine price would be unchanged at US$ 480 per tonne on a net CIF basis. A Russian producer of NBSK was also expected to leave prices unchanged at US$ 470 per tonne in China. Meanwhile, at least one Canadian NBSK producer has told Chinese customers that its price would be unchanged in August. Canadian NBSK prices have been US$ 480-500 per tonne of late.

Several market participants have suggested that NBSK price hikes will probably be proposed for China some time in August.

On the hardwood front, suppliers have been under pressure to reduce prices following the start-up of APP China's 1 million-tonne Hainan plant. The mill's output has attracted a number of cartonboard and tissue producers who used to buy Brazilian eucalyptus, with the result that sellers in Brazil have cut prices by US$ 30-40 per tonne. Indonesian mixed tropical hardwood has also dipped by US$ 10-20 per tonne.

On the Korean spot market, buyers have continued to snap up available volumes of BSK and Indonesian mixed tropical hardwood, which are selling at the same levels as in China. But there are still no cheap spot offers for Brazilian eucalyptus.

European consumer pulp inventories dropped by 5% in June to 1.127 million tonnes - their lowest level since August 2001, according to UTIPULP. Stocks were 128 998 tonnes or 10.3%, below the June 2004 level of 1.256 million tonnes. The figures convert to 28 days' supply for June 2005 compared to 30 days for May and 31 days for June 2004.

Pulp consumption rose 3.8% to 1.268 million tonnes in June, reaching its highest level since March 2004 when it stood at 1.292 million tonnes. The June figure was 2.9% higher than the 1.232 million tonnes recorded in the same month last year.

According to Europulp, stocks of woodpulp at European ports dropped for the third month in a row in sliding 4% in June to 1.378 million tonnes. Inventories dipped at most of the European ports surveyed in June: the largest decrease in percentage terms was seen in Switzerland, where stocks plunged 29.9%.

European paper mill order books for June:

Coated woodfree	12-16 days
Uncoated woodfree	10-19 days
Woodcontaining papers	4-17 days

European pulp prices as from July 1 (per admt CIF):

NBSK	US$ 620
SBSK	US$ 590
Radiata	US$ 600
SMHW	US$ 580
NMHW	US$ 590
BEK	US$ 600

middle de-inking grades weakened slightly in early July but recovered at the end of the month. Many printing companies shut down for summer holidays, resulting in shorter supplies of pre-consumer grades such as coated book which, in turn, have led to slight price increases. Office papers are stable and moving fairly well both domestically and to South America. The Indian market has remained quite strong despite the continuing shortage of containers; however, freight rates over recent weeks have been stable at June levels.

Asia

Sluggish demand

Demand has been generally slow for almost all grades of recovered paper given that many consuming mills in Asia are running below full capacity. That said, less recovered paper has been available to ship from Europe because of the impact of holidays. Prices have stabilised and freight rates have fallen slightly in recent weeks. □

European Paper Recycling Conference

US-based Recycling Today Media Group will stage its first European Paper Recycling Conference on October 3-5 this year at the Hilton Brussels Hotel in Brussels, Belgium. The conference will provide an opportunity for paper stock dealers, brokers, consumers, mill representatives, government/waste management officials and equipment/service providers involved in the paper recycling sector to discuss the current state of global markets. European organisations supporting the conference include the Confederation of European Paper Industries and the UK's Independent Waste Paper Processors Association.

The following topics will be addressed:

* Forecasting the future - a look at the potential of paper recycling
* Recovered paper quality - both sides of the coin
* The growth of Asian export opportunities
* Tons of pressure - meeting Europe's and the world's supply needs
* The recycling plant of the future - recovery facility design
* The procurement puzzle - a look at mill buying.

For delegate information, e-mail Michelle Fitzpatrick at mfitzpatrick@gie.net; for sponsorship and display information, e-mail Jim Keefe at jkeefe@gie.net

For more information or to register, visit: www.paperrecyclingeurope.com

Contributing to the Recovered Paper Market Analysis:

* Dick de Groot (Van Gelder Recycling, The Netherlands)
* Marielle Gommans (Bel Fibres, Belgium)
* Steve Vento (Tidewater Fibre Corp., USA)
* Dante Weyerman (CNC Company, The Netherlands)

Textiles

Closed: August 9 2005

Widespread abundance of original material

In both Europe and North America, collections and containers have generated large volumes of original material. In Europe, sales of sorted used clothing have diminished due to the traditional summer lull; demand from Africa has slowed while orders from Eastern Europe have come to a virtual standstill. By contrast, supreme quality clothing is in high demand and sorting companies have sold almost all their available supplies. Business remains fairly strong in North America: a five-month period characterised by a tremendous shortage of original material came to an end in July when collections and containers again began yielding large volumes. Prices have fallen as a result.

Europe

Volumes of original material from collections generally diminish during the summer months. This year, however, the opposite has been true and container volumes have been stable at very high levels. Many sorting companies have closed for the summer holidays and so there is currently an oversupply of original material. This, in turn, has led to an increase in sorters' costs - for example, to store additional volumes - and to further pressure on the industry's cost-effectiveness.

On June 1 this year, new legislation came into force in Germany which prohibits the landfilling of untreated wastes. As a result, there has been a huge rise in collectors' and graders' costs associated with disposing of waste. In addition, the quality of material found in containers has fallen further as a result of a tendency among some members of the public to dispose of all kinds of waste in the used textile bins.

In Western Europe, sales of sorted used clothing have been very quiet this summer while holidays have adversely affected demand from Eastern Europe, with orders from this region coming to a virtual standstill. Furthermore, the season for summer clothing is now ended but winter clothing is not yet being demanded in large volumes. By contrast, the late July and early August period has brought more than satisfactory demand for supreme quality clothing and sorting companies report having sold almost all of their supplies of this grade.

As usual during the summer months, demand from Africa has been rather slow but is expected to improve considerably in September.

In late July and early August, some of the recycling grades have come under pressure due to a considerable weakening of demand. However, it remains to be seen whether this is attributable to seasonal factors or whether the trend will persist into the autumn.

There is a reasonable balance between supply and demand for wiping cloths and, as a result, prices are expected to remain unchanged for the short term at least. In line with developments over the last six months, bed feathers continue to enjoy strong demand and prices have stabilised at high levels.

North America

Business in North America remains fairly strong. Collections and containers have been yielding large volumes of material over the past four weeks, thereby bringing to an end a five-month spell characterised by a tremendous shortage of original material. Prices have fallen in response to this supply boost.

The reason for this sudden abundance of material is not entirely clear. It could be that people are prepared to donate more material at this time of the year, or that companies tend to close down for several weeks in July and so help create a temporary snowball effect. However, it remains to be seen whether, in the longer term, prices will stick at their current lower levels.

African export markets are holding their ground although the general feeling is that import duties in some East African countries are still too high and that these conditions are hampering imports.

Over the last four weeks, reduced supply has been largely responsible for a strengthening of the US wiper market. □

Contributing to the Textiles Market Analysis:

* Günther Krippendorf, FWS/Alta West, Germany
* Bill Schapiro, Schapiro & Son, Inc., USA

equipment

machinery

IN THE NEXT ISSUE

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If you want to get your message across to more than 6000 leading recycling companies in 108 countries worldwide, then call/fax/e-mail us about editorial features or advertising in the September 2005 issue of Recycling International.

* Capricorn's stainless steel scrap expansion
* Recycling initiatives boost standards of living in South Africa and India
* Aluminium recycling at Ye Chiu Metal in China
* Winmex/Van Hout - a successful cable recycling joint venture in China

And, of course, our regulars:

* News * Product News
* Magazine Round Up
* In-depth Market Analyses covering ferrous and non-ferrous metals, paper and textiles * Viewpoint *

Extra circulation!

Additional copies of the September issue of Recycling International will be on display at:

Annual Meeting and Trade Exhibition of the German steel recycling association BDSV

September 28-29, Düsseldorf, Germany

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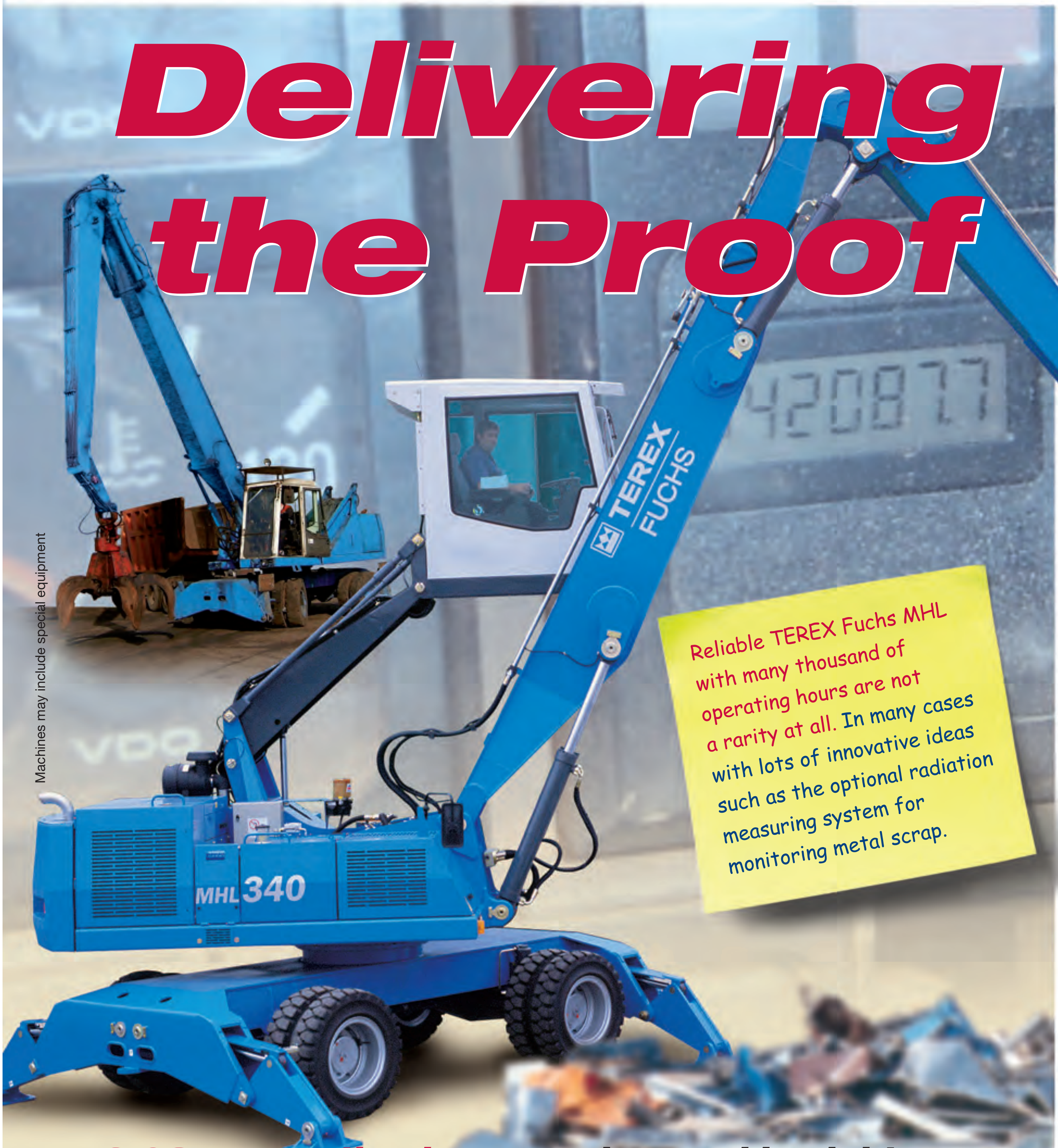

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Reaches *m/ft*	9.5/31	11.0/36.1	13.5/44	15.0/49.2	18.0/59	21.0/68.9
Grabs *m^3/yd^3*	0.4/0.53	0.6/0.78	0.6/0.78	0.6/0.78	0.8/1.0	1.4/1.8

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