

# TMS2007

**136th Annual Meeting & Exhibition**

**Linking Science and Technology for Global Solutions**

**February 25 – March 1, 2007**  
**Walt Disney World Swan and Dolphin Resort**  
**Orlando, Florida, USA**

## **Exhibition Preshow Directory**

See what companies have to offer you!

### **Exhibition Dates and Hours**

Monday, Feb. 26.....noon to 6 p.m.  
Tuesday, Feb. 27.....9:30 a.m. to 5:30 p.m.  
Wednesday, Feb. 28.....9:30 a.m. to 3 p.m.

### **Features**

- Grand Opening Reception – Feb. 26, 5 to 6 p.m. Enjoy complimentary food and beverages while visiting exhibitor booths.
- Complimentary Snack – Feb. 28, noon to 2 p.m.

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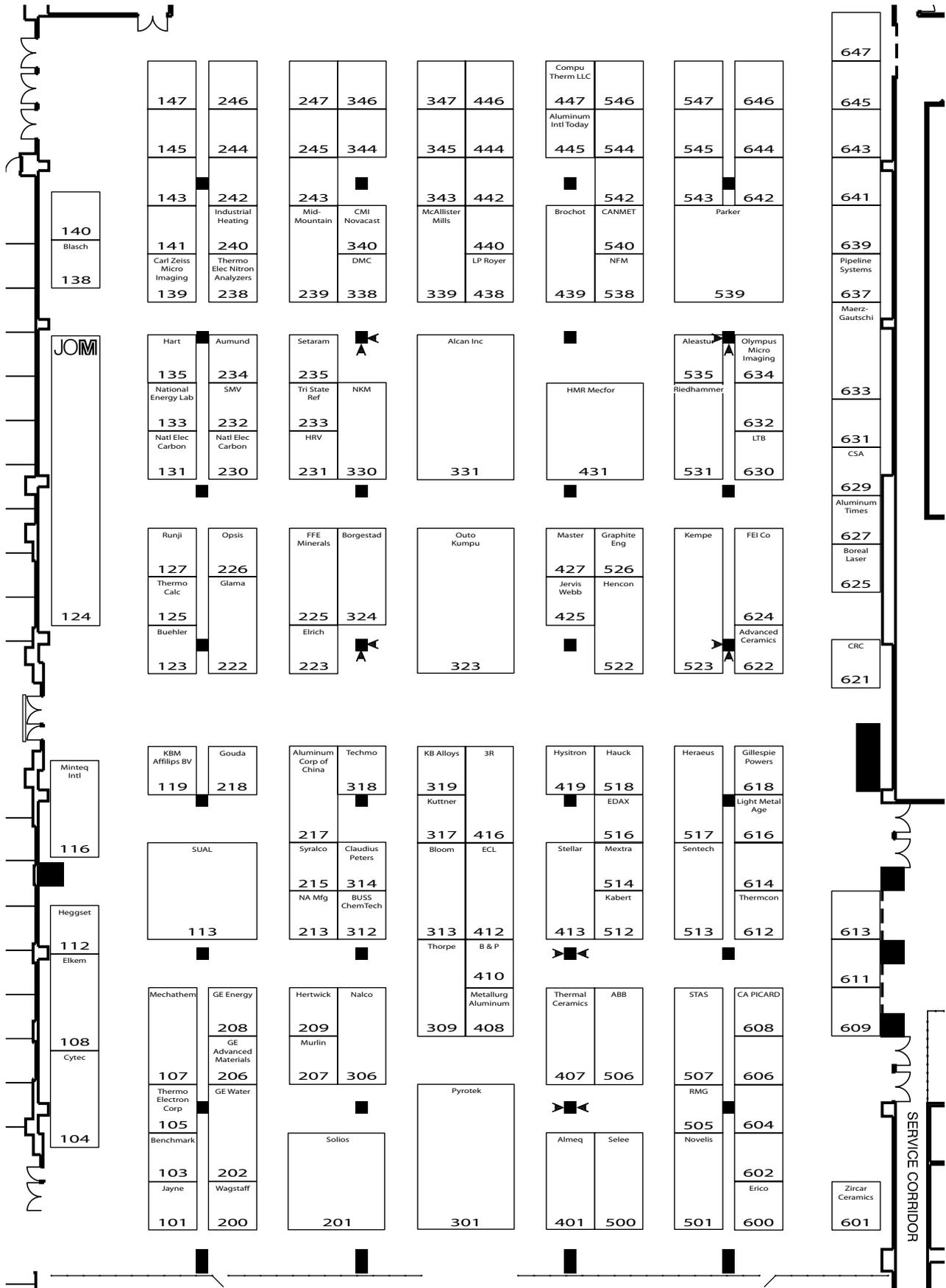
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## Walt Disney World Swan and Dolphin Resort





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## Company Descriptions

**ABB Inc.** #506  
Quebec, Canada  
[www.abb.com/analytical](http://www.abb.com/analytical)

ABB is a leader in power and automation technologies that enable utility and industry customers to improve performance while lowering environmental impact. The ABB group of companies operates in more than 100 countries and employs about 115,000 people. ABB's Analytical and Advanced Solutions business unit designs, manufactures and markets high-performance analytical system solutions and spectroradiometers for petroleum, chemical, life science, metallurgy and remote sensing/aerospace markets. Building on its 30 years of experience in analytical instrumentation, the company, through a dedicated team of engineers, offers you the best solutions with its complete range of reliable analytical instruments for inclusions and dissolved hydrogen measurement: AISCAN, LiMCA II, Prefil®-Footprinter, PoDFA and Metallographic Analysis Service.

**Advanced Dynamics Corporation** #622  
Quebec, Canada  
[www.advanceddynamics.com](http://www.advanceddynamics.com)

**Alcan Group** #331  
Montreal, Canada  
[www.alcan.com](http://www.alcan.com)

Alcan is a multinational, market-driven company and global leader in aluminum and packaging as well as aluminum recycling. With world-class operations in primary aluminum, fabricated aluminum, flexible and specialty packaging, aerospace applications, bauxite mining and alumina processing, Alcan is positioned to meet and exceed customer needs for innovative solutions and service. Alcan employs 88,000 people with operating facilities in 58 countries and regions. The company owns or has an interest in 26 smelters in 13 countries; it has enhanced its position as a leading low-cost producer of primary metal and is the worldwide leader in smelting technology. Alcan's annual smelter capacity is approximately 3.5 million tons, giving the company the largest share of low-cost capacity in the world. Technological expertise positions Alcan as the global leader and supplier of choice to the aluminum industry.

**Aleatur** #535  
Aviles Asturias, Spain  
[www.aleatur.com](http://www.aleatur.com)

Founded in the '80s, Aleatur manufactures a range of grain refiners and master alloys for the aluminium industry. Aleatur concentrates mainly in the production of AlTiB alloys in rod. In 2003 Aleatur established Aleatur of America LLC with offices and a central warehouse in Evansville, Indiana, to meet the growing demands of the Canadian and U.S. markets and to demonstrate our commitment by providing enhanced service for products. Aleatur of America LLC maintains local warehousing stock of aluminium grain refiners, master alloys and hardeners (tablets and briquettes) for primary and secondary aluminium smelters, integrated extruders and foundries. Canadian and U.S. sales functions are managed by Aleatur of America LLC having selected distribution points with strategically located warehouses throughout both countries.

**Almeq Norway AS** #401  
Langhus, Norway  
[www.almeq.com](http://www.almeq.com)

Almeq Norway AS is an engineering, marketing and production company for a wide range of equipment to the aluminium industry, in particular for smelters and foundries. The company is a leading supplier of its designed equipment as well as an export and marketing partner for other well accepted suppliers. Among machinery engineered and produced in Norway are crucible and tube cleaners, pot-liners and various electric drying and preheating systems. In cooperation with partners in Norway and abroad, Almeq delivers anode and metal transporters, and various potroom equipment. At TMS 2007, Almeq will focus on a new product range for the cast house, which includes metal treatment systems and metal weighing systems. "We will also show the results of our implementation of 3-D construction tools giving our equipment a new look."



**ALTECH SMV Ltd.**  
Kópavogur, Iceland  
[www.altech.is](http://www.altech.is)

**#230**

ALTECH will present some new equipment and systems for the aluminium industry for improved environment, efficiency and economy for anode rodding shops, turnkey anode rodding shops, and special equipment such as: automatic stub straightening machines, rod straightening presses, stub equalizing machine, stub sawing and welding system, thimble removal press, stub protection system, semi-automatic casting machines, electric heaters for heating of ladles, crucibles, stubs and anode holes and the ALTRACK anode and rod coding and tracking system. For cast house: PPM-purification of potroom metal by automatic skimmer and metal purification injection rotors.

**Aluminium International Today**  
Redhill Surrey, United Kingdom  
[www.aluminiumtoday.com](http://www.aluminiumtoday.com)

**#445**

Aluminium International Today—the leading international English language journal dedicated exclusively to the aluminium production and processing industries—is the professionals' choice! Founded in 1988 and now published six times a year, the journal consistently brings its readers a wealth of technical features aimed at providing producers and processors with information on the latest technologies, and business and market developments. Added to this is a regular digest of industry news, contracts, events, product reviews and conference coverage in regular foreign language editions, including Russian and Chinese. Aluminium International Today's editorial team has a firm background in the sector, and worldwide experience of the present day industry, to provide coverage of significant events and advances.

**Aluminium Times**  
Shoreham by Sea, United Kingdom  
[www.mmcpublishings.co.uk](http://www.mmcpublishings.co.uk)

**#627**

Aluminium Times circulates to over 65 countries of Europe and the Middle East with 4200+ copies each issue, more than any other aluminium journal. Our market is reaching primary and secondary producers, rollers and extruders plus other fabricators. From our booth at TMS, we shall distribute our World Maps and Directories of Primary Smelters, Rolling Mills and Extruders. Aluminium Times is published five times a year, and its policy is to promote the equipment and supply sector to producers, rollers and fabricators. Aluminium is freely received by managers involved in the purchase chain based in Europe and the Middle East. Our next show to attend with a booth is Arabal in Egypt.

**Aluminum Corporation of China**  
Beijing, China  
[www.chalco.com.cn](http://www.chalco.com.cn)

**#217**

Chinalco (Aluminum Corporation of China) is a backbone, state-owned enterprise under the direct leadership of China's Central Government and is the only Chinese company among the world top 30 nonferrous companies. Chalco (Aluminum Corporation of China Limited) is the subsidiary share-controlled by Chinalco. It is the People's Republic of China's largest, and the world's second largest, producer of alumina, as well as the largest producer of primary aluminum in the republic. Ranging from mining, alumina refining, aluminum smelting and downstream fabrication as well as other nonferrous metals such as molybdenum, titanium and copper, Chinalco and Chalco boast in their outstanding management teams and aim to be a world-class, multinational resources company in the nonferrous metals industry with a core business in aluminum.

**AUMUND Fordertechnik GmbH**  
Venlo, The Netherlands  
[www.aumund.de](http://www.aumund.de)

**#234**

The AUMUND Group is a worldwide leader and specialist in the design, manufacture and supply of material handling equipment and systems. At TMS 2007, AUMUND Fordertechnik will have cooling conveyors for hot and cooling lines for hot grabbed bath from the cells for the aluminium industry for improved environment, efficiency and economy. We welcome you to visit our booth at TMS 2007 in Orlando.



**B&P Process Equipment Systems LLC**  
Saginaw, Michigan  
[www.bpprocess.com](http://www.bpprocess.com)

**#410**

**See our ad on page 14!**

B&P Process Equipment (manufacturers of Baker Perkins machinery) is a supplier of specialized process equipment for the production of carbon paste, energetic materials, plastics, industrial chemicals, and for chemical separation. Many built since the 1930s are still in service. In 1952, the aluminum industry production requirements grew, and the Continuous Kneader became the preferred method of manufacturing carbon paste. Today, our batch mixers and continuous kneads are used worldwide in the production of carbon paste. B&P also offers a complete line of continuous pusher centrifuges for liquid/solid separation. B&P also has a joint venture with Battagion S.R.L., headquartered in Bergamo, Italy, for a broad line of mixing equipment.

**Benchmark Automation**  
Cleveland, Ohio  
[www.benchmarkautomation.com](http://www.benchmarkautomation.com)

**#103**

**Blasch Precision Ceramics**  
Albany, New York  
[www.blaschceramics.com](http://www.blaschceramics.com)

**#138**

Founded in 1979, Blasch Precision Ceramics manufactures complex refractory shapes via a patented injection molding process. Parts manufactured using this proprietary process have unique qualities that offer distinct advantages such as precise tolerances without machining ( $\pm 0.5\%$ ), excellent thermal shock resistance, controlled porosity, sub-particle distribution control, and outstanding resistance to spalling, erosion and metal penetration. Parts intended for aluminum applications are treated with a proprietary nonwetting agent. Whether you need low pressure stalk tubes, rotary degassers, thermocouple protection tubes, porous plugs or immersion heater tubes, Blasch can deliver. Our dedicated engineers are available to develop materials and design parts that satisfy customer needs.

**Bloom Engineering Co. Inc.**  
Pittsburgh, Pennsylvania  
[www.bloomeng.com](http://www.bloomeng.com)

**#313**

**See our ad on page 15!**

Bloom Engineering, a global combustion company, specializes in problem solving through custom engineering. Product lines include low NOx burner designs, combustion pipe train components and control systems. Bloom Engineering optimizes the burner combustion pattern required for the application. Burner designs are based on extensive experience obtained in the ferrous and nonferrous industries, development laboratory tests, and computational fluid dynamics design techniques.

**Boreal Laser**  
AB, Canada  
[www.boreal-laser.com](http://www.boreal-laser.com)

**#625**

Boreal Laser of Canada is the leading supplier of HF monitors to primary Aluminum smelters worldwide. GasFinder2 is a portable open path HF monitor used for HF emissions reduction studies and pot line roof monitoring. GasFinderFC is a portable stack or duct HF monitor. GasFinderMC is a fixed, multiple channel system that monitors multiple open paths and/or ducts or stacks at the same time. Primary benefits of the GasFinder technology are self-calibration, robustness, ease-of-use and industry-leading technical support. In the past five years, more than 100 GasFinder HF monitoring systems have been installed in over 30 smelters in 20 countries worldwide.

**Borgestad Fabrikker**  
Porsgrunn

**#324**



**Brochot**  
Tremblay en France, France  
[www.brochot.fr](http://www.brochot.fr)

**#439**

Activities in the light metal industries: Brochot designs, manufactures, carries out installation, provides after-sales services and spare parts of special machines; complete plants. We also provide full turnkey solutions and integrated process solutions. With our three departments, Brochot – SYPRIM – BERGER, we propose the full range of equipment necessary for aluminium and magnesium smelters. Brochot is a world leader with: potrooms--electric pot ramming machines, dross crucible skimming equipment (Ekumax), dross handling equipment (Ekumax); cast house--ingot casting and stacking lines, high throughput dross free ingot casting wheel; foundry--We resolve your nightmarish problems with our revolutionary process--full workshop supply or single pieces of equipment delivery among which we have developed a vacuum pressure pouring technology.

**Buehler Ltd.**  
Lake Bluff, Illinois  
[www.buehler.com](http://www.buehler.com)

**#123**

For over half a century, Buehler has been the leading manufacturer of scientific instruments and supplies for cross-sectional analysis. Buehler products are used throughout the world by metallurgical laboratories, quality control departments and failure analysis facilities for the analysis of all types of materials including ceramics, composites, semi-conductors, metals, rocks and minerals, and plastics. You can visit us in booth #123 or on our Web site at [www.buehler.com](http://www.buehler.com).

**Buss ChemTech AG**  
Switzerland  
[www.buss-ct.com](http://www.buss-ct.com)

**#312**

Buss ChemTech AG is a Swiss-based engineering company offering technology to the primary aluminium producers by providing complete solutions from metering of the raw materials to forming of the green anodes. The key equipment is the proprietary Buss Kneader for mixing of the green anode paste. Over the last 50 years, some 250 units have been supplied and most of them are still in full operation. This means that more than 50% of the world's primary aluminium is made with anodes that are based on the highly accepted "High Shear Buss Kneader Technology" of Buss ChemTech AG. For more information, please contact us directly or see us at our booth at TMS 2007. We are pleased to support you.

**CANMET, Natural Resources Canada**  
Ottawa, Canada  
[www.nrcan.gc.ca](http://www.nrcan.gc.ca)

**#540**

In collaboration with industry, the CANMET Materials Technology Laboratory uses its specialists and pilot-scale laboratory facilities in metal processing and joining, corrosion prevention, mechanical testing, materials characterization, and prototype fabrication to help companies develop new products, achieve higher performance from metal alloys, ceramics, and metal- or mineral-based advanced materials.

**C.A. Picard Intl.**  
Remscheid, Germany  
[www.picard.com](http://www.picard.com)

**#608**

Carl Aug Picard is specialized in manufacturing of high quality wear parts for continuous kneaders for the manufacture of green anodes for the primary aluminum industry. Picard manufactures kneading teeth, wearing plates/liners and screw flights out of different, highly wear-resistant qualities.

**Carl Zeiss Microlmaging**  
Thornwood, New York  
[www.zeiss.com](http://www.zeiss.com)

#139

**See our ad on page 15!**

Visit Zeiss' booth to experience the new Axio Imager upright digital microscope for routine and research. Highest optical performance is combined with maximum stability, exceptional ergonomics, and integrated intelligence for enhanced operating comfort. Also shown: Axiovert 200 MAT inverted high performance metallograph with brilliant optics, enhanced ergonomics, innovative optical techniques, unshakable stability and ease of use; LSM 5 PASCAL laser confocal system for surface topography and roughness measurement as well as the new AxioVision 4.3 imaging software for grain size analysis, nodule evaluation/identification, multiphase analysis and measurement of dendritic arm spacing.

**Chongqing Runji Alloy Co. Ltd.**  
Chongqing, People's Republic of China  
[www.runjico.com](http://www.runjico.com)

#127

We are specialized in producing all kinds of alloying tablets. Our production capacity is 30,000MT which is the largest in all of the world. We have our own manganese metal sources; state-of-the-art production management, technology and facilities; and advanced inspection machines. We can keep the very competitive price and the high quality which is the same as the Western producer. We are looking forward to our old customers, new customers and potential customers coming to our booth during the exhibition!

**Claudius Peters Projects GmbH**  
Dallas, Texas  
[www.claudiuspeters.com](http://www.claudiuspeters.com)

#314

Claudius Peters Projects GmbH, Germany, is headquartered in Buxtehude, near Hamburg, with regional offices in the Americas, Europe, China and the Far East. Claudius Peters Projects offers technologies in the field of materials handling and processing, together with turnkey and semi-turnkey systems to a wide range of industries such as aluminium, cement, gypsum and other bulk industries and coal pulverizing and injection systems for the global steel industry. Claudius Peters Projects GmbH is a wholly owned subsidiary of Langley Holdings plc, a privately controlled United Kingdom engineering group.

**CMI Novacast, Inc.**  
Elk Grove Village, Illinois  
[www.cminovacast.com](http://www.cminovacast.com)

#340

CMI Novacast, Inc., has electromagnetic pumps for nonturbulent, fully automated, metered molten metal delivery to your casting line. Our pumps have no moving parts which cause the turbulence of typical pumps. Our PG-300 pump is utilized in gravity pouring lines where you can have minimal free fall of the molten metal into your molds. The pumps can be used for transfer and for the highest quality castings - our PG-450 pump is ideal for low pressure casting. Aluminum, zinc and soon, magnesium capabilities.

**CompuTherm LLC**  
Madison, Wisconsin  
[www.compuTherm.com](http://www.compuTherm.com)

#447

**See our ad on page 27!**

CompuTherm LLC, expertise in thermodynamics of multicomponent alloys, has been providing software, databases and consulting services for industrial and academic uses since 1998. Pandat is a versatile software package for calculating phase diagrams and thermodynamic properties of multicomponent systems. Intelligence, reliability and friendly user-interface are three major features of Pandat. No initial values are required for any type of complex calculation. Pandat, when combined with thermodynamic databases: PanNi, PanTi, PanFe, PanMg, PanAl, Adamis solder, and Cu alloys available at CompuTherm, is a powerful tool for alloy design and processing optimization of a variety of advanced materials. We also provide consulting services and develop special functions for customer needs. With Pandat, you know you are calculating the correct phase diagrams!



**CSA**  
Bethesda, Maryland  
[www.csa.com](http://www.csa.com)

#629

Named as an EContent top 100 company for 2005, CSA serves as a guide to discovery for researchers. CSA specializes in publishing and distributing more than 100 bibliographic and full-text databases and journals in four primary editorial areas: natural sciences, social sciences, arts and humanities, and technology. Databases are delivered through the CSA Illumina platform, featuring site-wide access with unlimited use of extensive linking capabilities. CSA also provides Ulrich's serials research resources, MultiSearch federated searching, Community of Scholars, and PapersInvited. Researchers in more than 4,000 institutions in 80 countries use CSA's information resources.

**Cytec Industries Inc.**  
West Patterson, New Jersey  
[www.cytec.com](http://www.cytec.com)

#104

Cytec's alumina processing chemicals team has delivered breakthrough products for our Bayer Process customers — and there's more to come. From our recently renovated technology center in Stamford, Connecticut, some of the best surface and polymer chemists in the business are overcoming challenges to our customers' expansion and profitability plans. We can help our customers improve yield or production throughput, often without capital expenditures. Cytec is a leader in the development of innovative solutions for the global alumina and mineral processing industry. What can Cytec do for you?

**DMC Clad Metal Division**  
Boulder, Colorado  
[www.dynamicmaterials.com](http://www.dynamicmaterials.com)

#338

DMC is the world's leading manufacturer of explosion welded products. DMC manufactures Detaclad® explosion clad at its Nobel-clad factory in France, its Nitro Metall factory in Sweden and its Mt. Braddock Clad Metal factory in the U.S. Virtually any metal combination can be welded using the Detaclad® process. High quality clad plates are supplied for manufacture of autoclaves, pressure vessels, heat exchangers and tanks. DMC also supplies a large range of bimetal welding transition joints for making fully welded connections of aluminum-to-steel and aluminum-to-copper.

**ECL**  
Ronchin, France  
[www.ecl.fr](http://www.ecl.fr)

#412

With more than 46 years experience, ECL is the only smelter equipment manufacturer to be 100% dedicated to the aluminium industry. ECL offers complete solutions for the smelter's reduction sector (PTM, transfer and pot equipment), carbon sector (FTA cranes, anode handling and rodding shop), and metal sector. From design to erection, through to maintenance and refurbishment, ECL provides products and services adapted to the needs and demands of its customers, whatever the reduction technology. With subsidiaries in Australia, China, South Africa, Mozambique, Bahrain and the Netherlands, ECL is committed to providing the highest quality equipment and support to its customers.

**EDAX Inc.**  
Mahwah, New Jersey  
[www.edax.com](http://www.edax.com)

#516

**Eirich Machines Inc.**  
Gurnee, Illinois  
[www.eirichusa.com](http://www.eirichusa.com)

#223

Eirich Machines Inc. of Gurnee, Illinois, is a manufacturer of the Eirich Intensive Mixer, noted for the many advantages it provides the metallurgy industries. Eirich has been providing machines and complete plants to the carbon industry for more than 30 years. A constantly growing number of renowned manufacturers of carbon products all over the world are currently using EIRICH equipment. We offer the latest state-of-the-art technology for coke heating, mixing and re-mixing/cooling of pre-bake and Soederberg anode paste. The capacities of our batchwise and continuous systems range from 10- to nearly 60-tons per hour in a single line. Our latest development is the EIRICH Intensive Mixing Cascade (EMC) for the all-intensive preparation of anode paste at the lowest cost and the highest efficiency. For more information on our capabilities, please visit us in booth #223.

## **Elkem AS Materials, Ceramite Products**

**#108**

Kristiansand, Norway

[www.ceramite.elkem.com](http://www.ceramite.elkem.com)

## **Erico Inc.**

**#600**

Solon, Ohio

[www.erico.com](http://www.erico.com)

CADWELD® exothermic welding is a process for making large and complex welded electrical connections of aluminum-to-aluminum, copper-to-copper or copper-to-steel in which no external source of heat, such as electricity or gas, is required. The process produces a permanent molecular bond. CADWELD connections...assure that the current-carrying capacity of the connection is equal to or greater than the conductor's, will not loosen in service, electrical resistance will not increase with age, require no maintenance, can be made to any size or shape of conductors. CADWELD connections can be made in a highly magnetic environment.

## **FEI Company**

**#624**

Hillsboro, Oregon

[www.feicompany.com](http://www.feicompany.com)

FEI's Tools for Nanotech™, SEM, TEM, and DualBeam™ FIB/SEM instruments are ideal for studies of materials, metals and minerals, enabling advanced characterization and analysis at nanoscale dimensions. New DualBeam EBSD provides 3-D crystallographic data. FEI SEMs offer imaging and analysis solutions for challenging samples such as powders, polymers, films, carbon nanotubes, nanoparticles, porous and organic materials. Quanta SEM series adds in-situ dynamic experiment capabilities for humidity cycling, stress testing and high temperature studies. FEI TEMs, known for ease of use, deliver atomic resolution imaging and characterization of materials, with new Titan TEM supporting structural research at the sub-Å scale.

## **FFE Minerals**

**#225**

Bethlehem, Pennsylvania

[www.fls.com](http://www.fls.com)

The FLSmidth Group of companies is involved in many aspects of alumina refining and smelting and will present an overview of its technology at the 2007 TMS show. FFE Minerals provides sizing and grinding equipment for bauxite, gas suspension calcinations systems for alumina and solid liquid calcination systems for liquid purification. FFE also provides complete coke calcinations systems for use in anode production. FLSmidth Airtech provides a wide line of environmental control equipment for particulate and SO<sub>2</sub> control including electrostatic precipitators, fabric filters and semidry scrubbing systems. Moeller Materials Handling provides dense phase conveying systems, direct pot feeding systems, dosing systems for fume treatment centers and a wide line of bulk unloading and storage equipment.

## **GE Advanced Materials, Quartz**

**#206**

Cleveland, Ohio

[www.advceramics.com](http://www.advceramics.com)

GE Advanced Materials, Quartz (previously GE Advanced Ceramics) is a leading producer of advanced ceramic (nonoxide) powders, and hot-pressed and chemically vapor deposited shapes. GE produces boron nitride powders, coatings, hot-pressed shapes, and composites for metallurgical and other applications. Boron nitride coatings are nonwetting and inert with aluminum, magnesium, and related alloys and drosses, and provide outstanding lubricity and refractory properties. Innovative boron nitride solids and composites possess unique properties including outstanding release, wear resistance, and inertness in aggressive environments, which make them broadly useful for metallurgical processes.



**GE Energy**  
Kansas City, Missouri  
[www.gepower.com](http://www.gepower.com)

**#208**

GE Energy's environmental services team serves minerals, metals and materials producers worldwide with integrated and flexible emissions control technology and services for the entire system. GE Energy offers the BHA line of baghouse and precipitator air pollution control solutions, as well as CEMS, remote monitoring and diagnostics, ISO certified stack testing and more. GE evaluates your whole process and applies the right technology to help improve the performance of your existing assets. This creates value by providing cost-effective alternatives to buying new equipment or systems. GE Energy's solutions are designed to minimize operating and maintenance costs, helping provide higher performance for longer periods of time. With GE Energy's offerings, you can simultaneously focus on emissions goals and improved performance to help meet production, maintenance and profitability goals.

**GE Water & Process Technologies**  
Trevose, Pennsylvania  
[www.gewater.com](http://www.gewater.com)

**#202**

GE Water & Process Technologies is solving the world's most pressing water, wastewater and process treatment challenges with advanced solutions for municipal, industrial, agricultural, commercial and residential applications while lessening our dependence on fresh water sources. GE's broad portfolio includes chemicals, membranes (RO, NF, UF, MF), membrane bioreactors, electrodialysis reversal, analytical instruments, mobile units, packaged plants and ancillary equipment. These platforms are tied together with unique enabling technologies and financing. GE delivers value to customers by improving performance and product quality, reducing operating costs and extending equipment life.

**Gillespie & Powers, Inc.**  
St. Louis, Missouri  
[www.gillespiepowers.com](http://www.gillespiepowers.com)

**#618**

**GLAMA Maschinenbau GmbH**  
Gladbeck, Germany  
[www.glama.de](http://www.glama.de)

**#222**

GLAMA has designed and built heavy-duty mobile equipment for aluminium potrooms, cast houses and anode rodding shops throughout the world for more than 40 years. The following types of mobile equipment are available: anode changing vehicles, hammer crustbreakers, tapping trucks, anode pallet transporters, furnace charging machines, furnace tending machines, molten metal carriers, ladle charging trucks, butt cleaning manipulators and coil lift trucks.

**Gouda Vuurvast N.V.**  
Gouda, The Netherlands  
[www.goudavuurvast.nl](http://www.goudavuurvast.nl)

**#218**

Gouda is an innovative refractory producer (bricks and monolithics) with global experience and a long track record of supplying superior quality refractories all over the world, combined with innovative installation technology for more than 100 years. Gouda creates, manufactures, sells and installs top quality refractory linings. Gouda's solutions play an important role in aluminium, ferrous and non-ferrous metal, petrochemical, environmental and energy industries. Based on an industry-oriented structure and highly competent employees, we guarantee an optimal support which results in efficiency and reduction of refractory cost. Also Gouda's R&D department is conducted in close cooperation with its customers and renowned research institutes. Gouda's quality assurance is based on the international ISO 9001 standard. Besides our head office in Gouda, we also have sales locations in Australia, Belgium and Germany.



## **Graphite Engineering & Sales**

**#526**

**Greenville, Michigan**

**[www.graphite-eng.com](http://www.graphite-eng.com)**

Graphite Engineering & Sales is a customer-oriented company specializing in cutting and machining graphite products. The level of excellence we demand of our quality and service have provided Graphite Engineering with continuing success and growth. Graphite Engineering will have on-hand knowledgeable sales engineers to answer any questions you may have. Graphite Engineering specializes in machining graphite per your specifications. Graphite Engineering will be displaying nuts and bolts, brazing fixtures, degassing shaft and rotor, canister inserts, run-out plates, molds, secondary billet casting rings, heating elements, electrodes, crucibles, sintering trays, sintering boats.

## **Hamilton Research & Technology Pvt. Ltd.**

**#135**

**Kolkata, India**

**[www.hamiltonresearch.com](http://www.hamiltonresearch.com)**

Hamilton Research & Technology Pvt. Ltd. (HART) provides process automation solutions for the aluminum industry. HART's cost-effective technology solutions are available for Soederberg and prebaked pots of various sizes. HART's distributed control system for aluminum smelters uses individual Electronic Pot Controllers (EPC) as distributed control elements connected to a central computer system. Proprietary control algorithm, designed by internationally renowned aluminum experts and developed by Indian software experts, is customized to parameters of individual smelters leading to optimum current efficiency. Systems have been implemented in major aluminum smelters in India (INDAL, HINDALCO, MALCO) and in Russia (SaAZ, BrAZ). HART has implemented a third generation heating regulation system for carbon anode baking plants. Individual controllers control the air inlet, draught and burner firing to provide accurate adherence to the ideal heating curve.

## **Hauck Manufacturing Co.**

**#518**

**Lebanon, Pennsylvania**

**[www.hauckburner.com](http://www.hauckburner.com)**

Hauck Manufacturing Company designs, builds and markets a wide range of combustion products. Hauck burners, blowers and controls products are key components in industrial heat processing equipment used by most industries utilizing thermal energy. In business for over a century, Hauck has earned an outstanding reputation for its products, and the loyalty of customers nationally and in world markets.

## **Heggset Engineering**

**#112**

**Norway**

**[www.heggset.no](http://www.heggset.no)**

Heggset Engineering has supplied the aluminium industry with equipment and engineering services for more than 30 years. The company has built a good reputation in the market by providing innovative solutions that are built to last. Please visit [www.heggset.no](http://www.heggset.no). Cinnova Inc. of Norway is representing Heggset Engineering in worldwide sales and marketing of their innovative technology for Aluminium Smelters and Remelters. Please visit [www.cinnova.no](http://www.cinnova.no). The main focus is on cast house and anode rodding plant technologies and services. A range of standard products can be supplied, as well as custom built versions. In addition, special machines can be developed and supplied based on customer needs.

## **Hencon BV**

**#522**

**Uft, The Netherlands**

**[www.hencon.nl](http://www.hencon.nl)**

Backed by more than 50 years of experience, Hencon Holland is a worldwide supplier of "Special Mobile Equipment" for the aluminium industry. Besides the main plant in The Netherlands, Hencon has production and maintenance facilities in South Africa, Mozambique and Russia. The delivery program covers the complete range for the potroom and the cast house, such as furnace charging machines; furnace tending machines; hot metal transport and tilting vehicles; multipurpose vacuum cleaners; anode pallet transporters; tapping trucks; anode changing machines; alumina/fluoride/soda/bath feeding trucks; anode covering trucks; cavity cleaners; crust breakers; anode briquette feeders; rack raising trucks; manifold handling trucks; anode spading/tamping trucks; side loading forklift trucks; and platform lifting trucks.



**Heraeus Electro-Nite Co.**  
Langhorne, Pennsylvania  
[www.electro-nite.heraeus.com](http://www.electro-nite.heraeus.com)

**#517**

Heraeus Electro-Nite Co., the market leader in molten metal sensor technology, has introduced the 9 Box Control strategy to many smelters worldwide. This provides a total system for a more efficient cell operation with a stable bath temperature and chemistry control. The incorporation of the Cry-O-Therm superheat sensor, CV-Therm (bath temperature and CVD) and Positherm-AL© (bath temperature) in aluminum reduction cell control have given improved metal production, less energy consumption and longer expected pot life. The Cry-O-Therm system will be on show to demonstrate the measurement of superheat. Also, the Diligance IV AI, the latest technology for bath temperature/CVD measurement, combined with the latest data logging/IR downloading capabilities will be displayed.

**Hertwich Engineering**  
Braunau, Austria  
[www.hertwich.com](http://www.hertwich.com)

**#209**

Based in Braunau, Austria, with an office in the U.S.A., this supplier of equipment to the aluminum industry will be showcasing its entire line of products, including: fully automatic inline and stand-alone ultrasonic inspection stations, continuous homogenizing and cooling systems ranging from 8,000 tpy up to 160,000 tpy, fully automatic billet sawing and stamping plants, briquetting presses, fully automated billet and log stacking systems complete with bundle manipulation. Newly introduced equipment will include ingot casting lines (water free), contaminated scrap melting furnaces, rotary tilting furnaces and complete compact remelt operations for the processing of extrusion scrap into fully homogenized extrusion billet.

**HMR Group AS**  
Husnes, Norway  
[www.hmr.no](http://www.hmr.no)

**#431**

For exactly 50 years, HMR Group of 10 companies has been supplying products, equipment and engineering advice to the aluminium industry. Our potroom vehicles, anode stud bars and collector bars are used in all Hydro Aluminium's smelters in Norway. We obtained this position by continuous development of our competence, reliability and competitiveness. Contact us for information regarding Potroom vehicles and equipment, including: Tapping, Anode Changing, Pot Tending, Feeders, Spading, Crust, Breakers, etc. and Pot construction and start-up, including: Potshells, Superstructures, Busbars and flexibles installation, Anode stud bars, Collector bars, Anode yoke and rod assemblies. During TMS 2007, we will feature an upgraded model of Tapping Vehicle.

**HRV Engineering Group**  
Reykjavik, Iceland  
[www.hrv.is](http://www.hrv.is)

**#231**

HRV Engineering Group is an alliance of three of Iceland's largest and long-established engineering consultants – Hönnun, Rafhönnun, and VST. HRV Engineering Group has played a leading role in a range of local and international construction projects, including Iceland's three aluminium smelter plants. Drawing on extensive professional skills and technical expertise, acquired over decades of operating in some of the world's extreme climates and toughest geological conditions, HRV Engineering Group offers clients the portfolio of services, advice and solutions required to take any project, regardless of size, from drawing board to completion. These range from prefeasibility and environmental impact assessment, to design, construction and project management. HRV is the EP engineer for the NORDURAL expansion project in Iceland and a partner to Bechtel regarding the new 322,000 ton Alcoa Fjardaal smelter.

**Hysitron**  
Minneapolis, Minnesota  
[www.hysitron.com](http://www.hysitron.com)

**#419**



## Industrial Heating Magazine

#240

Pittsburgh, Pennsylvania

[www.industrialheating.com](http://www.industrialheating.com)

Industrial Heating is the leading thermal processing journal in the world. As the industry's largest and most preferred publication, Industrial Heating has over 23,000 monthly subscribers. Written for thermal process engineers, articles deal with nonferrous and ferrous thermal processing technologies and practices. Please come to our booth and take a FREE copy of our publication.

## Industries 3R Inc.

#416

Quebec, Canada

[www.industries3r.com](http://www.industries3r.com)

Leader in the designing and the manufacturing of high temperature industrial products, Industries 3R owes its fame to 28 years of expertise in research and development. Thanks to the many made-to-measure projects developed by our team, numerous companies protect and maximize the performance of their equipment and their manufacturing processes. Our innovations and expertise enable us to occupy an enviable presence in foundries, aluminum plants, iron and steel manufacturers, pulp and paper mills, petrochemical industries and thermal plants. Over the past years, our products have also met the standards required by contractors specialized in plumbing, heating or insulation, as well as furnace, stove and fireplace manufacturers.

## Jayne Industries

#101

See our ad on page 15!

Stoney Creek, Ontario, Canada

[www.jayneindustries.com](http://www.jayneindustries.com)

Jayne Industries manufactures the complete line of stainless steel V anchors, c-clips, studs and threaded products for refractory and ceramic fiber linings. Jayne has provided products and services to the aluminum, other nonferrous and ferrous industries for over 30 years. Hexmesh and accessories, as well as Jayne large volume refractory pan and paddle mixers, are manufactured at our Stoney Creek, Ontario, Canada facility. Jayne also supplies cast alloy castings and Fibercon stainless steel fibers for refractories. Visit our booth (#101) to further discuss your anchor and hardware requirements.

## Jervis B. Webb Co.

#425

Farmington Hills, Michigan

[www.jerviswebb.com](http://www.jerviswebb.com)

Jervis B. Webb Company is a recognized leader in the field of custom engineered material handling systems and equipment. Our full line of integrated material handling products efficiently automates rod/anode assembly, and green or baked anode operations. Our product line includes: Automatic Guided Vehicles, Power & Free conveyors, Roller conveyors, Heavy-duty chain conveyors, Automated Storage and Retrieval Systems, and custom designed automation equipment. From raw materials handling and transport ... to anode, molten metal and cast ingot handling ... to automated storage of work-in-process and finished product ... Webb has nearly 50 years of material handling experience in the aluminum Industry.

## JOM

#124

Warrendale, Pennsylvania

[www.tms.org](http://www.tms.org)

JOM, the monthly journal of The Minerals, Metals & Materials Society (TMS), will feature its new online page-turning edition, which brings the print version to life online. Also, guest speakers from the TMS 50th Anniversary Plenary Breakfast Series will be at the booth from 11 a.m. to 1 p.m. each day to further discuss the 50 Greatest Materials Moments in History and the future of materials science and engineering. Cast your vote for the top ten materials moments before December 31 at [www.materialmoments.org](http://www.materialmoments.org)!

**Kabert Industries Inc.**

#512

Villa Park, Illinois

[www.kabert.com](http://www.kabert.com)

Since 1960, Kabert Industries Inc. has been furnishing the aluminum industry with casting supplies. Fiberglass cloth, an inexpensive and effective method of nonferrous molten metal distribution and filtration, is specially woven for the aluminum industry. In addition to roll goods, the cloth can be cut and sewn into mini channel bags, trough socks and other shapes. Other products available include gaskets, primarily used to seal and insulate troughs. Kabert also is a leading supplier of vacuum formed shapes and board. New product enhancements are routinely developed to improve the overall performance of the products we make. We are proud of our reputation in the aluminum industry. Our total commitment is focused in continuing to offer our customers across the world the latest technology and unparalleled service at competitive rates.

**KB Alloys Inc.**

#319

Robesonia, Pennsylvania

[www.kballoys.com](http://www.kballoys.com)

KB Alloys Inc. produces aluminum-based master alloys including TIBOR , TITAL , and TICAR grain refiners, binary hardeners and special purpose alloys, including BORAL , strontium-aluminum, strontium-boron (STROBOR ) and beryllium aluminum. The master alloys are available in a variety of convenient-to-use forms including coiled rod, cut rod and ingot. With the use of statistical process control, KB Alloys controls its processes from alloy conception through all the manufacturing steps, including raw materials, process monitoring and product testing, to on-time delivery of quality products. Anglo Blackwells Ltd. produces strontium-aluminum and other specialty alloys. KB Alloys is the exclusive distributor for NGK Metals' beryllium-aluminum and Bostlan's compacted hardeners. KB Alloys recently announced a joint venture in China with plans to offer products into the Asian market from this operation.

**KBM AFFILIPS B.V.**

#119

Oss, The Netherlands

[www.kbmaffilips.com](http://www.kbmaffilips.com)

KBM AFFILIPS is dedicated to the development, manufacture and marketing of specialty master alloys for the metallurgical industry. The company is backed by manufacturing facilities located in the Netherlands (KBM) and Belgium (AFFILIPS). Both KBM and AFFILIPS are fully ISO 9000-ISO 14001 approved and offer the most complete range of master alloys for the metallurgical industry. Products for the aluminium industry include AlTiB, AlTiC, AlB, AlSr as well as a full range of hardeners, tablets and briquettes (a.o. Cr, Fe, Mn and Ti). The very complete product range for the copper industry includes products like CuB, CuCo, CuCr, CuFe, CuMg, CuSi, CuTi and CuZr. KBM AFFILIPS is also the right address for NiMg (and complex FeNiMg), additives for superalloy production as well as Pb and Zn master alloys.

**Kempe International**

#523

Geelong, Victoria, Australia

[www.kempe.com.au](http://www.kempe.com.au)

Kempe International is a leading service and equipment supplier providing turnkey facilities, specialized equipment, engineering consulting and maintenance support to the worldwide aluminium smelting industry. Kempe offers products and services in a variety of areas including potrooms, cast house, anode handling and cleaning, rodding shop, and materials handling and processing. Kempe has extensive experience in the smelting industry with clients in Australasia, Europe, India, Middle East, North America, South America and Southern Africa and is keen to work with new clients anywhere in the world. Kempe has permanent operations in Australia, Mozambique and the United Arab Emirates.

**Kuttner LLC**

#317

Port Washington, Wisconsin

[www.kuttnerllc.com](http://www.kuttnerllc.com)

Kuttner LLC is the North American office for Kuttner GmbH, Wuerz GmbH, and Luehr Filter GmbH; all recognized leaders in process controls, heat recovery, and gas cleaning systems for industries discharging hot crude and toxic gases, and particulate matter.

**L.P. Royer Inc.**  
Lac-Drolet Quebec, Canada  
[www.lproyer.com](http://www.lproyer.com)

**#438**

Since 1934, L.P. Royer has made and developed specialized safety footwear, even if it is for protection against molten metal infiltration, specialized chemical boots, for extreme cold or simply for a general use, available for man or woman. L.P. Royer Inc. has the solution to protect feet from injury. With the certification ISO 9001-2000, our products meet the Canadian (CSA), the American (ASTM) and the European (CE) standards. L.P. Royer Inc. is proud to supply potroom boots for all the aluminum companies in Canada and part of Alcoa's group in the United States. You can learn more about L.P. Royer Inc. in visiting our Web site at [www.lproyer.com](http://www.lproyer.com).

**LTB Lufttechnik Bayreuth GmbH & Co. KG**  
Goldkronach, Germany  
[www.ltb.de](http://www.ltb.de)

**#630**

**Maerz-Gautschi Industrieofenanlagen GmbH**  
Taegerwilen, Switzerland  
[www.maerz-gautschi.ch](http://www.maerz-gautschi.ch)

**#633**

Gautschi™, the Aluminium Division of Maerz-Gautschi, is a leading supplier of equipment for primary aluminium cast houses and recycling plants. The product range includes: melting – and holding furnaces; horizontal D.C. casting plants; open mould ingot casting and stacking plants; vertical D.C. casters for extrusion billets; AIR GLIDE® and AIRSOL VEIL® mould technology; pusher-type furnaces for rolling slab; homogenizing furnaces for extrusion billet and rolling slab; multiple chamber furnaces for coil and foil annealing; single coil annealing furnaces.

**Master Alloys Co.**  
Wabash, Indiana  
[www.wabashalloys.com](http://www.wabashalloys.com)

**#427**

Master Alloys will be exhibiting its popular 100% pre-weighed hardeners. The elements are packaged in moisture-proof containers. The product is unique in that it is 100% element in powder form, which increases the surface area insuring fast dissolution. Because it is 100%, it reduces inventory and is more economical than other forms of hardeners. Because of the unique packaging, the product is also easy to use, easy to store, has minimum metal contamination, minimum oxidation of melt and guaranteed composition. Master Alloys also supplies grain refiners and specialty alloys to the aluminum industry.

**McAllister Mills, Inc.**  
Independence, Virginia  
[www.mcallisttermills.com](http://www.mcallisttermills.com)

**#339**

Visit us at TMS 2007 in Orlando, Florida! McAllister Mills has several products we will show along with our standards. Our Maxsil CF6-2000 is the original Silica Fiber Needled Blanket, good for temperatures to over 2000 F. Maxsil CF6-2000 is shot-free as well as one of the most durable Blanket products on the market at high temperature. Other products of note are specialized oven/furnace door seals, coil pads, furnace curtains filter bags and socks, gaskets, specialized trough cover, etc. Tritex LLC, our insulation division, has a new alternative to RCF/Ceramic Fiber. The new Blanket product is suitable for temperatures to 1800 F, is biosoluble and is strong and easy to fabricate. The new Blanket is available ¼"-1" thickness and a standard 9# density.

**MECFOR Inc.**  
Chicoutimi, Quebec, Canada  
[www.mecfor.com](http://www.mecfor.com)

**#431**

MECFOR, a Canada-based corporation, designs, fabricates and supports specialized vehicles and process equipment for the primary and secondary aluminium industry worldwide. Our understanding of the aluminium production processes makes us an excellent turnkey project partner as we can actively and effectively participate in the determination of the best global equipment solution with our client. Our focus being the aluminium industry, all of our personnel clearly understand the harsh working environment of smelters, and our equipment is designed accordingly. We specialize in multifunctional cast house vehicles, bath crucible handlers, anode and crucible haulers, underpot cleaning vehicles as well as anode grooving machines and other custom process equipment.



**Mechatherm International Ltd.**  
Kingswinford, West Midlands, United Kingdom  
[www.mechatherm.co.uk](http://www.mechatherm.co.uk)

#107

Mechatherm, privately owned and formed in 1973, has developed a worldwide reputation specializing in furnaces for aluminium, copper and brass industries. The product range: aluminium foundry - melting and holding, rotary, scrap charging machines, vertical D.C. casting machines, turnkey foundry installations; aluminium extrusion - log heaters and shears, ageing ovens, automatic ageing oven basket handling systems and die ovens; aluminium heat treatment - air recirculated furnaces; aluminium dross reclamation - joint venture with Jesse Brough Metals, custom designed for the dross to be recycled - the full range of dross recycling plants include refining and separation into useable products and remelting of aluminium metallics; copper and brass extrusion – gas-fired billet heating furnaces, roller hearth and walking beam.

**Metallurg Aluminium**  
Rotherham, South Yorkshire, United Kingdom  
[www.MetallurgAl.com](http://www.MetallurgAl.com)

#408

Metallurg Aluminium is a dynamic, multilingual and multicultural organization, combining the strengths of its members, London & Scandinavian Metallurgical Co. Limited (LSM) and Companhia Industrial Fluminense (CIF). With its two manufacturing facilities, located in the UK and Brazil, its professional worldwide sales force and global distribution network, Metallurg Aluminium provides global solutions that turn today's ideas into tomorrow's innovations. Its diversified product portfolio includes aluminium grain refiners, master alloys, metal treatment and modification alloys, hardeners – including compacted powder products, powders and rod feeding and decoiling equipment. Our wide range of compacted powder products includes chrome, copper, iron, manganese, nickel and titanium in our ALTAB™ and mini-ALTAB™ products renowned for their high and consistent elemental yields and ease-of-use. Metallurg Aluminium - a long-time, proud supporter of TMS!

**MEXTRA Eng. Extrativa de Metalls**  
Jardim Inamar Diadema SP, Brazil  
[www.mextrametal.com.br](http://www.mextrametal.com.br)

#514

Producing ferro alloys and nonferrous metals, MEXTRA started its activities in 1978, as a result of the aspirations of a metallurgical engineer, Eduardo Barchese, who wanted to transform his doctoral thesis into an enterprise. Before long, MEXTRA reached an outstanding position in the market, producing metals and metal alloys which had never been produced in Brazil. Today, dynamic and aggressive management brings the company to expand its businesses, obtaining international recognition. With the production and grinding of metals, MEXTRA increased its product range and developed a line called Mextral alloying tablets. They are alloying tablets for aluminum, such as iron, chromium, manganese, copper and titanium which add excellent mechanical properties to aluminum. We have become well-known supplying aluminum manufacturers such as Alcan, Alcoa, CBA, Billiton, Aluvale and others, with this line of products.

**Mid-Mountain Materials Inc.**  
Mercer Island, Washington  
[www.mid-mountain.com](http://www.mid-mountain.com)

#239

Mid-Mountain Materials Inc., dedicated to the aluminum industry for 30 years, provides industrial textiles that enable the industry to move toward energy efficiency and environmental compliance. Our engineered sealing systems use our proprietary ARMATEX® QF refractory coated textiles. We custom design systems for reduction cells that aid in energy conservation, contain unwanted pollutants, and maximize pollution control equipment. In addition to our ARMATEX® coated fabrics, other thermal barrier products in our high performance textile and insulation product lines include: thermal insulation materials, engineered fabricated components, leached silica cloth, and refractory specialties for use in carbon bake and cast house areas for fuel efficiency, safety and maintenance.

M

**MINTEQ International Inc.**  
Slippery Rock, Pennsylvania  
[www.minteq.com](http://www.minteq.com)

**#116**

MINTEQ International Inc. is one of the world's largest producers of monolithic and specialty refractory lining systems for the steel, aluminum, cement, glass and power generation industries. MINTEQ is a resource- and technology-based company with manufacturing, and research and development, facilities around the globe. An industry leader at developing and introducing new and innovative technologies to the aluminum industry, MINTEQ's OPTISHOT™ AL and FAST FIRE™ AL shotcrete castable lining systems provide aluminum producers with the most durable refractory maintenance lining systems in the marketplace. The OPTISHOT™ AL and FAST FIRE™ AL lining systems also provide the fastest refractory installation method to rebuild and construct complete new furnaces without extensive engineering, complicated placement techniques and extensive lead times.

**Murlin Chemical Inc.**  
West Conshohocken, Pennsylvania  
[www.murlinchemical.com](http://www.murlinchemical.com)

**#207**

Bone ash is the premier instrument in providing consistent protection in its application to molds, refractory troughs, surfaces, dross bins, ladles, or any other tools that are exposed to the hostile properties of molten metals. Bone ash also acts as a thermal barrier to further protect against any damage caused by the intense temperatures found with molten metals. Bone ash may be applied as an aqueous slurry, dry powder, or any other method available to coat your exposed surfaces. Murlin Chemical Inc. has partnered with the nonferrous metals industry in the manufacture of the industry's premium mold release agents. Located in West Conshohocken, Pa., we produce aluminum grade natural bone ash, natural bone ash and synthetic bone ash. These products are accepted worldwide and have been universally accepted for more than 25 years. To learn more, please stop by and visit us at booth 207. We will be delighted to introduce ourselves.

**Nalco Company**  
Naperville, Illinois  
[www.nalco.com](http://www.nalco.com)

**#306**

Nalco Company is the world's largest water, and process chemicals and services provider to industrial end markets. We serve companies across a broad spectrum of industries and offer a wide range of programs to help customers improve their efficiency and productivity in an environmentally responsible manner. Our products and services' focus is on improving overall plant economics, optimizing equipment efficiency, addressing compliance issues and increasing operator capabilities and effectiveness. To ensure that our approach to your business is comprehensive, we carefully monitor interactions between the mechanical, operational and chemical aspects of your system. From mine to metals, Nalco is your total solution provider.

**National Electrical Carbon**  
Fostoria, Ohio  
[www.morgancarbon.com](http://www.morgancarbon.com)

**#131**

Morgan Carbon's National Electrical Carbon Products site, located in Fostoria, Ohio, is a producer of one of the broadest ranges of carbon and graphite products in the world. A number of these products are widely used in the metallurgical industry, including flux/injection tubes, pump shafts, rotor heads, porous carbon and graphite for filters and gas diffusers, and electrical brush block. National's Greenville, South Carolina facility uses the brush block to produce carbon brushes for a variety of process-critical electric motors. National has a long history of quality service to several major metallurgical accounts and various suppliers to the industry.

**National Energy Technology Laboratory**  
Albany, Oregon  
[www.netl.doe.gov](http://www.netl.doe.gov)

**#133**

The National Energy Technology Laboratory is the only U.S. Department of Energy laboratory devoted to fossil energy research. NETL specializes in formulating, characterizing, and/or melting of most metals, alloys and ceramics; casting and fabrication, prototype development; and the recycle and remediation of waste streams associated with these processes. NETL is one of the few places in the world where alloy development, melting, casting, fabrication, physical and chemical analyses and performance testing (wear, erosion and various forms of corrosion) can be performed in one place.



**National Filter Media**  
Salt Lake City, Utah  
[www.nfm-filter.com](http://www.nfm-filter.com)

**#538**

In 100 years, National Filter Media has become one of the world's largest filter media companies. NFM makes filtration products for vacuum filters, pressure filters and dust collectors. NFM also provides OEM filter replacement parts and consulting services. Our filter frames for the alumina industry have become the industry standard by dramatically increasing flow on the press floor. NFM has also developed new fabrics that are increasing filter life by 150%. Today's metals market is expanding and changing. Companies must get maximum output while maintaining quality. NFM's experts work to help their customers take advantage of today's newest technologies.

**NKM Noell Special Cranes GmbH**  
Wurzburg, Germany  
[www.nkm.com](http://www.nkm.com)

**#330**

NKM Noell is a leading supplier of cranes and special equipment to the aluminium industry for reduction, carbon and rodding. Supply covers the complete engineering, detail design, manufacturing, start-up and commissioning for individual equipment and turnkey projects: aluminium reduction - pot tending cranes, anode jacking frames, transfer gantry systems, cathode crane, crucible heaters, crucible and pipe cleaning machines, anode clamps; aluminium carbon - furnace tending cranes, flue wall brushing and straightening machines, anode stacker cranes; aluminium rodding - green and baked anode handling, casting and mating stations, stem and pin monitoring, stem brushing and repair, butt precleaning and stripper, butt handling/treatment, bath handling/treatment, loading/unloading station.

**North American Manufacturing Co. Ltd.**  
Cleveland, Ohio  
[www.namfg.com](http://www.namfg.com)

**#213**

North American Manufacturing is a solution provider for combustion and process control systems. The company produces and sells combustion hardware as well as complete systems including installation drawings and complete control systems. North American has been providing systems for the aluminum industry for better than 40 years, specializing in energy savings, emissions reduction and melt rate optimization.

**Novelis**  
Voreppe, France  
[www.pae.novelis.com](http://www.pae.novelis.com)

**#501**

Novelis PAE is recognized as an expert by aluminium professionals. This company supplies equipment for continuous strip casting (JUMBO 3C and JUMBO 3CM), in-line molten metal treatment (ALPUR, JETCLEANER, PDBF, CFF), automatic slab casting (D.C. casting machines, molds, automation system). NOVELIS PAE offers also extended after-sales services including sales of spares and consumables, and on-site technical support. Numerous cast houses have already placed their trust in its technology. From the engineering studies at the start of your project through successful completion including construction, supervision of installation, start-up and staff training, you will benefit from Novelis PAE's experience and professionalism.

**Olympus Micro Imaging Division**  
Orangeburg, New York  
[www.olympusmicroimaging.com](http://www.olympusmicroimaging.com)

**#634**

**Opsis AB**  
San Marcos, California  
[www.opsis.se](http://www.opsis.se)

**#226**

Opsis Inc. is the North American supplier of open path monitoring systems for air quality monitoring, continuous emissions monitoring (CEM) and process control. The ultraviolet DOAS technology, developed by Opsis, has received international approvals and provides customers with system solutions for several applications. All systems feature dynamic calibration capability and simple hardware configurations. The ambient system is an EPA approved equivalent method for SO<sub>2</sub>, NO<sub>2</sub> and O<sub>3</sub>. Other Opsis benefits include DOAS system packages, automatic monitoring systems, multigas and multipath systems, fast and continuous measurements, modular construction and simple report generations. Opsis equipment applications include trend monitoring, street level air quality monitoring, and fugitive emissions fence line monitoring among many others.

**Outokumpu Technology Ltd.**  
Burlington, Ontario, Canada  
[www.outokumputechnology.com](http://www.outokumputechnology.com)

**#323**

**See our ad on the inside front cover!**

In 2001, Outokumpu, a leading global metals and technology group, expanded its offerings to the alumina and aluminum industries. Outokumpu Technology specializes in the design, engineering and delivery of alumina calcining plants (Lurgi Metallurgie), paste plants (KHD Aluminium Technology), rodding shops (Aisco and KHD Aluminium Technology) and casting machines (Aisco). Outokumpu's long term commitment to the metals industries, combined with the technologies of these three reputed suppliers, positions Outokumpu Technology to be the technology and service partner of choice for the aluminum industry. E-mail: [aluminum.technology@outokumpu.com](mailto:aluminum.technology@outokumpu.com)

**Parker Hannifin**  
Ulricehamn, Sweden/Wadsworth, Ohio  
[www.parker.com](http://www.parker.com)

**#539**

Parker is the world's leading diversified manufacturer of motion and control technologies and systems. Parker provides precision engineered solutions for a variety of commercial mobile, industrial and aerospace markets. We design and manufacture optimal systems using fluid connectors, hydraulics, pneumatics, instrumentation, refrigeration, filters, electromechanical components, and seals required in motion-control systems. Parker's experience in the aluminum industry spans more than 30 years. Parker has equipped machinery in all phases of aluminum production including smelters, casters and extruders through grinders, rolling mills and strip processing lines, etc.

**Pipeline Systems Incorporated**  
Concord, California  
[www.pipesys.com](http://www.pipesys.com)

**#637**

**See our ad on page 24!**

Pipeline Systems Incorporated (PSI), established in 1979, is one of the world's leading engineering companies specializing in design of slurry transportation systems. Specialty services include laboratory analysis, steady state and transient hydraulic design, pipeline route selection, evaluation of the hydraulics for complex high pressure piping systems and/or non-newtonian fluids, pipeline material selection, mainline pump design and selection, computer modeling, SCADA, and telecommunications systems. PSI is a CSIA certified engineer offering integration, implementation, maintenance and support services for plant automation and control systems. PSI is able to provide total solutions that integrate control and information systems using a broad spectrum of products and manufacturers including software, hardware, communications and the Internet.

**Pyrotek Inc.**  
Spokane, Washington  
[www.pyrotek.info](http://www.pyrotek.info)

**#301**

From concept to casting, Pyrotek partners with you to improve process performance through enhanced melt quality and metal processing. Pyrotek's technical experts are experienced in every aspect of aluminium production, from primary and secondary smelting, to holding, degassing, filtration and casting. Pyrotek's Metallurgy and EMP Technologies divisions provide products and services that improve productivity, reduce energy consumption, increase metal recovery and improve product quality. As your supply partner, Pyrotek helps you utilize advancements in technologies and products to better your bottom line. Visit Pyrotek at TMS to discuss how Pyrotek's solutions can improve your aluminium process.



**Rex Materials Inc.**  
**Fowlerville, Michigan**  
[www.rexmaterials.com](http://www.rexmaterials.com)

**#505**

Rex Materials has emerged as a world leader in helping our customers solve their heat containment problems. We specialize in developing and delivering products that solve specific customer needs utilizing our custom-engineered, high-temperature material systems and refractory products. Our materials include Pyrolite® ceramic fiber, FUSIO2N™ fused silica and Pyroform™ refractory. Rex Materials has two manufacturing facilities along with a separate design, tooling and prototype center. We have a team of engineers, designers and material scientists ready to help you solve your heat dilemma. From high-temperature insulation to molten metal handling systems to specialty heaters, we deliver solutions.

**Riedhammer GmbH**  
**Nuremberg, Germany**  
[www.riedhammer.de](http://www.riedhammer.de)

**#531**

Since 1925, Riedhammer GmbH has specialized in the design and construction of high productive, state-of-the-art ring pit furnaces for baking of high quality anodes and cathodes for the aluminum industry, as well as electrodes for the steel industry. More than 105 furnaces, in 25 different countries, have been built or modernized based on this concept. Riedhammer also supplies the pertinent equipment for the aforesaid furnaces like Auto Firing System for a wide range of fuels, waste gas treatment systems, tending cranes and conveyors, and provides outstanding product quality, maximum fuel efficiency, reliability and world-class environmental friendliness in an affordable way.

**SELEE Corporation**  
**Hendersonville, North Carolina**  
[www.selee.com](http://www.selee.com)

**#500**

SELEE Corporation, born as a division of an international aluminum company, introduced ceramic foam filters of SELEE structure as a medium for filtering molten aluminum in the 1970s. SELEE immediately established a reputation as the world leader in aluminum melt treatment and filtration technology and for ceramic material development and innovation. SELEE Corporation is dedicated to new product development, continuous improvement and innovation, always building on its strong background in the aluminum industry. In the aluminum industry, SELEE is key to achieving the highest levels of metal cleanliness and quality. SELEE is the only supplier of molten metal handling and treatment products in the world that is certified to ISO 9001 and ISO 14001 standards.

**SenTech Precimeter Inc.**  
**Gothenburg, Sweden**  
[www.precimeter.se](http://www.precimeter.se)

**#513**

**See our ad on page 24!**

**Setaram Engineering**  
**Caluire, France**  
[www.setaram.com](http://www.setaram.com)

**#235**

For more than 30 years, Setaram has been producing anode baking furnace firing and regulating systems for the aluminium industry. The Setaram Firing Systems are available for any type of ring furnace (open or closed type) and for any type of fuel (light or heavy fuel oil, natural gas, coal gas or LPG). Setaram proposes a complete hardware and software package to control and monitor the whole anode baking process through the following functions: central regulation, real-time supervision and data management. The heating programming and regulating techniques are operating in aluminium plants all over the world. Dedicated to constantly improving our technology, Setaram Firing Systems set the standards for the industry.

**SMV AS**  
**Norway**  
[www.smv.as](http://www.smv.as)

**#232**

SMV AS for potrooms: special crushers and cooling lines for hot grabbed bath from the cells; special vehicles for transport of anode pallets, metal crucibles and potshells; vacuum cleaners, cell service wagons, spike removal machines, cell cavity cleaners, cell feeders, anode changers, etc. For cathode service shops: semiautomatic potlining machines. For cast house: PPM-purification of potroom metal by automatic skimmers and metal purification stations. We welcome you to visit our booth (#232) at TMS 2007 in Orlando.



**Solios Group**  
Saint Germain en Laye, France  
[www.solios.com](http://www.solios.com)

#201

**STAS**  
Chicoutimi, Quebec, Canada  
[www.stas-unigec.com](http://www.stas-unigec.com)

#507

STAS, based in Québec, Canada, continues to develop degassers, filters and flux injectors for the aluminium industry following 25 years of successful applications in more than 30 countries worldwide. STAS is well-known for its automated equipment used in metal treatment for both primary and secondary plants. For example, there continues to be a need to reduce alkalines in crucibles (TAC), to remove hydrogen and inclusions from molten metal in casting centres, with or without chlorine. Available from STAS are automated hot and cold crucible cleaning machines, and automated siphon tube cleaners, and a new development is to automate anode handling in the potroom.

**Stellar Materials Inc.**  
Tarpon Springs, Florida  
[www.stellarmaterials.com](http://www.stellarmaterials.com)

#413

Visit Stellar Materials online at [www.stellarmaterials.com](http://www.stellarmaterials.com)

**SUAL Group**  
Moscow, Russia  
[www.sual.com](http://www.sual.com)

#113

**SYRALCO**  
Haarlem, The Netherlands  
[www.syralco.com](http://www.syralco.com)

#215

SYRALCO (formerly Wienalco) is formed around a group of experts with decades of experience in the aluminium industry. SYRALCO serves the industry with a wide range of aluminium smelter, carbon baking and graphitizing industry dedicated machines. Modernization in existing smelters and baking furnaces is our special expertise. Improvement of labor working conditions, improvements on machines efficiencies including adding new operation tools are recognized to be most valuable. The scope of supply comprises: pot tending machines (prebake, soderberg, radio and cab control), anode baking furnace, tending machines (as well as stationary vacuum installations), crane transfer systems (gantry, lifting beams, retractable buffers), cathode removal cranes, anode jacking frames (automatic, cold and hot frames), anode rod clamps, crucible cleaning machines, tube cleaning machines and more.

**Taylor & Francis Group/CRC Press**  
Boca Raton, Florida  
[www.crcpress.com](http://www.crcpress.com)

#621

Founded as the Chemical Rubber Company, CRC originally manufactured and distributed laboratory supplies for chemists. It first distributed its Handbook of Chemistry and Physics free as a bonus incentive to customers who purchased a rubber apron, one of the company's signature items. Ninety years later, CRC Press, a member of the Taylor & Francis Group, is a pre-eminent publisher of books, journals, and electronic databases in materials science, life science, food science, environmental science, forensic science, engineering, business, technology, mathematics and statistics. This year we will be featuring Steel Heat Treatment Handbook, Second Edition; Introduction to Materials Science and Engineering; Introduction to the Principles of Materials Evaluation; and much more. Please visit our booth to peruse our selection and take advantage of our meeting discounts.



**Techmo Car s.p.a**  
 Limena, Padova, Italy  
[www.techmo.it](http://www.techmo.it)

**#318**

Over the last 41 years, Techmo has been devoted to the solution of technical problems connected with the aluminium industry. Among the most significant machines produced by Techmo are anode changers, tapping trucks, feeder vehicles, crust breakers, a wide range of heavy duty transporters and the most up-to-date furnace tending vehicles. Techmo is also supplying to aluminium company fixed plants, such as anode butts cleaning stations and ladle cleaning stations, tailor-made equipment and a wide range of services. All of Techmo's products and services propose new, environmentally friendly and cost-effective solutions to aluminium producers.

**Thermal Ceramics**

Augusta, Georgia  
[www.thermalceramics.com](http://www.thermalceramics.com)

**#407**

Thermal Ceramics, a worldwide leader in refractory and high-temperature insulation technology, offers solutions for the most demanding thermal management challenges. Our products for the aluminum industry include Superwool® 607® and Superwool 607® MAX®; Tri-Mor®Albond®, Alcast®, Kaocrete® and Kaolite® Castables; K® and JM™ Insulating Firebrick and Mortars; TR-19®/TR-20® Structural Board Insulation; Kaowool® Blanket/Strip/Bulk Ceramic Fibers; Kaowool® and Vacuum Formed Boards and Shapes; BTU-Block™ Microporous Insulation; Kaowool® Paper and Felts; Pyro-Bloc® Weld-On and Veneering Modules.

**Thermcon Ovens B.V.**

Geldermalsen, The Netherlands  
[www.thermcon.com](http://www.thermcon.com)

**#612**

Thermcon Ovens B.V., a member of the Otto Junker Group of companies, is a supplier of the complete state-of-the-art cast house package for the production of aluminium extrusion billets, rolling slabs and foundry ingot. The delivery program for the cast house comprises: charging machines, skimming machines, melting and holding furnaces, launders, casting machines, homogenizing furnaces and billet sawing systems. Recycling furnaces for contaminated aluminium scrap are also available. Thermcon Ovens B.V., together with other members of the Otto Junker Group, supply pusher furnaces, heat treatment plants for aluminium strip, etc., and Elhaus equipment for around the extrusion press. Unique one-stop shopping is available to the aluminium industry.

**Thermo-Calc Software**

McMurray, Pennsylvania  
[www.thermocalc.com](http://www.thermocalc.com)

**#125**

**See our ad on the back cover!**

Thermo-Calc Software is a leading developer of software and databases for calculations involving computational thermodynamics and diffusion controlled simulations. Thermo-Calc is a powerful tool for performing thermodynamic calculations for multicomponent systems. Calculations are based on thermodynamic databases produced by expert evaluation of experimental data. Databases are available for steels, Ti, Al, Ni-superalloys and other materials. Programming interfaces are available which enables Thermo-Calc to be called directly from in-house developed software or MatLab. DICTRA is used for accurate simulations of diffusion in multicomponent alloys. Applications include: homogenization of alloys; microsegregation during solidification; coarsening of precipitates; welding.

**Thermo Electron Corporation**

Madison, Wisconsin  
[www.thermo.com](http://www.thermo.com)

**#105**

Thermo Electron Corporation's NITON Analyzers unit is internationally recognized as the world's leading manufacturer of portable nondestructive alloy analysis instrumentation. Thermo NITON XRF alloy analyzers are ideal tools for QA/QC of alloy materials, NIST's traceable validation and positive material identification (PMI) of machined or fabricated components in various manufacturing industries. With the press of a trigger, the NITON analyzer provides positive grade identification and composition analysis of materials ranging from aluminium alloys to stainless steels, nickel-based alloys, titanium alloys and more in seconds. Since XRF technology is completely nondestructive, the analysis can be performed without concern on finished and installed components and raw materials. The NITON Analyzers unit is headquartered in Billerica, Massachusetts with facilities in Bend, Oregon; Munich, Germany; Hong Kong; and Shanghai, China; and sales and service centers throughout the world.

## Thermo Electron Niton Analyzers

#238

Billerica, Massachusetts

[www.thermo.com/niton](http://www.thermo.com/niton)

Thermo Electron Corporation's NITON analyzers are recognized as the world's leading portable nondestructive elemental analysis instruments. The new NITON XLt 898He is the first truly nondestructive portable analysis tool for light element content in alloy material. The XLt 898He can directly quantify Al, Si, and Mg levels in aluminum alloys, Si in steels, Al in nickel and titanium alloys, and a host of other chemical analyses previously unattainable using portable XRF technology. With the simple pull of a trigger, the NITON analyzer provides chemical analysis, grade identification of metal alloys, and much more in seconds.

## Thorpe Technologies Inc.

#309

Whittier, California

[www.thorpetech.com](http://www.thorpetech.com)

Thorpe Technologies Inc. designs and builds custom industrial furnaces, delacquering systems, thermal oxidizers and related thermal technology equipment. Thorpe's aluminum product line includes: 1) Apros-based technology delacquering systems; 2) scrap drying systems; 3) rectangular melting furnaces; 4) side-well melting furnaces; 5) dry hearth melting furnaces; 6) round, top charge melting furnaces; 7) tilting melting furnaces; 8) rotary melting furnaces; 9) stationary holding furnaces; 10) tilting holding furnaces; 11) batch homogenizing furnaces; 12) continuous homogenizing furnaces; 13) charging machines; 14) ladle preheaters; 15) ladle tilt stations and transfer cars. Thorpe Technologies Inc. is headquartered in Whittier, California; telephone (562) 903-8230. Projects in Mexico are handled by Thorpe Technologies engineers and builds mill duty industrial furnaces and thermal processing equipment.

## Tri-State Refractories

#233

Evansville, Indiana

Tri-State Refractories is a full-service refractory contractor serving the aluminum industry. Our work includes melting furnaces, pot lining, carbon bake furnaces, rotary furnaces and boilers.

## Wagstaff Inc.

#200

Spokane, Washington

[www.wagstaff.com](http://www.wagstaff.com)

Since 1946, customers with exacting quality standards have turned to Wagstaff for aluminum solidification technology. Today, with customers in more than 52 countries, Wagstaff has earned international recognition as the aluminum industry's leader in direct chill casting equipment. For more details on Wagstaff, visit our booth (#200), contact us at [info@wagstaff.com](mailto:info@wagstaff.com) or visit [www.wagstaff.com](http://www.wagstaff.com).

## ZIRCAR Ceramics Inc.

#601

Florida, New York

[www.zircarceramics.com](http://www.zircarceramics.com)

ZIRCAR Ceramics Inc. is a manufacturing and international marketer of a wide range of cast house consumables which include: castertips and nozzles for twin roll and belt continuous casters; ceramic foam and fiberglass cloth filters; vacuum-formed ceramic fiber and non-RCF fiber shapes; ceramic fiber textiles - rope, tape, cloth; ceramic fiber and non-RCF paper and blankets; precision CNC machined and precast refractory baffles, floats, dams; microporous insulation fabricator. Phone: (845) 651-6600; Fax: (845) 651-0441; E-mail: [sales@zircarceramics.com](mailto:sales@zircarceramics.com)