New finds on the show floor

As usual, new machinery, equipment and services designed to meet the needs of today's global recycling industry were showcased at the US Institute of Scrap Recycling Industries' Annual Exposition, held in early May at the San Diego Convention Center. In this article, Recycling International rounds up some of the key news from the show floor.

By Manfred Beck

ISRI's 2010 Convention & Exposition drew more than 225 machinery, equipment and service providers.

Al-jon Manufacturing

Iowa-based Al-jon, machine supplier to the scrap, vehicle dismantling and solid waste industries, showcased its Model 4020CLS container loader system in San Diego. 'Whether you have a 20- or 40-foot container, our container loader system will dramatically improve your operation, productivity and safety,' commented the company's International Sales Manager David Little. 'The extreme heavy-duty structure is designed for years of trouble-free operation. Weighing in at 30 000 lb (13 608 kg), which is heavier than our competitors, the 4020CLS is built to last the most rugged applications.'

Operation is simple: an operator loads the hopper using, for example, a crane, magnet or material handler to the point where a digital readout tells the operator when the maximum weight has been loaded. With a press of a remote button, the system will load automatically with no damage to the container. The tractor trailer remains stationary during the loading cycle.

www.aljon.com


Al-Jon's International Sales Manager David Little in front of the company's new 580CL baler/logger.

Caterpillar

Caterpillar highlighted two new products in San Diego, including the 950H wheel loader Industrial Arrangement featuring new optional guarding and air cleaner systems for enhanced durability and reliability, and extended maintenance intervals in demanding demolition applications. Starting from the third quarter of 2010, the specially-equipped wheel loader can be fitted with new options such as a rear machine guard and pre-cleaners for engine air and for cab air. The rear machine guard is designed to keep material from damaging the fan, radiator and engine enclosure. The dual-stage engine air pre-cleaner has a turbine-type first stage and a


Caterpillar's new 950H wheel loader Industrial Arrangement.

canister second stage; the system enhances air filtration and extends engine air filter maintenance intervals in high-debris environments. The new options are designed to provide more uptime and decreased operating costs.

The 950H produces 197 constant net HP (147 kW) and handles bucket sizes of 3.25 to 4.5 cubic yards (2.5 to 3.5 cubic metres) in most applications. High-lift loader linkage arrangements are available for applications requiring additional dump clearance.

At the San Diego show, Caterpillar also introduced the Cat S365C and S385C mobile shears for scrap processing and demolition applications featuring bolt-on piercing tips for thorough protection in critical wear areas, easy maintenance for optimal piercing performance, and field serviceability without welding.

The Cat bolt-on piercing tip design offers several advantages. The tip protects the moving jaw on both sides, effectively protecting the parent metal from wear as the moving jaw travels through the lower jaw. Additionally, the tip blades are fully reversible so that each blade provides two uses; the blades are reversed using common hand tools.

www.cat.com

Eriez

Eriez Magnetics had announced that it would 'unleash the beast' in San Diego. It turned out to be a new permanent rare earth 'Xtreme' drum magnet which the company calls 'a breakthrough in automotive shredder residue (ASR) processing equipment that promises to revolutionise metal recovery'. It adds: 'This new process will capture a portion of the waste stream that had either been allowed to pass, or had been hand-sorted.'

The P-Rex, as the new machine has been dubbed, has a magnetic field that is 40% stronger during operation, Eriez claims. And it also

has an exceptionally large pick-up zone, capturing ferrous - even the large pieces - edge-to-edge. Optional on the P-Rex is a retractable jaw that reduces its magnetic field.

But there was much more news on offer at the Eriez booth, such as the RevX-E Eddy Current Separator featuring an eccentric magnetic rotor to allow a single point of separation. This differs from a concentric design because it offers one chance of separating small particles, while a concentric model offers maximum expulsion over the whole area of the outer shell, Eriez says. The machine is suitable for purifying cullet and plastics as well as for recovering valuable metal from secondary metals and incineration ash, especially separation of small particles. In addition, Eriez unveiled its ProSort II Airless Metal Recovery System which incorporates all of the advanced features of the original ProSort but with twice as many sensors per paddle. Its new inverted paddle design is said to mean better detection of both larger and smaller metallics - even some wire, according to Mike Shattuck, Eriez's Project Manager - Heavy Industries. 'The ProSort II uses high-sensitivity metal sensors aligned with low-energy, electromagnetically-driven paddles to separate valuable metals from waste material,' he explained. 'It helps reduce landfill waste, reuse metals and save energy, and is designed for the most efficient and economical processing of shredded automobiles, co-mingled recyclables, electronic scrap, glass cullet, foundry sand as well as many other resource recovery operations.'

www.eriez.com

Eriez' new P-Rex, a permanent rare earth 'Xtreme' drum magnet for automotive shredder residue processing.

Eriez' RevX-E Eddy Current Separator featuring an eccentric magnetic rotor to allow a single point of separation.

Exodus Machines

One of the eye-catchers at this year's ISRI Exposition was a completely newly-designed, futuristic-looking material handler: the Exodus MX447L. Wisconsin-based Exodus Machines - which claims to be the first US-based company dedicated exclusively to building material handlers - began the design of this machine with a completely blank sheet of paper, interviewing many people in the industry. 'We are determined to build the best machines available anywhere in the world and to build them in America,' the company brochure reads. And it goes on to say: 'Everything about our machine is designed to do one thing well - move material. Being purpose-built is the only way this can be done to the fullest extent.'

The new, futuristic-looking material handler Exodus MX447L was one of the eye-catchers at this year's ISRI Exposition.

The Exodus MX447L weighs in at 101 500 lb, has a reach of 51 or 59 feet, a lift at 50 feet of 11 820 lb, and a maximum lift of 42 300 lb. Powered by a 275 HP John Deere nine-litre Tier III engine, the machine's undercarriage has an Exodus exclusive chassis; Weldox construction; 59-inch wheels; four independent planetary drives; high clearance; and completely protected components. According to Exodus, key features include: a ground-access and ultra-comfortable cab; IQAN machine monitoring and controls; the most extensive auto-lube system available; exhaust silencer; proprietary hydraulic controllers with Bosch Rexroth pumps for exceptional smoothness and efficiency; and hurricane-rated front glass.

The Exodus is only available in North America at present but President Bruce Barron says his company will eventually market the machine to other parts of the world once there is sufficient interest. 'It's all got to do with serviceability,' he noted.

www.exodusmachinesinc.com

Innov-X Systems & Steinert

At the ISRI show in San Diego, it was announced that US metal alloys analyser producer Innov-X Systems and German magnetic separation specialist Steinert have entered into an OEM agreement to market a new high-speed, X-ray fluorescence (XRF) sorting system that will effectively identify and remove copper-containing material such as 'meatballs' from ferrous scrap.

'This new technology will be a welcome solution for metal recyclers worldwide who have long been challenged by copper contaminants in steel scrap product,' the companies say. The new sorting system will feature Innov-X's proven X-Stream technology - a high-speed XRF sensor unit capable of elemental analysis in milliseconds - engineered into an industrial-grade full system that has been the hallmark of other Steinert sorting systems.

'The partnership will result in the world's first and only industrial-grade system that sorts metals on the basis of chemical composition to identify and extract specific contaminants,' the new partners note. Besides offering a solution for copper meatballs, Steinert will be in the exclusive position to produce and offer the worldwide

Innov-X showcased its Delta family of x-ray fluorescence analysers.

market a system marketed to a multitude of non-ferrous metal recycling applications. Under the agreement, Steinert will not only manufacture the equipment but will also provide sales and marketing support for the new metal sorter.

Franz Heiringhoff, CEO of the Steinert Group, commented: 'Our co-operation with Innov-X represents an effective solution to the problem of copper in ferrous scrap and will be the answer to current and new market demands not only in metal scrap recycling, but also in areas like plastic and wood recycling in the near future. The new sorting system will truly take metal sorting to the next level and will show big advantages to a huge range of customers.'

www.innov-x.com or www.steinert.de

SEDA

SEDA, the Austrian manufacturer of equipment for the automotive recycling sector, used the ISRI event to showcase its new de-pollution station - the SEDA-DrainTower. Powerful air pumps and proven drainage tools are claimed to ensure the quickest and safest drainage of petrol and diesel, engine and gear oil, radiator coolant, windscreen wash and brake f uid.

The SEDA team in San Diego. From left to right: Maarten Tulleken, Steve DeMayo and Edgar Root.

Succeeding the SEDA-Rapid drainage station, this compact system is said to drain virtually all liquids from a scrap car in around six minutes. Its upright design allows it to be placed practically anywhere; and since the swing arm moves from left to right, it can drain cars from two separate bays. Single- and twin-tower versions are pre-installed in the company's factory which saves time and money during installation.

The machine is ISO, CE and TÜV certified and the tank drill and pumps are ATEX certified against explosion. Other features include a pneumatic control panel and integrated filters suitable for all types of vehicle ramp.

Seda's new de-pollution station - the DrainTower.

www.seda.at

Thermo Fisher Scientific

In San Diego, Massachusetts-based Thermo Fisher Scientific Inc. demonstrated the newest member of its family of Thermo Scientific Niton hand-held XRF analysers: the Niton XL2 series XRF Alloy Analyzers. 'With the launch of the Niton XL2, we can now offer scrap recyclers

Tom Andersen of Niton demonstrates the company's Niton XL2 series XRF Alloy Analyzer.

a range of products that are engineered from the ground up to deliver a new level of productivity and profitability to today's metal recycling industry,' says Bob Wopperer, Director of Marketing and Business Development for Thermo Scientific Niton Analyzers.

The hand-held Niton XL2 and Niton XL3 series XRF analysers are purpose-built for taking measurements at any location, with accurate results available in seconds. These easy-to-use, non-destructive instruments provide integral, tamper-proof storage of all test results. Multiple communication options include Bluetooth wireless, USB and RS-232 serial communication ports.

These devices also come as standard with Thermo Scientific Niton Data Transfer (NDT) software, a suite of data management utilities that allows users to set operator permissions, print certificates of analysis to document results or operate the analyser remotely from a PC. The NDT file format preserves and protects the data from each sample analysis, ensuring that these data are not unintentionally or intentionally compromised.

The new Niton XL2 series analysers are lightweight and yet ruggedly built to withstand the harshest environments, according to the company. Ergonomically designed and featuring daylight readable icons, they incorporate customisable menus for ease of use, multi-language options and a standard analytical range of more than 25 elements. 'It is the ideal instrument for analysing metal alloys for scrap recycling,' it is claimed.

www.thermoscientific.com/niton

US Shredder & Castings Group

US Shredder & Castings Group unveiled its new heavy-duty scrap shredder model 7090 for small to medium-sized yards which has been designed specifically to compete with the 6085 model with regard to price and production.

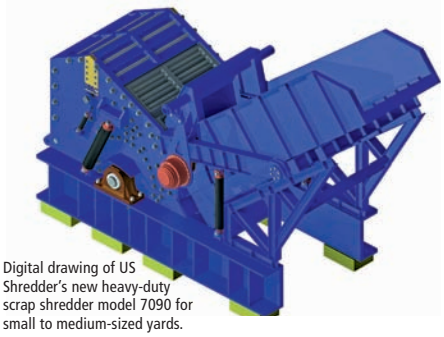
According to the company, the 12% wider rotor provides up to 30% more hammer impact, resulting in advantages in the thickness of scrap that can be shredded, the efficiency of the motor and the longevity of the machine itself.

'Many shredder experts agree that the 6085 is relatively a non-ferrous or light ferrous shredder,' comments US Shredder's President Bill Tigner. 'The basic size of the 6085 is primarily the problem. The strength and durability of our rotor will eliminate many of the maintenance and service issues associated with smaller, lighter shredders. The gap between the 6085 and 80104 models exists no longer.'

US Shredder says its engineers worked closely with its fabrication team to devise a bigger, heavier shredder that can be built at the cost of lighter competitive models. Supplied with state-of-the-art controls, hydraulics and long-lasting castings, the shredder will be offered typically with a DC 2300 HP drive system but can be provided with larger systems. An efficient, cost-effective downstream is also available.

The US Shredder & Castings Group is a manufacturer of scrap shredders, control systems, downstream systems, non-ferrous recovery, air systems, scrap shears, balers and loggers, and also offers castings, service and consulting to the worldwide scrap industry. Latest company news includes the launch of a new division based in Cleveland, Ohio, to design, develop and manufacture its non-ferrous systems which will focus on the development of upgrading systems as well as incorporating new technologies. The company has hired Mick Erdos, former national Sales Manager for SGM Magnetics, to head up this new arm. □

www.usshredder.com



Digital drawing of US Shredder's new heavy-duty scrap shredder model 7090 for small to medium-sized yards.