

TMS2005

134th Annual Meeting & Exhibition

February 13-17, 2005

Moscone West Convention Center • San Francisco, CA
First Floor Exhibit Hall

Exhibition Directory

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**Your primary source for practical, problem-solving solutions
for metals and materials production, processing
and research challenges!**

Show Dates and Hours:

Monday, February 14, 2005	12:00 Noon – 6:00 PM
Tuesday, February 15, 2005	9:30 AM – 5:30 PM
Wednesday, February 16, 2005	9:30 AM – 3:00 PM

Featured Exhibit Hall Events:

***Be sure to make plans to attend the following special events during
the 2005 Exhibition:***

Hosted Grand Opening Reception

— An opportunity to visit the booths while enjoying a hosted reception
Monday, 5:00 – 6:00 PM

Wednesday Snack

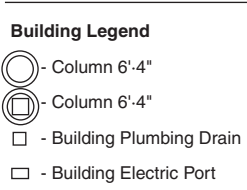
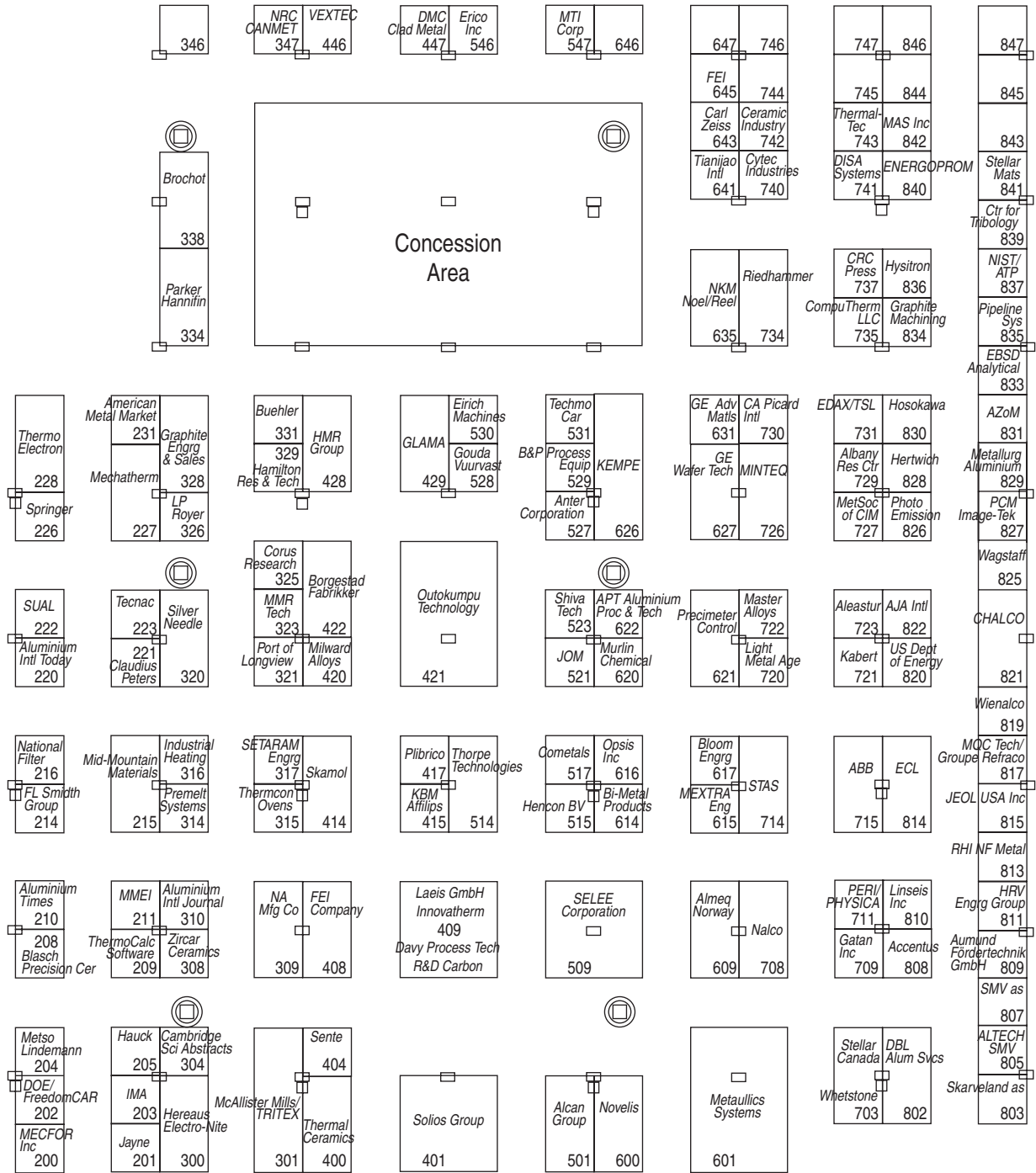
— Visit the booths and join us in the exhibit hall for an afternoon treat!
Wednesday, 12:15 – 2:00 PM

Plan to visit the Lunch Café Area in the Exhibit Hall—

Open during Show Hours

- ***Featuring specialty food selections***
- ***Convenient Lunch and Great Savings***

Use the \$ dollar discount coupon in your
badge packet for savings on lunch.



Aisles are 10' wide (unless noted)
 Booths are 10' x 10' (unless noted)
 Ceiling Height 27'

MAIN ENTRANCE

LISTING OF EXHIBITING COMPANIES AND BOOTH NUMBERS

Company	Booth Number	Company	Booth Number	Company	Booth Number
ABB	715	GLAMA Maschinenbau GmbH	429	NKM Noell/Reel Group	635
Accentus plc, C3 Technology	808	Gouda Vuurvast	528	North American Mfg Co Ltd	309
AJA International Inc	822	Graphite Engineering & Sales	328	Novelis	600
Albany Research Center	729	Graphite Machining Inc	834	NRCan CANMET Mats Tech Lab	347
Alcan Group	501	Groupe Refraco	817	Opsis AB	616
Aleastur	723	Hamilton Research & Technology Ltd	329	Outokumpu Technology Ltd	421
Almeq Norway AS	609	Hauck Manufacturing Co	205	Parker Hannifin	334
ALTECH SMV ehf	805	Hencon BV	515	PCM/Image-Tek	827
Aluminium International Journal	310	Hereaus Electro-Nite Co	300	PERI / PHYSICA	711
Aluminium International Today	220	Hertwich Engineering	828	Photo Emission Tech Inc	826
Aluminium Times	210	HMR Group AS	428	Pipeline Systems Inc	835
Aluminum Corporation of China	821	Hosokawa Micron International Inc	830	Plibrico	417
American Metal Market	231	HRV Engineering Group	811	Port of Longview	321
Anter Corporation	527	Hysitron Inc	836	Precimeter Control AB	621
APT Aluminium Proc & Tech	622	Industri-teknik Bengt Fridh AB	803	Premelt Systems Inc	314
AUMUND Fördertechnik GmbH	809	Industrial Heating Magazine	316	R&D Carbon Ltd	409
AZoM Network Group	831	innovatherm GmbH+Co.KG	409	RHI Non Ferrous Metals Engrg GmbH	813
B&P Process Equipment Systems LLC	529	International Magnesium Association	203	Riedhammer GmbH	734
Blasch Precision Ceramics Inc	208	Jayne Industries	201	SELEE Corporation	509
Bloom Engineering	617	JEOL USA Inc	815	SENTE Software/ThermoTech	404
BMP Bi-Metal Products	614	JMatPro	404	SETARAM Engineering	317
Borgestad Fabrikker AS	422	JOM	634	Shiva Technologies, Inc	523
Brochot	338	Kabert Industries	721	Silver Needle Inc	320
Buehler Ltd	331	KBM Affilips BV	415	Skamol A/S	414
C A Picard Intl	730	KEMPE International	626	Skarveland AS	803
Cambridge Scientific Abstracts	304	L P Royer Inc	326	SMV AS	807
Carl Zeiss MicroImaging Inc	643	Laeis GmbH	409	Solios Group	401
Center for Tribology, Inc	839	Light Metal Age	720	Springer	226
Ceramic Industry	741	Linseis Inc	810	STAS	714
Claudius Peters	221	Master Alloys Co	722	Stellar Canada Inc	703
Cometals	517	Materials Analytical Services Inc	842	Stellar Materials Inc	841
CompuTherm LLC	735	McAllister Mills/TRITEX LLC	301	SUAL Group	222
Corus Ceramic Research Ctr	325	MECFOR Inc	200	Techmo Car s.p.a	531
CRC Press	737	Mechatherm International Ltd	227	Tecnac do Brasil	223
Cytec Industries Inc	740	Metallurg Aluminium	829	Thermal Ceramics	400
Davy Process Technology (Switzerland) AG	409	Metallurgical Society of CIM	727	Thermal-Tek/Michigan, Inc	743
DBL Aluminium Services SA	802	Metaullics Systems Co LP	601	Thermcon Ovens BV	315
DISA Systems Inc	741	Metso Lindemann GmbH	204	Thermo Electron Corporation	230
DISA Systems Inc	741	MEXTRA Eng, Extrativa de Metals	615	ThermoCalc Software	209
DMC Clad Metal	447	Mid-Mountain Materials Inc	215	Thorpe Technologies Inc	514
EBSD Analytical Inc	833	Milward Alloys Inc	420	Tianjiao International	646
ECL	814	MINTEQ International Inc	726	US Dept. of Energy/Office of Energy Efficiency and Renewable Energy	820
EDAX Inc/TSL	731	MMR Technologies Inc	323	USDOE./FreedomCar and Vehicle Technologies Program	202
Eirich Machines Inc	530	Molten Metal Equipment Innovations Inc	211	VEXTEC Corporation	446
ENERGOPROM	840	MQC Technologies Inc/Groupe Refraco Inc	817	Wagstaff, Inc	825
Erico Inc	546	MTI Corporation	547	Whetstone Technology Inc	703
F.L. Smidth Group	214	Murlin Chemical Inc	620	Wienalco	819
FEI Company	645	Nalco Company	708	Zircar Ceramics Inc	308
Gatan Inc	709	National Filter Media	216		
GE Advanced Materials, Quartz	631	NIST Advanced Technology Program	837		
GE Infrastructure--Water & Process Technologies	627				

PRODUCTS/SERVICES INDEX

Refer to this convenient index to locate the exhibiting companies who supply the products and services you are looking for.

AIR POLLUTION CONTROL EQUIPMENT

Bloom Engineering
FLSmidth Group
National Filter Media
OP SIS, Inc.
Parker Hannifin Corp
SMV A/S
Solios

ALUMINUM INDUSTRY WEAR PARTS

B&P Process Equipment
Stellar Canada Inc

ALUMINUM PRODUCTION, TECHNOLOGY & EQUIPMENT

ABB Inc
Alcan Group
Almeq Norway AS
ALTECH SMV ehf
Anter Corporation
AUMUND Foerdertechnik GmbH
Brochot
Davy Process Technology
ECL
Eirich Machines, Inc.
GE Infrastructure--Water & Process Technologies
Glama Maschinenbau GmbH
Graphite Machining Inc
Gouda Vuurvast
Hamilton Research & Technology Ltd
Hencor B.V.
Heraeus Electro-Nite Co
Industri-teknik Bengt Fridh AB
Kempe International
Mecfor Inc
Metallurg Aluminium
Metso Lindemann GmbH
Novelis PAE
Outokumpu
PCM/Image-Tek
Premelt Systems
Riedhammer GmbH
SETARAM
Silver Needle
Skarveland AS
SMV AS
Solios
STAS, Ltd.
SUAL Group
Techmo Car SPA
Thermcon Ovens BV
Wienalco

ALUMINUM QUALITY

ABB, Inc.
Cambridge Scientific Abstracts
FL Smidth Group
Precimeter, Inc.
Premelt Systems
Whetstone Technology

ALUMINUM REFINING SYSTEMS

ABB Inc.
Alcan Group
FLSmidth Group
Metal Refining Systems
National Filter Media
RHI Non-Ferrous Metals Engineering GmbH
Shiva Technologies, Inc
STAS, Ltd.

ANODE:

ASSEMBLY

Almeq Norway AS
ALTECH SMV ehf
Altech
DMC Clad Metal
ECL
ENERGOPROM
Hamilton Research & Technology Ltd
HMR Group AS
Kempe International
Metso Lindemann GmbH
Riedhammer GmbH
SETARAM
SMV AS

CLEANING, TRANSPORTATION

ALTECH SMV ehf
Altech
AUMUND Foerdertechnik GmbH
ENERGOPROM
HMR Group AS
Mecfor Inc
Metso Lindemann GmbH
SMV AS
Solios Carbone
STAS
Techmo Car spa

AUTOMATION/COMPUTER SIMULATION/ SOFTWARE

ABB Inc.
Alcan Group
CompuTherm LLC
Mechatherm International Ltd
PCM/Image-Tek
PERI/PHYSICA
Pipeline Systems Inc
RHI Non-Ferrous Metals Engineering GmbH

Sente Software and Thermotech Ltd
STAS
Thermcon Ovens BV
Thermo-Calc Software AB

BUTT CRUSHING/STRIPPING

Brochot SA
ECL
Outokumpu
Solios
Techmo Car SPA

CARBON:

PASTE PRODUCTION & EQUIPMENT

Anter Corporation
B&P Process Equipment
Brochot SA
C A Picard Intl
Davy Process Technology
Eirich Machines Inc
ENERGOPROM
Hamilton Research & Technology Ltd
LAEIS GmbH
Outokumpu
Pechiney
SETARAM
Solios

TECHNOLOGY AND SUPPLIES

Anter Corporation
Davy Process Technology
ENERGOPROM
Graphite Machining Inc
innovatherm GmbH +Co KG
R&D Carbon, Ltd.
Riedhammer GmbH
SETARAM
Solios
Wienalco

CASTING

Alcan Group
Almeq Norway AS
Brochot SA
ECL
GE Advanced Ceramics
Groupe Refraco
Hertwich Engineering
Mechatherm International Ltd
Metallurg Aluminium
Mextra
Murlin Chemical, Inc.
Novelis PAE
Outokumpu
Pechiney
Precimeter
Premelt Systems
Solios
Thermcon Ovens BV
Zircar Ceramics Inc

CHEMICALS AND ADDITIVES

Aleatur
Cometals
Cytec Industries Inc
ENERGOPROM
GE Infrastructure--Water & Process Technologies
Hosokawa Nano Particle Technology Center (USA)
Metallurg Aluminium
Milward Alloys
MINTEQ Intl Inc
Nalco Company
Tianjiao International Co.

CLOTHING – PROTECTIVE

L.P. Royer Inc.
Silver Needle Inc

COMBUSTION TECHNOLOGY

Bloom Engineering Co., Inc.
Hauck Manufacturing Inc
Industri-teknik Bengt Fridh AB
North American Mfg Co Ltd
Thorpe Technologies Inc

CORROSION/SURFACE TREATMENT

DMC Clad Metal
GE Infrastructure--Water & Process Technologies

CRANES

Brochot SA
ECL
NKM/Noell
Wienalco

DEGASSING

Alcan
ALTECH SMV ehf
Blasch Precision Ceramics
Graphite Engineering
Hertwich Engineering
Metallurgical Systems Co LP
Molten Metal Equipment Innovations
Novelis PAE
SELEE Corporation
SMV AS
STAS
Thermcon Ovens BV

DROSS:

HANDLING/PROCESSING EQUIPMENT

Altech
Almeq Norway AS
Brochot SA
GE Advanced Ceramics
Glama Maschinenbau
Hencon BV
Hertwich Engineering
Kempe International
Mechatherm International Ltd

Outokumpu
Premelt Systems
STAS

COOLING/REMOVAL

Hencon BV
Mecfor Inc
Mechatherm International Ltd
STAS

ENGINEERING, CONSULTING, CONTRACTORS

ABB Inc
Alcan Group
Almeq Norway a/s
ALTECH SMV ehf
AUMUND Fördertechnik GmbH
Bloom Engineering
Brochot SA
CompuTherm LLC
Davy Process Technology
Groupe Refraco
HRV Engineering
Materials Analytical Services
Mecfor Inc
NIST Advanced Technology Program (ATP)
North American Mfg Co Ltd
PCM/Image-Tek
PERI/PHYSICA
Pipeline Systems Inc
R&D Carbon, Ltd.
Riedhammer GmbH
RHI Non-Ferrous Metals Engineering GmbH
JMatPro/Sente Software
SETARAM
Shiva Technologies, Inc
SMV AS
Solios Thermal
STAS
SUAL Group
Techmo Car SPA
Thermo-Calc Software AB
Thorpe Technologies Inc
U.S. DOE FreedomCar & Vehicle Technologies Program
VEXTEC Corporation
Wienalco

FILTRATION

Alcan
Metallics Systems Co L.P.
National Filter Media
Novelis PAE
SELEE Corporation
STAS
Zircar Ceramics, Inc.

FURNACES

ABB Inc.
Graphite Machining Inc
Groupe Refraco
Hauck Manufacturing Inc

Hertwich Engineering
Mechatherm International Ltd
Minteq International Inc
North American Mfg Co Ltd
R&D Carbon Ltd
Riedhammer GmbH
SETARAM
Solios
Thermcon Ovens BV
Thorpe Technologies Inc

GRAIN REFINERS/HARDENERS

Aleatur
Cometals
KBM Affilips B.V.
Master Alloys
Metallurg Aluminium
Mextra
Milward Alloys

GRAPHITE PARTS

ENERGOPROM
Graphite Engineering & Sales
Graphite Machining Inc
Metallics Systems Co LP
Molten Metal Equipment Innovations
Shiva Technologies, Inc

HF MEASUREMENT SYSTEMS-- POT ROOMS/ STACKS

ALTECH
OPSIS, Inc.

INGOT & SOW CASTING, HANDLING & STACKING

Brochot SA
Hertwich Engineering
Mecfor Inc
Murlin Chemical, Inc.
NKM/Noell
Outokumpu
Thermcon Ovens BV
Thorpe Technologies Inc

INSTRUMENTATION

ABB, Inc.
Anter Corporation
Buehler
Center for Tribology
EDAX Inc./TSL
Gatan Inc
GE Infrastructure--Water & Process Technologies
Heraeus Electro-Nite Co
Hysitron Inc
JEOL USA, Inc.
OPSIS Inc.
R&D Carbon
SETARAM
Thermcon Ovens BV
Thermo Electron Corp

LUBRICANTS

Cometals
GE Advanced Ceramics

MAINTENANCE

Thermal-Tek/Michigan, Inc.

MASTER ALLOYS

Aleatur of America LLC
Cometals
Hosokawa Nano Particle Technology Center (USA)
KBM Affilips B.V.
Master Alloys Co.
Metallurg Aluminium
Mextra
Zircar Ceramics, Inc.

MATERIAL HANDLING

Almeq Norway a/s
Altech
AUMUND Foerdertechnik GmbH
Cometals
Glama Maschinenbau GmbH
Hencon BV
Hertwich Engineering
Hosokawa Nano Particle Technology Center (USA)
HMR Group AS
Kempe International
Outokumpu
PCM/Image-Tek
Pipeline Systems Inc
Techmo Car SPA
Thermcon Ovens BV
Thorpe Technologies Inc
Wienalco

MATERIALS INFORMATION PROVIDERS

AZoM Group

MEASUREMENT/TESTING AND ANALYSIS

ABB Inc.
Anter Corporation
Buehler
Carl Zeiss MicroImaging Inc
Center for Tribology
EBSD Analytical Inc
EDAX Inc./TSL
Heraeus Electro-Nite Co
Hysitron Inc
Materials Analytical Services
Opsis Inc.
PERI/PHYSICA
Pipeline Systems Inc
R & D Carbon, Ltd.
Shiva Technologies, Inc
Thermo Electron Corp

MOLTEN METAL FILTRATION, PUMPS

ABB Inc.
Hertwich Engineering
Metaullics Systems Co L.P
Molten Metal Equipment Innovations
Novelis PAE

PROCESS EQUIPMENT

AJA International Inc.
Altech
ABB Inc
B&P Process Equipment
Brochot SA
Davy Process Technology
DMC Clad Metal
Eirich Machines, Inc.
GE Infrastructure--Water & Process Technologies
Hauck Manufacturing Inc
Heraeus Electro-Nite Co.
Hertwich Engineering
Hosokawa Nano Particle Technology
Center (USA)
Kempe International
North American Mfg Co Ltd
Novelis PAE
OP SIS Inc.
R&D Carbon, Ltd.
RHI Non-Ferrous Metals Engineering GmbH
Riedhammer GmbH
SETARAM
Solios Group
Tecnac do Brasil
Thermcon Ovens BV
Thermo Electron Corp
Thorpe Technologies Inc
Wienalco

PUBLISHERS

Aluminium Times
Aluminium International Journal
Aluminium International Today
American Metal Market/Metal Bulletin
APT Aluminium
Cambridge Scientific Abstracts
Ceramic Industry
CRC Press
Industrial Heating
JOM
Light Metal Age
Metallurgical Society of CIM
R & D Carbon, Ltd.
Springer

RARE EARTH MATERIALS

Tianjiao International Co.

RECYCLING/SCRAP PROCESSING

Almeq Norway a/s
ALTECH SMV ehf
AUMUND Fördertechnik GmbH

Cometals
Hertwich Engineering
Mechatherm International Ltd
Metso Lindemann GmbH
Metallics Systems Co. L.P.
Murlin Chemical, Inc.
Outokumpu
Premelt Systems
Skarveland AS
Solios Thermal
Thermcon Ovens BV
Thorpe Technologies Inc

REFRACTORY & INSULATING PRODUCTS

Blasch Precision Ceramics
DBL Aluminium Services SA
GE Advanced Materials, Quartz
Gouda Vuurvast N V
Graphite Machining Inc
Groupe Refraco
Kabert Industries Inc
McAllister Mills
Mid-Mountain Materials Inc
Minteq International Inc
Murlin Chemical Inc
RHI Non-Ferrous Metals Engineering GmbH
SELEE Corporation
Skamol
Stellar Canada Inc
Stellar Materials
Thermal Ceramics
Whetstone Technology
Zircar Ceramics, Inc.

MAINTENANCE/REPAIR

Gouda Vuurvast N V
Mid-Mountain Materials Inc
Minteq International, Inc.
RHI Non-Ferrous Metals Engineering GmbH
Stellar Canada Inc

RESEARCH & DEVELOPMENT

AJA International Inc.
Aluminium International Journal
Center for Tribology
CompuTherm LLC
CSA Inc
Cytec Industries Inc
EBSD Analytical Inc
EDAX Inc TSL
Gatan Inc
Groupe Refraco
Hosokawa Nano Particle Technology Center (USA)
Hysitron Inc
JMatPro/Sente Software
Mecfor Inc
Minteq International, Inc.
Natural Resources Canada - CANMET

NIST Advanced Technology Program (ATP)
PERI/PHYSICA
R&D Carbon Ltd
Shiva Technologies, Inc
SUAL Group
Thermo-Calc Software AB
US Department of Energy
U.S. DOE FreedomCar & Vehicle Technologies Program
VEXTEC Corporation
Wienalco

SAWING SYSTEMS

ALTECH
Brochot SA
Buehler
Hertwich Engineering
Mecfor Inc

SERVICE CONTRACTORS

EBSD Analytical Inc
Gouda Vuurvast
Materials Analytical Services
Nalco Company
R&D Carbon, Ltd
Skarveland AS
Stellar Canada Inc

SOFTWARE

EDAX Inc TSL
CompuTherm LLC
CRC Press
Gatan Inc
JMatPro/Sente Software
PERI/PHYSICA
Thermo-Calc Software AB
VEXTEC Corporation

VEHICLES FOR POTROOMS & CASTHOUSES

ALMEQ Norway AS
Altech
Brochot SA
Glama Maschinenbau GmbH
Hencon BV
HMR Group AS
Mecfor Inc
SMV A/S
Techmo Car SPA

WATER COOLING & TREATMENT

Brochot SA
GE Infrastructure--Water & Process
Technologies
Nalco Company

X-RAY DIFFRACTION

EBSD Analytical Inc
EDAX Inc TSL
Thermo Electron Corp

A

ABB Inc

#715

Quebec, CANADA

www.abb.com/analytical

Please see our display ad on the back cover.

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 Analytical and Advanced Solutions

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. More information is available at www.abb.com/analytical.

ABB ElectroMagnetic Stirrers

ABB's ElectroMagnetic Stirrers, AL-EMS, help you to be more cost effective and to achieve tighter tolerances in your aluminium melting, holding and refining operations. Efficient stirring of the aluminium melt is one of the most decisive factors to speed up the kinetics of reactions and for improvement of heat and mass transfer, which are factors essential to increase productivity, with retained or improved quality, while minimizing an impact on the environment.

AL-EMS has shown to increase the productivity by 25%, reduce energy consumption by 15% and reach a gross reduction of more than 25%. With over 100 installations world wide, ABB's ElectroMagnetic Stirring can be considered as the most efficient tool to achieve these benefits.

Accentus plc

#808

Didcot, Oxfordshire, United Kingdom

www.accentus.co.uk/c3

Accentus C3 Technology is an acknowledged leader in providing proprietary crystallization solutions that deliver large scale added value benefits to our customers.

C3 Sonocrystallization technology facilitates the Complete Crystallization Control™ of many aspects of crystallization processes including the control of crystal size, shape habit, size distribution and the selective production of polymorphs. Its industrial application allows higher productivity, enhanced filtration,

reduced processing time, higher purity, and maximises yield. C3 technology has been successfully used to significantly enhance key impurity removal in Bayer Liquor at Aughinish Alumina in Ireland, and is now available for commercial licensing.

AJA International Inc

#822

Scituate, Massachusetts

www.ajaint.com

SPUTTERING-MICROWAVE-RF-ION BEAM

Sputtering and E-beam Systems for R&D and Pilot Production. Static and Rotating Magnetron Sputter Sources for HV and UHV, Substrate Holders with Rotation, RF Biasing, Heating and Cooling; Sputter Targets, Microwave, RF and DC Power Supplies, Microwave Components and Plasma Sources, RF Ion/Plasma Sources.

Albany Research Center

#729

Albany, Oregon

www.alrc.doe.gov

The Albany Research Center is a U. S. Department of Energy laboratory staffed by Federal employees specializing in life cycle research starting with the formulation, characterization, 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. We routinely solve industrial processing problems by investigating melting, casting, fabrication, physical and chemical analysis and wear, corrosion and performance testing of materials through the use of state-of-the-art equipment and analytical techniques.

Alcan Group

501

Montreal, CANADA

www.alcan.com

Alcan is a multinational, market-driven company and a global leader in aluminum and packaging, as well as aluminum recycling. With world-class operations in primary aluminum, fabricated aluminum as well as flexible and specialty packaging, aerospace applications, bauxite mining and alumina processing, today's Alcan is well positioned to meet and exceed its customers' needs for innovative solutions and service. Alcan employs 88,000 people and has operating facilities in 58 countries and regions.

With the acquisition of Pechiney, the company owns or has an interest in 26 smelters in 13 countries. With the smelting facilities acquired as a result of the acquisition, Alcan has enhanced its position as a leading low-cost producer of primary metal and is the worldwide leader in smelting technology. The acquisition of Pechiney increases Alcan's annual smelter capacity to approximately 3.5 million tonnes and gives the company the largest share of low-cost capacity in the world. In addition, Pechiney's technological expertise positions the company as the global leader and supplier

of choice to the aluminum industry. For example, cutting edge smelting technology such as the AP30 series has an outstanding performance record, and the new AP50 smelting technology is expected to reduce investment costs, increase production capacity and further reduce greenhouse gas emissions.

ALEASTUR OF AMERICA, LLC

#723

Evansville, IN

www.aleastur.com

Founded in the 80's, Aleastur manufactures a comprehensive range of Grain Refiners and Master Alloys for the Aluminium industry. The major activity of Aleastur is concentrated in the production of AlTiB alloys in rod.

In 2003 Aleastur established Aleastur of America, LLC, and opened offices with a central warehouse in Evansville, IN, not only to meet the challenging and growing demands of the Canadian and U.S. markets but to demonstrate our commitment to these market regions by providing enhanced service for our exclusive products. Aleastur of America, LLC, currently 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. All Canadian and U.S. sales functions are now managed by Aleastur of America, LLC, having selected distribution points with strategically located warehouses throughout both countries.

Our aim is to supply the finest products in the market, supported by our state-of-the-art technology and the utmost dedication of our technical staff. Aleastur provides full technical support to fulfill the special requirements of each customer.

Almeq Norway AS

#609

Langhus, NORWAY

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 own 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 co-operation with partners in Norway and abroad ALMEQ deliver anode and metal transporters, and various pot room equipment.

In its 20th year of exhibiting at the TMS, ALMEQ will focus on a new product range for the casthouse, which include metal treatment systems and metal weighing systems.

We will also show the results of our implementation of 3D construction tools giving our equipment a new "look".

ALMEQ welcomes you to visit our exhibition stand (booth 609) at the TMS 2005 in San Francisco. We will be happy to answer any questions concerning our products and services.

ALTECH SMV Ltd

#805

Kópavogur, Iceland

www.altech.is/

At TMS 2005 ALTECH will as usual present some new equipment and systems for the Aluminium Industry for improved environment, efficiency and economy:

For Anode Rodding Shops: Turn-key Anode Rodding Shops and special equipment such as: Automatic Stub Straightening Machines, Rod Straightening Presss, 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.

We welcome you to visit our booths No. 803 - 809 at the Altech Pavilion at TMS 2005 in San Francisco.

ALUMINIUM International Journal

#310

Isernhagen, GERMANY

www.giesel.de

ALUMINIUM – International Journal for industry, research and applications – is the leading German journal (bilingual: German/English) for more than 80 years. It deals with everything that concerns the material, its extraction, processing, recycling and applications. Matters of economics and the ecological consequences of using aluminium are also considered. The scope of the month-by-month reporting includes scientific contributions and condensed information about new technologies and applications. The journal addresses aluminium producers, semis manufacturers, foundries, processors, metal and semis traders and, not least, research institutes concerned with aluminium. ALUMINIUM is circulated in over 40 countries worldwide.

Aluminium International Today

#220

Redhill Surrey, UNITED KINGDOM

www.aluminiumtoday.com

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 to 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. 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 topical coverage of the most significant events and advances.

Aluminum Corporation of China

#821

Beijing, P R China
www.chinalco.com.cn

A backbone state-owned enterprise under the direct leadership of the Central Government, Chinalco (Aluminum Corporation of China) boasts in its outstanding management team and versatile technical talents. Chinalco has developed many key proprietary technologies ranging from mining, alumina refining, aluminium smelting and downstream fabrication.

Under the operation motto of "Credibility, ultimate investment return", Chinalco is dedicated to continuous renovation and progress. Chinalco aims to be a world-class multi-national resource company in non-ferrous industry with a core business in Aluminium.

Aluminium Times

#210

UNITED KINGDOM
www.mmc.dircon.co.uk

If you target your products to defined areas of the world, Aluminium Times can help you reach Europe and the Middle East. 100% of copies are distributed to these areas. If you target specific managers in primary and secondary production, then 50.2% of our readers are in this category.

If you want to reach managers involved in the purchase of plant, equipment and consumables, 96.7% of our readers are part of the buying process.

Apart from that, we publish an attractive magazine, and European and World Aluminium maps.

APT Aluminium

#622

London, United Kingdom
www.aluminiumtechnology.com

APT Aluminium Process & Product Technology is the only multimedia publication harnessing the power of print, CD-ROM and the internet that provides an indispensable resource for all senior and technical management operating smelting and processing plants worldwide.

APT Aluminium is the only ground breaking publication promoting the latest applied processes and product technology throughout the international aluminium industry with contents of lasting value in each edition.

APT Aluminium has the most expansive and targeted international circulation that reaches a readership of 70,000. This offers the best value for money for the serious marketing and advertising campaigns.

Anter Corporation

#527

Pittsburgh, PA
www.anter.com

Anter Corporation is a manufacturer of thermophysical properties measuring instruments and a provider of contract testing services. Products include a full range dilatometers for thermal expansion/shrinkage measurement, thermal conductivity meters and thermal diffusivity systems, covering temperatures from -180°C to 2800°C.

A number of instruments are specifically designed for the aluminum industry and are in world-wide use, such as: unitherm model 1101 dilatometer for cored samples (50 mm diameter by up to 150 mm long) of carbon anodes; model 2022 thermal conductivity meter for 50mm diameter samples; model 9609 electrical resistivity meter for carbon and graphite; flashline-3000 thermal diffusivity system for coarse-grain refractories and highly conductive materials. ISO 9001 certified.

AUMUND Foerdertechnik GmbH

#809

Venlo, The Netherlands
www.aumund.de

The AUMUND Group is a worldwide leader and specialist in the design, manufacture and supply of material handling equipment and systems.

At TMS 2005 AUMUND FÖRDERTECHNIK will present special crushers 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 booths No. 803 - 809 at the Altech Pavilion at TMS 2005 in San Francisco.

AZoM Network Group

#831

Penkhull, Stoke-on-Trent, United Kingdom
www.AZoM.com

Launched in 2001, AZoM.com has now become the internet's leading engineering materials knowledge base dedicated to informing and educating engineers, designers and scientists from all industries and in academia about all types of engineering materials: metals, ceramics, polymers and composites, their processing and applications.

Such has been the outstanding success of AZoM.com that it now averages over 540,000 visitor sessions per month (over 7.5 million site hits) and is highly ranked by all of the major Search Engines and is an 'Accredited News Source' for Google. AZoM.com is proven to be highly effective in connecting Buyers and Sellers of Materials, Materials-related Services and associated products.

B&P Process Equipment

#529

Saginaw, MI

www.bpprocess.com

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 1930's 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.

Blasch Precision Ceramics

208

Albany, New York

www.blaschceramics.com/

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.

In addition, parts intended for aluminum applications are treated with a proprietary non-wetting agent. So whether you need low pressure stalk tubes, rotary degassers, thermocouple protection tubes, porous plugs, or immersion heater tubes, Blasch can deliver.

A dedicated staff of engineers is always available to develop materials and design parts that satisfy specific customer needs. We welcome you to visit us at booth 208

Please see our display ad on page 17 of JOM.

Bloom Engineering Co.

#617

Pittsburgh, PA

www.bloomeng.com

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.

Offerings include the 1500 Series cold air burners, 1630 Series recuperative burners and the 1150 Series regenerative burners which are currently the lowest NOx producing burners in the industry.

BMP Bi-Metal Products

#614

Fountain Valley, CA

www.doall.com/bimetal.htm

Borgestad Fabrikker AS

#422

Porsgrunn, Norway

<http://www.borgestad.com>

Borgestad Fabrikker AS founded in 1887, started as brickworks but grew rapidly into a producer of quality refractories. In 1996, Höganåas Bjuf, with more than 200 years experience of manufacturing refractory bricks, became a part of Borgestad. Today Borgestad is truly international, exporting over half its production and is the largest supplier of non-basic refractories to furnace and kiln related industries.

Products that ensure long life and maximum performance are only one part of the Borgestad commitment to customer satisfaction. Projecting, project control, contracting, installation, repair and maintenance are services we offer to ensure that your furnaces run smoothly with down-time periods kept at a minimum.

BROCHOT SA

#338

Tremblay en France, FRANCE

www.brochot.fr

Activities in the Light Metal Industries: BROCHOT's company designs, manufactures, carries out installation, provides after sales services and spare parts of special machines; complete plants. We also provide full turn key solutions and integrated process solutions. With our 3 departments, BROCHOT – SYPRIM – BERGER, we propose the full range of equipment necessary for aluminium and magnesium smelters

BROCHOT Department as a World leader with:

Potrooms:

- Electric pot ramming machines
- Dross crucible skimming equipment (Ekumax)
- Dross handling equipment (Ekumax)

Casthouse:

World Leaders in the Casthouse with:

- Ingot casting & stacking lines
- High throughput Dross free ingot casting wheel

In the Foundry - BROCAST:

- 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

SYPRIM:

Anode handling system:

- Anode cooling
- Anode Conveying systems
- Stacking crane
- Anode cleaning machine
- Anode & groove cleaning systems
- Anode Slot cutting machine
- World Leader in the Anode rodding shop equipment on a piece delivery to turnkey project
- All solutions for Anode Hooking & unhooking station
- Automatic bath removal system
- Carbon Butt & Thimble removing
- Anode mating & casting station for all kind of technology
- Pin straightening station, etc.

BERGER:

- Special vehicles for anode & molten metal transport
- Furnace charging & tending vehicles
- Towing tractor
- Alumina and bath transport vehicle

Call us to discuss your requirements at +33 149 63 74 00 or visit our booth #338 where we'll show you our latest developments and discuss innovative solutions.

Buehler Ltd.

#331

Lake Bluff, IL

www.Buehler.com

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 at Booth #331 and on our website at www.buehler.com.

Please see our display ad on page 21 of JOM.

C

C.A. PICARD International

#730

Remscheid, Germany

www.capicard.com

C.A. 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 MicroImaging Inc

643

Thornwood New York

www.zeiss.com

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 & 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, multi-phase analysis and measurement of dendritic arm spacing.

Center for Tribology, Inc

#839

Campbell, California

www.cetr.com

CETR is a world leading manufacturer of nano, micro and macro precision mechanical testers for thin and thick coatings, ultra-thin films and advanced bulk materials, with measurements of friction, wear, adhesion, delamination, scratch-resistance, nano-hardness, elastic modulus, contact acoustic emission and electrical resistance. Their standard features include computerized control of multiple linear and rotary motions, with servo-control of loads or displacements. Optional accessories include vacuum, high temperature, special gases and humidity chambers. These universal materials testers are utilized in the biomedical, microelectronics, data storage, automotive, aerospace, chemical and other industries, as well as in the universities and academia all over the world.

Ceramic Industry

#741

Powell, Ohio

www.bnppmedia.com/pubs/about_ci.htm

CSA

304

Bethesda, MD

www.csa.com

CSA publishes a wide variety of research databases. The CSA Materials Research Database provides access to more than 2.5 million records with backfiles to 1966 covering all aspects of the materials sciences. CSA also publishes notable databases including METADEX, Aluminium Industry Abstracts, and Engineered Materials Abstracts. Databases are delivered through CSA's platform featuring links to electronic fulltext and document delivery.

Claudius Peters

#221

Dallas, Texas

www.claudiuspeters.com

Across the globe, in the field of materials handling and processing, there is a name that is synonymous with innovation and technical excellence. Claudius Peters is active across a broad spectrum of industries. From roots established in the cement industry over half a century ago to a major provider of aluminum components to the aerospace of today, we have grown and diversified to become one of the most trusted names in industry, providing materials handling and process technologies, either individually or turnkey. From conception to installation, through commissioning to after-sales support and facilities management, Claudius Peters provides world-class service to world-class clients.

Cometals

517

Fort Lee, New Jersey

www.commercialmetals.com

Cometals is division of Commercial Metals Company. Cometals is active in marketing and logistics of industrial minerals, metals, and chemicals. We maintain office presence in all global business centers with focus in China and CIS. For the aluminum industry, we supply carbon products such as anodes, coke, and electrodes; minerals such as Fluorspar, Aluminum Fluoride, and Bauxite; and alloying ingredients such as Silicon, Manganese, and Magnesium.

CompuTherm LLC

#735

Madison, WI

www.computherm.com

CompuTherm LLC develops phase diagram and thermodynamic calculation software as tools for industrial, academic, and educational use. Professor Y. Austin Chang, Wisconsin Distinguished Professor and member of the National Academy of Engineering, established CompuTherm LLC in 1996.

Pandat is a software package for calculating phase diagrams and thermodynamic properties of multi-component alloys. PanEngine is a calculation engine for creating custom software applications such as microstructure and microsegregation simulations. CompuTherm has developed thermodynamic databases for aluminum, nickel, magnesium, titanium commercial alloy systems. A lead-free solder database is also available.

Please see our display ad on page 14 of JOM.

Corus Ceramics Research Centre

#325

IJmuiden, THE NETHERLANDS

www.ceramics-research.com

The Ceramics Research Centre (CRC) is part of Corus Research Development & Technology and traditionally is dedicated to refractory applications in steel and aluminium production.

To apply best value refractory materials in use and to develop improved refractories, an integrated approach is used. Together with users and suppliers, CRC plays an important role in finding tailor made refractory solutions. CRC has developed advanced aluminium, iron and steelmaking refractories, improving reliability and availability of Corus production facilities significantly.

CRC is unique in being fully dedicated to testing, characterizing and developing of high-temperature materials for the ferrous and nonferrous industry. This includes research and pilot-studies on inorganic, non-metallic, waste products produced by these industries.

The services of CRC range from consultancy and materials testing to product development, process simulation, computer modelling (temperature/stress calculations), prototyping, damage analysis and refractory training.

CRC Press

737

Boca Raton, FL

www.crcpress.com

CRC Press, a member of the Taylor & Francis Group, invites you to view our new and established titles on MEMS, NEMS, Optics and our bestseller CRC Materials Science and Engineering Handbook, 3rd Edition. CRC Press is recognized as a leader in scientific, engineering, medical, environmental, technical, and statistics publishing producing books, journals and databases. CRC Press is also the creator of ENGnetBASE.com and CHEMnetBASE.com, a wealth of information online. Visit us at <http://www.crcpress.com> for more details.

Cytec Industries Inc

#740

West Patterson, New Jersey

www.cytec.com

Cytec's Alumina Processing Chemicals Team has delivered breakthrough products to 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 achieve improved performance with products that assist with yield or throughput-based production increases, often without capital expenditures. Cytec Mining Chemicals is a leader in the development of innovative solutions to the global Alumina and Mineral Processing industry. What can Cytec do for you?

D**Davy Process Technology (Switzerland) AG
#409**

Hohenrainstrasse 10,
CH-4133 Pratteln, SWITZERLAND
www.davyprotech.com

Davy Process Technology (Switzerland) AG or DPT the former BUSS AG is still regarded as the world leader for carbon paste technology being the sole supplier to the aluminium Industry of the well known BUSS KNEADER for anode paste mixing.

Efficient processing of anode paste using mixing energy in the range of 7 to 10 kWh per ton of paste is vital for the economic production of anodes, being suitable for the high amperage smelting technology. The continuously operating Buss Kneader guarantees uniform paste quality for trouble free anode forming and baking and for smooth operation of the pot rooms.

Over 200 Buss Kneaders, with capacities up to 50 tons/h in single units, are in operation worldwide. Our unsurpassed services include the supply of genuine spare parts from stock and revamping or upgrading of existing installations.

Additionally we are supplying complete paste plants and as well as our own technology and proprietary equipment for the continuous pitch melting and manufacture of aluminium fluoride.

**DBL Aluminium Services S.A.
#802**

<http://www.dbljv.com>

DBL Aluminium Services is a strategic alliance of three leading international turnkey mechanical & refractory project and maintenance service companies; Dickinson of South Africa, Metallurgie Brasco of Canada and Lizmontagens of Portugal. DBL has extensive business experience in the execution of green-field and brown-field aluminium smelter projects in North & South America, Europe, Southern Africa and Middle East, with proven know-how and resources to render turnkey mechanical and refractory projects including reduction, casthouse and carbon as well as electrolysis mechanical project and maintenance service to primary aluminium smelters throughout the world.

**DISA Systems Inc
#741**

Thomasville, North Carolina
www.disagroup.com

DISA Systems, Inc. is a 100 year old company, and serves an international market with offices in three countries. The US Division based in Thomasville, NC has been serving general industry dust collection for 22 years. As a global company it has over 30,000 installations to its credit and sell a complete line of cyclone separators, modular & cyclonic bag houses, and cartridge collectors in sizes ranging from 500 CFM to over 100,000 CFM. DISA specializes in complete turn-key system design to include collectors, ducting, fans, spark detection equipment and more.

DMC Clad Metal

#447

Boulder, CO
www.dynamicmaterials.com

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

E**EBSD Analytical Inc**

#833

Lehi, Utah
www.ebsdanalytical.com

EBSD Analytical Inc. offers complete microstructural analysis services for scientists and researchers worldwide. We specialize in electron backscatter diffraction (EBSD) and EDS techniques, and guarantee the quality of our results. In addition to providing comprehensive analytical reports, we also provide high resolution EBSD data collection only on a Schottkey FEG SEM for customers who wish to do their own analysis. Our consulting services include custom on-site software and hardware training to ensure you are getting the most out of your own EBSD or EDS system.

Please see our display ad on page 66 of JOM.

ECL Company

#814

Ronchin, FRANCE
www.ecl.fr

Worldwide market leaders in equipment for primary aluminium smelters, ECL is entirely dedicated to this industry and exports 97% of its turnover to all continents. Our highly skilled workforce and integrated design and manufacturing operations, allow us to complete successfully the most challenging projects.

With such a wide product range ECL is the only supplier to offer a complete package including conception, turnkey delivery, installation and maintenance in all the sectors of a smelter. ECL business strategy is to consolidate further technical support and after sales service capabilities globally. We are in the process of establishing fully owned subsidiaries on a worldwide basis in order to localize our know-how and reduce considerably our response time.

Address: 100 rue chalant - 59790 RONCHIN
FRANCE Phone: +33 3 20 88 70 70 • Fax: +33 3 20 88 70 99

EDAX Inc./TSL

#731

Mahwah, NJ
www.edax.com

EDAX/TSL provides a powerful line of material characterization tools including, OIM™, Delphi (Phase ID), ACT (Automated Crystallography for TEM) and Pegasus. OIM™ is a powerful tool for investigating key aspects of polycrystalline microstructures including local crystallographic textures and grain boundary analysis. Recently OIM™ has been enhanced with the addition of CHI-scan with Phase Cluster Analysis (PCA). CHI-Scan is a powerful tool for the Pegasus platform that combines the EDS and EBSD information gathered from a specimen to improve the speed and accuracy of measurements from multi-phase samples. The Pegasus platform combines EDS and EBSD in a single system.

Please see our display ad on page 20 of JOM.

ENERGOPROM

#840

Moscow, Russian Federation
www.energoprom.ru

ENERGOPROM has been dealing with the biggest world carbon and graphite plants (Novosibirsk, Chelyabinsk, Novochoerkassk electrode plants and Sibirsky Anthracite) for more than 10 years already and also with the greatest in Europe and CIS oil shale plant (secondary petroleum processing also) as well as number one in industrial chemicals cryolite plant. The structure of the company provides full process of production and market including raw material extraction and processing, finished products manufacture and sale. Upon ENERGOPROM initiative the Russian Carbon & Graphite Association ("UGLEGRAFIT" Association) was established. Association integrates industrial and scientific facilities providing technology development and new products design.

Eirich Machines, Inc.

#530

Gurnee, IL
www.eirichusa.com

Eirich Machines, Inc. of Gurnee, Illinois, are manufacturers of the Eirich Intensive Mixer noted for the many advantages it provides the metallurgy industries, including:

- Significantly reduced process times, pronounced vertical and horizontal movement, and high speed mixing pan rotation facilitate faster mixing and faster discharge
- Low maintenance, low wear-no lubrication points in the mix, large access doors, no contact between product and shaft seals, no material build up due to wall/bottom scraper
- Cost effective-75.6% of connected power available for mixing, lowest operating cost over lifetime of any mixer, minimum 20 years life expectancy, without rework.

Please see our display ad on page 8 of JOM.

Erico Inc

#546

Solon, Ohio
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.

F

F L Smidt Group

#214

Bethlehem, PA
www.flsmh.com

The F. L. Smidth Group of companies is involved in many aspect of alumina refining and smelting and will present an overview of its technology at the 2005 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.

F. L. Smidth Airtech provide a wide line of environmental control equipment for particulate and SO 2 control including electrostatic precipitators, fabric filters and semi dry scrubbing systems.

Moeller Materials Handling provide dense phase conveying systems, direct pot feeding systems, dosing systems for fume treatment centers and a wide line of bulk unloading and storage equipment.

FEI Company

#645

Hillsboro, Oregon
www.feicompany.com

Gatan Inc

#709

Pleasanton, California
www.gatan.com/

Gatan, Inc. is the world's leading manufacturer of instrumentation and software used to enhance and extend the operation and performance of electron microscopes. The Gatan name is recognized and respected throughout the worldwide scientific community and has been synonymous with high quality products and the industry's leading technology.

At the 2005 TMS Meeting, Gatan will be demonstrating its key material science products for:

- Specimen preparation
- Specimen holders
- Imaging
- Analysis
- Software

Please see our display ad on page 6 of JOM.

GE Advanced Materials, Quartz

#631

Cleveland, Ohio
www.advceramics.com

GE Advanced Materials, Quartz (previously GE Advanced Ceramics) is a leading producer of advanced ceramic (non-oxide) 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 non-wetting 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 Infrastructure--Water & Process Technologies

#627

Treose, PA
www.gewater.com

As a world leader, GE provides specialty chemical treatment programs for the aluminum industry, metal processing, mineral processing and for water systems such as boilers, cooling towers and influent and effluent systems.

Our industry specific chemical treatment programs help to reduce operating costs and meet environmental objectives that improve product quality for Influent Water · Boiler Systems · Cooling Towers · Wastewater Systems · Caster Systems · Dust Control · Scale

Control · Corrosion Inhibitors · Finishing Treatment · Conversion Coatings · Cleaners · Passivation Treatments · Heavy Metals Removal · Legionella Control · Combustion Additives.

Call us at (800)775-7175 or visit our website at www.gewater.com

GLAMA Maschinenbau GmbH

#429

Gladbeck, GERMANY
www.glama.de

GLAMA has designed and built heavy-duty mobile equipment for aluminium pot rooms, cast houses and anode rodding shops throughout the world for almost 30 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
- Coil Lift Trucks

Gouda Vuurvast N.V.

#528

Gouda, NETHERLANDS
www.goudavuurvast.nl

GOUDA is an innovative refractory producer (Bricks and Monolithics) with global experience and has 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 several industries: aluminium, ferrous and non-ferrous metal, petrochemical, environmental and energy industry.

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 co-operation with its customers and/or 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 : Gouda Refractories Australia; Belgium : Gouda Vuurvast Belgium; Germany : Gouda Feuerfest GmbH

Refractories - GOUDA can offer you a total care package: Manufacturing (refractory bricks, castables, mortar, self flowing castables, complex pre-cast shapes), engineering, research and development and installation (several new techniques such as: pumping, shotcreting).

Graphite Engineering & Sales

#328

Greenville, MI

www.graphite-eng.com

Graphite Engineering & Sales Co 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 the following items:

1. nuts and bolts
2. brazing fixtures
3. degassing shaft and rotor
4. canister inserts
5. run-out plates
6. molds
7. secondary billet casting rings
8. heating elements
9. electrodes
10. crucibles
11. sintering trays
12. sintering boats

Visit Graphite Engineering & Sales Co at booth #328 to discuss your graphite requirements.

Graphite Machining Inc

#834

Topton, Pennsylvania

www.graphitemachining.com/

When your company needs quality machined graphite parts, put your trust in Graphite Machining, Inc. GMI is an independent machining company with facilities in Topton PA, Reading PA and Metamora MI. All plants are equipped with state of the art equipment, ready to respond to your immediate graphite needs. GMI offers in house purification with less than 5ppm total ash. We also offer custom manufactured carbon carbon parts as well as pyrolytic graphite up to 5/8" thick. Gas injection nozzles, elements, connectors, feed thrus, hearth assemblies, shaft and rotors, etc. are our specialty. GMI can supply you with most grades of graphite manufactured.

Groupe Refraco

#234

Chicoutimi, Quebec, Canada

www.refraco.com

AT THE SOURCE OF SOLUTIONS

Since its foundation in 1995, Groupe Réfraco has offered refractory manufacturing maintenance, engineering and research services to clients primarily in the aluminium, steel, cast iron, pulp and paper, cement and mining industries.

Through its innovation and initiative, it has built a reputation for excellence and proven itself to be an invaluable source for refractory solutions.

The personalized, cordial, open and enduring relationships that Groupe Réfraco builds and maintains with its clients and partners is at the heart of its success. The resulting atmosphere of trust promotes a high level of collaboration that allows effective and efficient solutions to be found.



Hamilton Research & Technology Ltd.

#329

Kolkata, India

www.hamiltonresearch.com

Hamilton Research & Technology (P) Ltd. (HART) provides complete Process Automation solution for the Aluminum Industry. HART's cost-effective technology solutions are available for Soederberg as well as Pre-baked type of 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 suit 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 plant. Individual controllers control the air inlet, draught as well as burner firing to provide accurate adherence to the ideal heating curve. Unique wireless infrared communication system designed for communication between field modules and master computer eliminates frequent maintenance.

Hauck Manufacturing Co

#205

Lebanon, Pennsylvania

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.

Hencon BV

515

Ulft, the Netherlands
www.hencon.nl

SPECIAL VEHICLES FOR THE ALUMINIUM INDUSTRY

Backed by more than 45 years experience, Hencon Holland is a main worldwide supplier in the field of "Special Mobile Equipment" for the aluminium industry.

Besides the delivery of new equipment, Hencon also has vehicle maintenance facilities near several smelters.

The delivery program covers the complete range for potroom (Söderberg and Prebaked) for the casthouse, 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
- Anode Spading / Tamping Trucks
- Side Loading Forklift Trucks
- Platform Lifting Trucks

At the TMS 2005 Exhibition, Hencon will be present at booth no. 515, where the products of the delivery program will be shown.

SPECIAL NEW DEVELOPMENTS ARE:

- Compact Hot Metal Transport and Tilting Vehicle
- Tapping Trucks (for alumina and bath)
- Anode Transporter (compact design, with integrated lifting and suspension system)
- Multipurpose Vacuum Cleaner H-3000
- Multipurpose Furnace Charging Vehicle

Heraeus Electro-Nite Co.

#300

Langhorne, Pennsylvania
<http://www.electro-nite.heraeus.com>

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 Digilance IV AI, the latest technology for bath temperature / CVD measurement, combined with latest data logging / IR downloading capabilities will be displayed.

Hertwich Engineering

#828

Braunau, Austria
www.hertwich.com/

Based in Braunau, Austria and having an office in USA, this supplier of equipment to the aluminum industry will be showcasing their entire line of products. This will include: fully automatic in-line 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

#600

Husnes, NORWAY
www.hmr.no

For 48 years HMR Group of 9 companies supplies 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 Vehicles
 - Anode Changing
 - Feeders
 - Spading Vehicles
 - Wheel Crust Breakers, etc.
- Pot construction and start-up, including:
 - Potshells
 - Superstructures
 - Busbars and flexibles installation
 - Anode stud bars
 - Collector bars
 - Anode yoke and rod assemblies

During TMS 2005 we will feature a new model of Dual Anode Changer with rotating crane and cabin, include cap removal unit for handling pot and cooling covers, developed by HMR Hydek, Norway together with the drivers and industrial health service to meet the future demand for mobile vehicles.

Hosokawa Nano Particle Technology Center (USA)

#830

10 Chatham Road, Summit, NJ 07901
www.hosokawanano.com

Hosokawa Nano Particle Technology Center (USA) is a division of Hosokawa Micron International, Inc. Hosokawa Micron, a pioneer of

powder technology, develops and manufactures various nanoparticle processing and dry particle bonding technologies for producing nanoparticles and nanocomposites used in electronics, cosmetics, pharmaceuticals, energy, military, and aerospace industries.

Equipment for the production of nanoparticles and nanocomposites and for particle surface modification as well as their application examples, such as in ceramics, polymers, cermets, fuel cells, superconductive materials, and carbon nanotubes, are to be presented in the exhibition. Services for application development and contract manufacturing are available.

Hosokawa Micron offers complete consultation, solution, and support for your needs of equipment and process know how in nanoparticle processing.

HRV Engineering Group

811

Reykjavik, Iceland
www.hrv.is

The HRV Engineering Group is an alliance of three of Iceland's largest and longest-established engineering consultants – Hönnun, Rafhönnun and VST. The HRV Engineering Group has played a leading role in a wide range of major local and international construction projects, including each of Iceland's three aluminium smelter plants.

Drawing on a wealth of professional skills and extensive technical expertise acquired over several decades operating in some of the world's most extreme climates and toughest geological conditions, the HRV Engineering Group offers clients the complete portfolio of services, advice and solutions required to take any project, regardless of size, from drawing board to completion. These range from pre-feasibility and environmental impact assessment, to design, construction and project management.

The HRV is the EP Engineer for the NORDURAL expansion project in Iceland and a Partner to Bechtel regarding the new 322,000-tonne Alcoa's Fjarðal smelter.

We welcome you to visit our booth No. 811 at TMS 2005.

Hysitron Inc

#836

Minneapolis, Minnesota
www.hysitron.com

As the world leader in nanomechanical testing, Hysitron is solely dedicated to the development of testing solutions for nanoscale mechanical characterization. Known as the "Pioneers of Scanning Nanoindentation", Hysitron's instruments provide high-speed in-situ SPM imaging, as well as measurement of many mechanical properties, including modulus, hardness, fracture toughness and wear resistance. Newly developed advance techniques include acoustic emission sensing, dynamic testing (nanoDMA®) and a nanometer resolution Modulus Mapping technique. Higher force indentation and 3D scratch capabilities provide the ability to study micro to nanoscale connectivity. Stop by the booth to discuss a testing solution specific to your application



Industrial Heating Magazine

#316

Pittsburgh, PA
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 24,000 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.

Industri-teknik Bengt Fridh AB

803

Arlöv, Sweden
www.industri-teknikbf.se

INDUSTRI-TEKNIK Bengt Fridh AB, is specialised in different types of combustion design for heating, drying, destruction, preheating, etc.

At TMS 2005 INDUSTRI-TEKNIK will present their special heating systems for applications in the Aluminium Industry like:

- Pre-heating of cathode cells.
- Pre-heating of cathode and collector bars.
- Heating of crucibles.
- Combustion systems for baking kilns in Carbon Plants.

We welcome you to visit our booths No. 803 - 809 at the Altech Pavilion at TMS 2005 in San Francisco.

innovatherm GmbH & Co KG

#409

Butzbach, GERMANY Phone: 0049-6033-9696-0
Fax: 0049-6033-9696-9
E-mail: dmaiwald@innovatherm.de
www.innovatherm.de

innovatherm GmbH & Co. KG is concerned with thermal processes and has specialized in tuning, reconstruction and optimization of existing furnaces. Especially in the field of the anode baking process, innovatherm has gained many years of experience in open and closed pit, single and triple baffle furnace technology. innovatherm continues and improves the former Leisenberg technology for firing and control systems for anode baking furnaces.

The International Magnesium Association (IMA)

#203

Wauconda, IL
www.intlmag.org

The International Magnesium Association (IMA) is the global voice of the metal magnesium industry. IMA is a trade association for magnesium's primary producers, recyclers, foundries, fabricators, end-users and suppliers. IMA's leadership provides the global industry with services and information through its world conference,

seminars, industry production statistics, sponsored research and publications. Founded in 1943, IMA's mission is to enhance magnesium's position in material selection and promote innovative applications of the metal. Today's use of magnesium provides numerous options and benefits to manufactures and consumers.

2005 IMA World Magnesium Conference will be held May 22-24 in Berlin, Germany. Conference includes presentation of papers, exhibition, networking opportunities and committee meetings.

J

Jayne Industries

#201

Stoney Creek, Ontario, Canada
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 & services to the Aluminum, and other Non Ferrous and Ferrous Industries for over 30 years.

Hexmesh and accessories as well as Jayne large volume Refractory Pan & 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 #201 to further discuss your anchor and hardware requirements.

Please see our display ad on page 11 of JOM.

JMatPro Sente Software/Thermotech Ltd.

#404

Guildford, Surrey, United Kingdom
www.jmatpro.com

This is a unique software program for predicting phase transformations, physical/mechanical properties and solidification properties for complex alloys. It provides fast and robust calculations that have been extensively validated to ensure sound predictions of the properties. Our software combines industrial relevance with realistic physical models and user-friendly interfaces that work with "real" materials which are multi-component in nature and exhibit complex behavior.

JEOL USA

#815

Peabody, Massachusetts
www.jeol.com

JEOL is a leading global provider of electron optical instrumentation for high-end scientific and industrial R&D. Innovative technologies and award-winning services promote advances in materials science, nanotechnology, biotechnology and biology. Core products include electron microscopes for failure analysis, inspection, high resolution applications, and semiconductor equipment (e-beam lithography,

defect review and inspection tools, and wafer process monitors).

Learn more about our new high-performance products, including: JSM-6480LV

- Flexible, fast, high resolution analytical SEM
- Ultra-wide magnification range of 5X to 300,000X
- Large specimen chamber and stage for observation of very large samples
- Automated features for ease-of-use; asynchronous five-axis stage movement, unattended data acquisition, and "smart", programmed settings for common samples
- Streamlined, compact design fits multi-user lab environments

Cross Section Polisher/CSP-SM-09010

- Easy-to-use, benchtop sample prep device for SEM, EPMA, and SAM applications
- For use with soft, hard, and composite samples
- Minimum sample damage, smearing or deformation
- Achieve clean, polished cross section with a large viewing area.

Please see our display ad on page 5 of JOM.

JOM

#521

The official publication of TMS and the TMS 2005 Annual Meeting & Exhibition

Warrendale, PA

www.tms.org/pubs/journals/JOM/jom.html

Published monthly by TMS (The Minerals, Metals, and Materials Society), *JOM* is a technical journal devoted to exploring the many aspects of materials science and engineering. *JOM* reports scholarly work that explores the state-of-the-art processing, fabrication, design, and application of metals, ceramics, plastics, composites, and other materials. In pursuing this goal, *JOM* strives to balance the interests of the laboratory and the marketplace by reporting academic, industrial, and government-sponsored work from around the world.

K

KBM Affilips BV

#415

Oss, The Netherlands

Phone: +31 412 681311 • Fax: +31 412 635594

E-mail: info@kbmaffilips.com

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 & Ti).

The very complete product range for the Copper industry includes products like CuB, CuCo, CuCr, CuFe, CuMg, CuSi, CuTi & CuZr.

KBM AFFILIPS is also the right address for NiMg (& complex FeNiMg), additives for super alloy production as well as Pb and Zn master alloys.

For further information please visit our booth 415 or contact our office.

Kabert Industries

#721

Villa Park, IL

Phone: (630) 833-2115 • Fax (630) 833-9298 • 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 a variety of other shapes.

Other products available include gaskets, which are 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.

Kempe International

#626

Geelong, Victoria, AUSTRALIA

www.kempe.com.au

Kempe International is a leading service and equipment supplier providing turnkey facilities, specialised equipment, engineering consulting and maintenance support to the worldwide aluminium smelting industry.

Kempe offers products and services in a variety of areas including:

- Potrooms
- Casthouse
- Anode Handling & Cleaning
- Rodding Shop
- Materials Handling & 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 in Russia & Asia.

Kempe has permanent operations in Australia, Mozambique and the United Arab Emirates.



L P Royer Inc

#326

Lac-Drolet, Quebec, CANADA

www.lproyer.com

Since 1934, L.P. Royer makes and develops specialized safety footwear. Even if it is for protection against molten metal infiltration, lineman, woodcutter or pruner, specialized chemical boot, for extreme cold or simply for a general use, available for men and women. 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 (ANSI) and the European (CE) standards.

L.P. Royer is proud to supply pot room 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 by visiting our website at www.lproyer.com.

Laeis GmbH

#409

Trier, GERMANY

www.laeis-bucher.com/

LAEIS is a leading supplier of machines and plants for the ceramics and refractories industry, the building materials industry, the carbon industry and others. The product range includes:

- Hydraulic high performance presses with pressing forces from 600 up to 4 200 tons
- Kilns & dryers with a temperature range up to 1 850 °C
- Automation and handling systems
- High intensity hot mixers and grain heaters for batch sizes up to 2 000 l
- Plant engineering

LAEIS has developed a new concept for a paste preparation and anode pressing plant based on a hydraulic high performance press for a capacity of up to about 50 t/h in a single line.

Light Metal Age

#720

San Francisco, CA

www.lightmetalage.com

For over 61 years, Light Metal Age has covered primary production and semi-fabrication of light metals, primary aluminum and associated nonferrous industries throughout the world. Circulation goes to smelters, rolling mills, extrusion plants, sheet rod and wire mills, foundries and die casting, anodizing, roll casting, coil coating and forging operations.

Recipients are executives, general managers, plant managers, technicians, metallurgists, chemists and engineers responsible for fabrication, production and operations.

Editorial topics covered in Light Metal Age include: extrusion process control, aluminum automotive applications, pot line technology, direct chill casting, secondary aluminum production, casthouse metal quality, hard anodizing, and rolling mill technology.

Linseis Inc

#810

Princeton Junction, New Jersey
www.linseis.com

Linseis Inc. is the worldwide leader in Thermal Analysis Products. Linseis manufactures instruments for thermo physical property measurement. We offer a complete line of instruments for research and quality control. Those instruments include Dilatometers, Thermal Gravimetric Analyzers (TGA), Differential Thermal Analyzers (DTA), Simultaneous Thermal Analyzers (STA), Differential Scanning Calorimeters (DSC), Rapid Induction Thermal Analyzers (RITA), and Thermal Mechanical Analyzer (TMA).

Systems are available with interchangeable furnaces providing a wide temperature range from -150 to 2400°C on most instruments. Most instruments offer connections to FTIR and mass spectrometers for evolved gas analysis. Select systems also offer analysis in high vacuum, inert, dynamic, static, and/or corrosive atmospheres.



Master Alloys Co

#722

Wabash, IN
www.wabashalloys.com

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
- MINIMUM METAL CONTAMINATION
- MINIMUM OXIDATION OF MELT
- GUARANTEED COMPOSITION

Master Alloys also supplies grain refiners and specialty alloys to the aluminum industry.

Materials Analytical Services

#842

Sunnyvale California
www.mastest.com

Materials Analytical Services is a commercial analytical laboratory offering a complete range of materials and process characterization services, FIB assisted SEM and TEM microscopy services and environmental testing for the laboratory or the fab.

Services include SIMS, XRD, XRR, XPS, TXRF, AES, RBS, AFM, FE-SEM, FIB, TEM and STEM. For detailed information on the services we offer, please visit our web site or call our laboratory to discuss your requirements at (408) 737-9700.

McAllister Mills/TRITEX LLC

#301

Independence, Virginia
www.mcallistermills.com

Come visit us at TMS 2005 in San Francisco. McAllister Mills has several new products we are introducing 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 is introducing 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

#202

Chicoutimi, QC, Canada
www.mecfor.com/

Manufacturer of specialised mechanical equipment, Mecfor has developed a specific expertise in the field of custom equipment for all of the aluminium industry sectors: transformation of bauxite into alumina, plants carbon sector, potroom and casthouse sectors, general maintenance and secondary transformation industry.

We specialise in mobile equipment such as multifunctional articulated vehicles, bath crucible handlers and anode and crucible carriers. Our most frequently used tools are surface skimming, bottom skimming, cleaning and stirring scrappers, the ingot and scrap loading clamps, the tub dumping, the fork positioner and the fork rotator. Anode grooving equipment is also equipment we specialize in.

At MECFOR, we don't only design equipment, we deliver technology developed in partnership with our clients. All equipment developed and fabricated at Mecfor take into consideration the harsh working environment of aluminium mills: the presence of highly abrasive alumina dust and other harmful gases in the ambient air as well as the effect of magnetic fields on various components.

Mechatherm International Ltd.

#227

Kingswinford, West Midlands, United Kingdom
www.mechatherm.co.uk

Mechatherm is a privately owned company, formed in 1973 and has developed a worldwide reputation specialising in furnaces for the aluminium, copper and brass industries. The product range can be split into 4 main categories:

Aluminium Foundry - melting and holding, rotary (static and tilting), scrap charging machines, vertical d.c. casting machines, turnkey foundry installations including all necessary ancillary items

Aluminium Extrusion - including log heaters and shears, ageing ovens, automatic ageing oven basket handling systems and die ovens

Aluminium Heat treatment - all air recirculated types of furnaces including homogenising, coil annealing, foil annealing, slab heating and solution heat treatment

Aluminium Dross reclamation - joint venture with Jesse Brough Metals, custom designed to suit the type of dross to be recycled. The full range of dross recycling plant includes refining and separation into useable products and remelting of aluminium metalics.

Copper and Brass Extrusion - gas fired billet heating furnaces both roller hearth and walking beam type.

Metal Bulletin LLC

#231

London, UNITED KINGDOM

www.metalbulletin.com

American Metal Market & Metal Bulletin provide readers with up to date metals news and prices. They are the titles of choice for management at metals producers, semi-fabricators, traders, end-users, recyclers, and capital equipment suppliers.

Metal Bulletin is widely known internationally for its comprehensive coverage of international news and prices. MB is complimented by MBR, its research arm, and a comprehensive range of directories and conferences covering various industry segments world-wide.

Metallurg Aluminium

#829

Rotherham, South Yorkshire – UK

Newfield, NJ – USA

São João Del Rei – Brazil

www.MetallurgAl.com

Metallurg Aluminium combines the strengths of its members, London & Scandinavian Metallurgical Co Limited (LSM), Shieldalloy Metallurgical Corporation (SMC) and Companhia Industrial Fluminense (CIF) to innovatively meet the highest quality requirements of the aluminium industry.

With its three manufacturing facilities, located in the UK, USA and Brazil, its professional worldwide sales force and global distribution network, Metallurg Aluminium offers the aluminium industry the highest level of service in the supply of aluminium grain refiners, master alloys, hardeners, powders and rod feeding equipment.

Our wide range of compacted powder products includes Chrome, Copper, Iron, Manganese, Nickel and Titanium in our ALTAB™ products and briquettes – renowned for their high and consistent elemental yields and ease-of-use.

Metallurg Aluminium's line of innovative aluminium-based master alloys include TiBAI™, TiCAI™, TiAI™ and TiBAlloy™ grain refiners, Boron aluminium treatment alloys (8BAI™), and strontium

aluminium modifiers including 15% SrAl Quick-Sol Bar™ and Strobloy™. Various binary hardeners are also available - CaAl, CrAl, FeAl, MnAl, NiAl, SiAl, TiAl, VAl and ZrAl. Convenient-to-use forms include coiled rod, cut rod, Castcut™, Quick-Sol™ Bar, and ingot.

Consistently high quality is secured through statistical process control and rigorous quality assurance programs. All Group members are registered to the following quality standard: ISO 9001:2000.

We invite you to visit the Metallurg Aluminium booth for the latest information on our products and services and how they can be used in your applications to improve yields and lower costs.

Metallurgical Society of CIM

#727

Montreal CANADA

www.metsoc.org

The Metallurgical Society (MetSoc) of the Canadian Institute of Mining, Metallurgy and Petroleum was formed in 1967 under the umbrella of CIM to serve the needs of all Canadian Metallurgists working to transform ores to metals and other useful commercial products. MetSoc, 1,400 strong, provides an open forum for engineers, scientists and technical personnel and students to exchange and share new knowledge. MetSoc also acts as a catalyst in enhancing the growth of its members who are engaged in all phases of the minerals, metals and materials industry.

To enhance the exchange of information MetSoc publishes a number of proceedings that touch a number of topics including:

- Hydrometallurgy of non-ferrous metals
- Light metals
- Pyrometallurgical operations, covering the smelting of sulphides and laterites
- Iron and steel developments
- Technology of zinc and lead processing
- Waste processing and environment issues
- Computer applications
- Management in metallurgy
- Mineral processing

MetSoc would like to take this opportunity to invite you to our booth #727. See you in San Francisco!

Metaullics Systems Co. LP

#601

Solon, Ohio

www.metaullics.com

Metaullics Systems is a leading supplier of engineered solutions for handling and processing non-ferrous molten metals. Metaullics®, along with its subsidiary EMP Technologies provide products and services that improve productivity, reduce energy consumption, increase metal recovery, and improve product quality. Metaullics offers the following low maintenance products.

- State-of-the-art Tensor® Series pumps designed to last up to a year between rebuilds
- High flow EMP pumps which provide the reliability inherent with no moving parts
- Light gauge melting systems such as LOTUSSTM which maximize recovery of swarf and other hard to melt products
- Re-usable bonded particle molten metal filters with the ability to remove particles down to 5 microns in size
- Graphite degassing shafts and rotors using our proprietary anti-oxidation treatment and patented Shur-Lok coupling for long life and easy maintenance
- RODECS, a revolutionary batch de-coating and drying system for aluminum scrap

Metso Lindemann GmbH

#204

Düsseldorf, Germany

www.metsominerals.com/lindemann

Metso Lindemann specializes in state-of-the-art processing systems for scrap and residual materials. Its products are used in metal recycling plants and automobile factories but also in Aluminium recycling as well as in thermal and biomechanical waste processing plants, to name only a few applications.

One of our main focal points is the primary and secondary aluminium industry. For the aluminium smelters we developed a recycling concept which includes the processing of anode butts from aluminium electrolysis, whole baked or green waste anodes for reuse as recycling materials in anode coal mills.

Products for scrap processing:

Anode crushers, shredder systems, scrap shears, scrap balers, briquetting presses, turnings crushers and NF-metal separators

Please see our display ad on page 25 of JOM.

MEXTRA Eng. Extrativa de Metals

#615

Jardim Inamar Diadema SP, BRAZIL

www.mextrametal.com.br

Producing ferro alloys and non-ferrous metals, MEXTRA started its activities in 1978, as a result of the aspirations of a metallurgical engineer, Eduardo Barchese, who wanted to have his doctoral thesis transformed into an enterprise. Before long, MEXTRA reached an outstanding position in the market, producing metals and metal alloys which had never yet been produced in Brazil. Today, dynamic and aggressive management brings the company to expand its businesses, obtaining international recognition.

More recently, with the production and grinding of metals, MEXTRA increased its range of products 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 the main aluminum manufacturers such as ALCAN, ALCOA, CBA, BILLITON, ALUVALE and others, with this line of products.

Our company has grown aiming at satisfying our clients and respecting our employees, aware that this is the pathway to our continuous growth.

Mid-Mountain Materials Inc

#215

Mercer Island, WA

Phone: 1-800-382-2208

www.mid-mountain.com

Mid-Mountain Materials specializes in industrial textile manufacturing, coating formulation & coated fabrics, insulation mats, refractory specialties, and fabricated components. Our expertise in diverse material technologies enables the design and manufacture of engineered solutions for severe applications across multiple industries.

Mid Mountain's focus in the Aluminum Industry is energy efficiency and environmental compliance thru custom designed sealing systems for aluminum processing equipment. Designed specifically for the Aluminum Industry, our proprietary "Q" coating has been a key in the performance success of many composite material-sealing systems. Armatex Q coating is impregnated into traditional textiles to enhance temperature, chemical & abrasion resistance.

"The Final Barrier Against Abrasion, Chemicals & Heat."

Milward Alloys, Inc.

#420

Lockport, New York

www.milward.com

Milward Alloys, Inc. is a manufacturer of both copper and aluminum based master alloys. It produces a wide variety of grain refiners, hardeners, modifiers, and degasifiers for the non-ferrous industry in the form of rod, waffle, ingot, shot, cut-cast and Acu-Stix.

Several unique alloys are available like 1% and 5% Beryllium Aluminum, 10% and 15% Strontium Aluminum and 8% and 15% Phosphorus Copper. Milward Alloys also possesses unique capabilities to manufacture specialty alloys upon request.

We invite you to stop at our booth #420 to discuss your special needs.

MINTEQ International Inc.

#726

Slippery Rock, PA

www.mineralstech.com

MINTEQ International Inc. is one of the world's largest producers of monolithic and specialty refractory materials for the steel, cement, glass, and non-ferrous metals industries. MINTEQ is a resource and technology based company with R&D facilities in five locations around the globe. Our aluminum resistant, self-flowing and shotcrete castable products are the most advanced in the industry.

One of our newest product lines is the proprietary STARFLOW family of products. STARFLOW products were developed for high temperature maintenance and repair of melting and holding

furnaces, troughs, ladles, and molten metal containing vessels.

STARFLOW products provide the following benefits:

- Furnished as a dry product that requires no addition of water
- No mixing required
- No dusting during application (safe, environment friendly application)
- Contains no pitch or other organic additives
- Wets out and flows upon exposure to heat
- Sets up within minutes
- Eliminates costly downtime for maintenance and repair

Stop by our booth at the TMS in San Francisco for a STARFLOW demonstration!

MMR Technologies

323

Mountainview, CA
www.mmr.com

MMR Technologies manufactures temperature controlled systems – cryogenic cooling systems and wide temperature range thermal stages – which find applications in materials research in chemistry, biology, electrical engineering and physics. These systems operate over the temperature range of 10K to 730K. They are used for electrical resistivity, Hall effect, Seebeck effect, DLTS, MEMS, magnetoresistivity and luminescence studies. They are also used in medical applications and the cooling and characterization of computer chips, electronic devices, laser diodes and thermal imaging devices as a function of temperature.

Molten Metal Equipment Innovations

#211

Middlefield, Ohio
www.mmei-inc.com

Molten Metal Equipment Innovations is a world leader in molten metal pumps, degassing equipment and scrap submergence melting systems. MMEI offers a complete range of transfer, circulation and gas injection pumps. Our pumps provide the highest flow rates and longest service life for maximum production. Complete degassing systems are available, including lightweight portable units, automatic ladle degassing stations and in-line units. MMEI specializes in the ability to customize our products to meet each customer's unique application. MMEI has a complete staff of engineers and sales support to offer a variety of services to our customers.

MQC Technologies Inc

234

Chicoutimi, Quebec, Canada

MTI Corporation

#547

Richmond, CA
www.mticrystal.com

MTI Corporation, founded in 1994 by a group material researchers from MIT, has now become a leading manufacturer of oxide crystals and substrates in the world, thanks to a venture capital from Silicon Valley.

MTI has built up a factory in China with 50 sets of crystal growers and more than 100 sets of polishing machines to produce all kinds of oxide single crystal and substrates. The state of art equipment, including cutting, polishing, optical coating, dicing and AFM quality inspection combined with a lower labor cost, enable MTI to provide the best quality single crystal and substrates at the most competitive price. Quality control is the first priority at MTI.

Murlin Chemical, Inc.

#620

West Conshohocken, PA
Phone: (610) 825-1165 • Fax: (610) 825-8659
E-mail: general@murlinchemical.com
www.murlinchemical.com

Aluminum Grade Natural Bone Ash, Natural Bone Ash and Synthetic Bone Ash are manufactured at the Murlin Chemical Plant in West Conshohocken PA, USA. All these products are accepted world wide in the non-ferrous metals industries as the premium mold release agent. Bone ash provides a consistent barrier against attack by the molten non-ferrous metal when applied to a mold, a refractory trough, a surface, or a tool that will be exposed to molten metal. Bone ash not only provides a non-wetting barrier to molten non-ferrous metal but also protects as a thermal insulator while allowing easy release of castings.

*Plan to visit BOOTH 620 to learn more
about advantages gained by using Murlin Bone Ash.*

You may contact us at any time at 610-825-1165 (phone), 610-825-8659 (fax), email at general@murlinchemical.com or visit our web page at www.murlinchemical.com.



Nalco Company

#708

Naperville, Illinois
www.nalco.com

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 Filter Media

#216

Salt Lake City, UT
www.nfm-filter.com

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.

Natural Resources Canada - CANMET

#347

Ottawa, Ontario, Canada
www.nrcan.gc.ca/mms/canmet-mtb/mtl/default_e.htm

CANMET-MTL develops and deploys technologies to improve all aspects of producing and using value-added products from metals and other materials. CANMET-MTL is responsible for providing sound technical input to codes and regulations to ensure public safety. Sustainable development, as it applies to reduced demand for materials and energy, is key to all CANMET-MTL's research and development programs. CANMET-MTL, recognizing that job creation and economic growth will occur through the growth of small and medium-sized enterprises, strives to ensure the competitiveness of these industries by advising them on how to improve their products and processes.

NIST Advanced Technology Program

#837

Gaithersburg, Maryland
www.atp.nist.gov

The Advanced Technology Program (ATP) is administered by the Department of Commerce's National Institute of Standards and Technology. ATP has provided cost-shared funding to industry to accelerate the development and commercialization of high-risk technologies with the potential for broad-based economic benefits for the nation. Technology area examples include: forging, superalloys, powder metallurgy, casting, aluminium, and titanium. Further information about ATP can be found by visiting the website, at: <http://www.atp.nist.gov>.

NKM Noell/Reel Group

#635

Wurzburg, Germany
www.nkm.com

NKM Noell is a leading supplier of cranes and special equipment to the aluminium industry for Reduction, Carbon and Rodding. The scope of supply covers the complete engineering, detail

design, manufacturing, start up and commissioning for individual equipments as well as for turn key projects.

Aluminium Reduction:

- Pot Tending Cranes
- Anode Jacking Frames
- Transfer Gantry Systems
- Cathode Crane
- Crucible Heaters
- Crucible Cleaning Machines
- Pipe Cleaning Machines
- Anode Clamps
- Roof Filling Spouts
- Retractable Buffers

Aluminium Carbon:

- Furnace Tending Cranes
- Flue Wall Brushing Machines
- Anode Stacker Cranes
- Flue Wall Straightening Machines

Aluminium Rodding:

- Green & Baked Anode Handling
- Casting Station
- Mating Station
- Stem & Pin Monitoring
- Stem Brushing
- Stem repair
- Butt Precleaning
- Butt Stripper
- Butt handling/Treatment
- Bath handling/Treatment
- Loading/Unloading Station
- Pin Graphite Coating
- Thimble Stripper
- Pin Heating

North American Manufacturing Company Ltd.

#309

Cleveland, OH
www.namfg.com

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 forty years, specializing in energy savings, emissions reduction and melt rate optimization.

Please see our display ad on page 15 of JOM.

NOVELIS PAE

#600

Voreppe, France
www.novelis.com

Novelis PAE is recognized as an expert by aluminium professionals.

This company supplies equipment and technical assistance for continuous strip casting, in-line molten metal treatment, automatic slab casting and associated spare parts and consumables. Numerous casthouses have already placed their trust in its technology.

From the engineering studies at the start of your project through to successful completion including construction, supervision of installation, start-up and staff training, you will benefit from Novelis PAE's experience and professionalism.

O

Opsis

#616

San Marcos, CA

www.opsis.se

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 reliable system solutions for a number of applications. All systems feature dynamic calibration capability and simple hardware configurations. The ambient system is an EPA approved equivalent method for SO₂, NO₂ and O₃.

Other Opsis benefits include complete DOAS system packages, fully automatic monitoring systems, multi gas and multi path systems, fast, continuous measurements, modular construction which allows expanding or updating of existing installations and simple report generations.

Applications for Opsis equipment include Trend Monitoring, Air Quality Monitoring at street level, Fence Line Monitoring of fugitive emissions, Monitoring Background Levels, Measurement of Aircraft emissions, Waste Incinerations, Power Plants, Mineral Wool Production, Cement Industry, Chemical Industries, Sulfuric Acid Production, Fertilizer Production and Aluminum Smelters.

Outokumpu Technology Ltd.

#421

www.outokumpu.fi/metallurgy/aluminium.htm

In 2001, Outokumpu, a leading global metals and technology group, expanded their offerings to the alumina and aluminum industries. The acquisition of German companies, KHD Aluminium Technology GmbH and Lurgi Metallurgie GmbH, compliments the technologies of its Canadian subsidiary Aisco Systems Inc.

Outokumpu Aluminum 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 Aluminum Technology to be the technology and service partner of choice for the aluminum industry. e-mail: aluminium.technology@outokumpu.com

Please see our display ad on the inside back cover.

P

PCM/Image-Tek

#827

Springfield, Vermont

www.pcmanufacturing.com

Innovative Barcoding for the Metals Industry

PCM/Image-Tek is a leader in harsh environment barcode identification solutions. As experts in the extreme, we are pleased to introduce the unique ability to provide a complete application solution for your high temperature production management requirements.

Ultra high temperatures, solvent and chemical resistant, oily surfaces, abrasion resistant and weather resistant, we can provide the labels that survive. From raw material receipt to shipping. We provide the labels that need to survive.

Please call our knowledgeable staff at 802-885-6208 x 300, so that we can provide you with the engineered solutions for any of your extraordinary applications.

Parker Hannifin

#334

Ulricehamn, SWEDEN/Wadsworth, OH

www.parker.com

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 aluminium industry spans over more than 30 years. Parker has equipped machinery in all phases of aluminum production including smelters, casters & extruders through grinders, rolling mills & strip processing lines etc.

PERI / PHYSICA

#711

Salt Lake City, Utah

www.processeng.com

Process Engineering Resources is dedicated to the creation of leading edge simulation tools and software, specifically targeted at the computational modelling of the most challenging multi-physics engineering processes governed by the equations of continuum physics.

PHYSICA+, a new generation of software to enable the computational modelling of multi-physics phenomena in a unified environment. Multi-physics simulation essentially involves interaction amongst continuum phenomena (e.g fluid-structure interaction, magneto-hydrodynamics with heat transfer and solidification/melting, heat transfer-material defects, aero-acoustics; these are but a few of the common examples around us).

PHYSICA+ Solve challenging computational modeling problems with -
Multi-Physics simulation technology (electromagnetics, acoustics)
Navier-Stokes flows, heat transfer, phase changes, structures
One-way, two-way, or fully coupled physics
Open software architecture
Essentially parallel
Feature-rich (in terms of physics)
Competitive cost

Please see our display ad on page 17 of JOM.

Photo Emission Tech Inc

#826

Newbury Park, California
www.photoemission.com

Pipeline Systems Incorporated

#835

Concord, CA
www.pipesys.com

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, 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.

PSI has designed pipelines for the transport of mineral concentrates and ores, tailings management systems (conventional/cycloned tailings, paste backfill, thickened tailings, deep sea tailings placement), red mud disposal systems and water pipelines

Please see our display ad on page 70 of JOM.

Plibrico Inc

#417

Chicago, Illinois
www.plibrico-usa.com

Plibrico Company celebrates its 90th year as an American owned and operated manufacturer and installer of monolithic refractories. Plibrico's product line is composed of a wide range of plastics, castables and maintenance materials that can be installed through various methods, such as our patented HyRate and mini-HyRate plastic gunning, pumping, Plishot, gunniting, etc.

Stop by our booth to discuss how Plibrico's experience and "state of the art" consistent products, along with your local area representative can successfully solve your refractory problems in a timely fashion.

Port of Longview

#321

Longview, Washington
www.portoflongview.com

Port of Longview is a deep water port authority with full- service bulk and breakbulk terminal facilities and a 300-acre industrial park on the Columbia River.

Port Facilities: The Port of Longview's import and export terminal facilities on the Columbia River in Washington state are capable of handling your bulk and breakbulk moves to and from the Pacific Northwest. Longview specializes in bulk handling with an emphasis on chemicals, minerals and fertilizers and breakbulk commodities such as steel.

Industrial Park: The Port's 300-acre industrial park is a great site for expanding iron, aluminum and steel manufacturers and processors requiring excellent transportation connections. Dual rail service and tax advantages in General Purpose Foreign Trade Zone #120 offer companies a competitive edge.

Contact: For more information, stop by our booth #321 or call (360) 425-3305.

Precimeter Control AB

#621

Gothenberg, Sweden
www.precimeter.com

Precimeter delivers level control systems for automating the casting process in aluminium foundries. These systems can be used in a variety of applications such as:

- Level control for Mold and Head-box
- Level control for Trough and Launder
- Furnace Level Control

Precimeter's laser sensor system guard the quality of the casting and the purity of the alloy at every stage from smelting to final pouring. The sensor and actuator combination form a complete control system, no external equipment is needed. Precimeter sensors are delivered with a PI-controller built into the sensors or directly connected to your existing system.

Please see our display ad on page 29 of JOM.

Premelt Systems Inc

314

North Canton, Ohio
www.premelt.com

Premelt Systems is the premier supplier of complete metal scrap cleaning, processing, and melting systems worldwide. Our patented chip melting technology combines the conventional vortex well with our nitrogen operated gas lift molten metal circulating pump. The addition of an enclosed charge well hood in combination with our continuous scrap feeding systems results in a scrap melt system with no moving parts in the bath, hands-free operation, and optimum thermal efficiency with the highest melt yield possible.

Our innovative metal processing and melting techniques ultimately result in unprecedented operational efficiencies and metal cost savings of 10% or more. Please visit us at booth #314

R

R&D Carbon Ltd

#409

Sierre, SWITZERLAND
www.rd-carbon.com

R&D Carbon is a leading expert in carbon technology with a long history of research and development, anode plant operation and customer support. Our products and services include:

- Engineering:

We design paste plant and bake furnace with our network of renowned equipment suppliers, refractory and system engineers for lowest investment and operating cost.

- Plant Optimisation:

We transfer our expertise e.g. by auditing coke calciners and anode plants, followed by plant optimization and fine tuning to increase plant productivity and improve product quality.

- Laboratory Testing:

The R&D Carbon Laboratory Sales Division exclusively sells our laboratory test equipment for coke, pitch, anodes, cathodes and lining material. In our performance technology center we evaluate raw materials and anodes with ISO methods.

- Training:

We give on-site or centralized courses about general or tailored carbon topics.

RHI Non Ferrous Metals Engineering GmbH

#813

Leoben, Austria
www.rhi-ag.com

The RHI Non Ferrous Metals Engineering GmbH -a subsidiary of the RHI Group- is an integral part of RHI Refractories and has been established in the fields of non-ferrous metals as the competence

center for systems and process solutions which bear customer added values and which are far going beyond refractories.

Refractories is the core business of the RHI Group. Under the RHI Refractories brand, products, system solutions and services are delivered to over 10,000 customers in more than 180 countries on all continents. As the global market and technology leader, RHI Refractories has an optimized worldwide network of production, sales and services.

Please see our display ad on page 26 of JOM.

Riedhammer GmbH

#734

Nuremberg, GERMANY
www.riedhammer.de

Since 1925, 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 of 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 system, tending cranes and conveyors, focusing outstanding product quality, maximum fuel efficiency, reliability and world class environmental friendliness in an affordable way.

S

SELEE Corporation

#509

Hendersonville, NC
www.selee.com

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, QS-9000 and ISO 14001 standards.

Sente Software and Thermotech Ltd

#404

Guildford, Surrey, United Kingdom
www.jmatpro.com

We offer materials-focused software products for modeling the behavior and properties of complex alloys. The thermodynamic

databases produced by Thermotech set the standard for the prediction of equilibrium and non-equilibrium structures in multi-component commercial alloys. Our latest product, JMatPro, is a unique software program for predicting phase transformations, physical/mechanical properties and solidification properties for complex alloys. It provides fast and robust calculations that have been extensively validated to ensure sound predictions of the properties. Our software combines industrial relevance with realistic physical models and user-friendly interfaces that work with "real" materials which are multi-component in nature and exhibit complex behavior.

SETARAM Engineering

#317

Caluire, FRANCE
www.setaram.com

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
- 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.

Shiva Technologies, Inc

#523

Syracuse, New York
www.shivatec.com

Specialize in providing trace and ultra-trace analysis of metals, alloys, ceramics, compound semiconductors, etc., using high-resolution glow discharge mass spectrometry (GDMS). Established in 1990, Shiva has evolved to become the global leader in the application of GDMS to the analysis of inorganic materials. Applications include providing bulk, near surface, and depth profile analyses of electronic materials, aerospace alloys, specialty steels, high purity materials, and alloys for medical devices. Shiva also performs: ICP-OES analysis for alloy composition; combustion and inert gas fusion techniques for C, S, O, N, and H; and optical microscopy. Accreditations: ISO 17025, ISO 9001:2000, Nadcap, GE-S400, DOE. Locations: USA (NY), FRANCE, and INDIA.

Silver Needle, Inc.

#320

Kellogg, ID Toll Free 1-800-863-7733
www.silverneedle.net

With 24 years of combined knowledge of foundry-smelter operations and safety clothing the Silver Needle was born.

- 24 years of designing and manufacturing safety apparel for the molten metals industries.
- Specializing in custom orders
- Aluminized fabrics and leathers
- Vinex™
- Spats, aprons, chaps, coats, gloves, lab coats, shirts, pants and more.

At the Silver Needle, your safety is our only business!

Please see our display ad on page 28 of JOM.

Skamol

#414

www.skamol.com

When it comes to insulating materials, knowing the right solution can make the difference in thermal efficiency, energy savings, and lifetime of the lining. Skamol can optimize insulating solutions in aluminum reduction cells, carbon baking furnaces and cast house furnaces.

We offer a wide range of thermal insulating products for service temperatures up to 1150 C (2102 F) including bricks, blocks, slabs and special shape pot-set insulation to fit individual cell designs. Our Silcal 78 Nitride Bonded Silicon Carbide bricks and shapes provide world-class performance. For flow control components: T-Plates, Floats, pins and spouts, we offer Calcast high density calcium silicate from Calcast America. From Elkem Carbon, we offer Elkem's Carbon's "R" and "T" Lining Paste.

Skarveland as

#803

Sunde, Norway
www.skarveland.no

At TMS 2005 Skarveland AS will present new equipment and systems for the Aluminium Industry for improved environment, efficiency and economy.

For Potrooms: A new technology for total recycling of Spent Potlining Material and a Build, Own and Operate (B.O.O.) workshop for such operation.

Skarveland will present B.O.O. workshops for repair of anode rods and potshells.

Skarveland will also present a new technology for maintenance and cleaning of conveying pipes in Dense Phase Systems for transport of secondary alumina.

We welcome you to visit our booths No. 803 - 809 at the Altech Pavilion at TMS 2005 in San Francisco.

SMV as

#807

Norway

www.smv.as

At TMS 2005 SMV AS will present new equipment and systems for the Aluminium Industry for improved environment, efficiency and economy.

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: Semi-automatic Potlining Machines.

For Cast House: PPM-Purification of Potroom Metal by automatic Skimmers and Metal Purification Stations.

We welcome you to visit our booths No. 803 - 809 at the Altech Pavilion at TMS 2005 in San Francisco.

Solios Group

#401

Solios Carbone

Givors, France

www.solios-carbone.com

Solios Carbone is a leader in turnkey plants, process and proprietary equipment in the primary aluminium industry, for Green Anode Plant, Bath Processing, Carbon Butts Processing and Pitch Processing.

Solios Carbone offers a leadership based on industrial engineering and process know-how and has also developed a wide range of proprietary equipment for dry material preparation, paste preparation, anode forming and treatment of waste.

The latest generation of Green Anode plants are based on the SCAP RHODAX® technology and the intensive mixing/cooling cascade.

Solios Environnement SA

Solios Environnement Inc

St Germain en Laye, France

Montreal, Quebec, Canada

www.solios-environnement.com

Solios Environnement designs, builds and installs dedusting units and Fume or Gas Treatment Plants thanks to a complete range of proprietary equipment. Solios Environnement is well-known for providing high quality equipment based on reliability and easy maintenance. Each process is an integrated part of the aluminium production and does not produce any waste.

In Gas Treatment Center, Solios Environnement offers dual suction systems to double pot ventilation during anode change providing significant reduction in potroom roof emission.

Solios Thermal

Wombourne, Wolverhampton, England

www.solios-thermal.com

Solios Thermal is a world class contractor in the design, supply and installation of thermal processing equipment both for the primary and the secondary aluminium industries.

Solios Thermal is specialised in the supply of equipment for the melting and processing of Aluminium in Casthouse Furnaces, Melting & Holding Furnaces, Heat Treatment Furnaces, Recycling Equipment with Associated Control Systems.

Solios Thermal has developed a rotary kiln based thermal delacquering / drying system known as the IDEX®.

Solios Thermal also has a metal movement system, EMIX+®, which is capable of both stirring the molten metal and transferring the metal from Melting to Holding Furnace.

Springer

#226

Secaucus, New Jersey

www.springeronline.com

Stellar Materials Inc

#841

Tarpon Springs, Florida

www.stellarmaterials.com/

Thermbond® is a unique refractory binder technology with a number of features not available in traditional refractory systems.

Unlike conventional refractory products, Thermbond® refractories naturally resist penetration from molten metals. Since there are no additives in Thermbond® to burn or wear out, linings always remain clean, even after long-term use or exposure to very high temperatures. Since the lining stays clean, there is far less maintenance and mechanical abuse, resulting in significantly longer refractory life.

In addition, Thermbond® refractories exhibit very high adhesion strengths to existing refractories, so they can be installed as a veneer to "renew" worn refractory linings.

Additional features of Thermbond® products include fast setting and curing, very high green strengths, far less cracking, and high resistance to thermal cycling.

Thermbond is available in over 60 different formulations for virtually every refractory application. Learn more at www.thermbond.com or email us at info@thermbond.com.

STAS

#714

Chicoutimi, Quebec, CANADA

www.stas-unigec.com

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 world-wide.

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; automated Siphon Tube Cleaners and a new development is to automate Anode Handling in the pot room.

Stellar Canada Inc

703

Burlington, ON, Canada

www.stellarcanada.com

REDUCE YOUR OPERATING COSTS AND DOWN TIME!!

Our refractory experts will evaluate your needs and match you with the right products to meet your requirements and save you money. We offer unique thermal and wear resistant castables, precast shapes and a full line of conventional refractories. Our exhibit will highlight FIBERStone, a high temperature refractory metal and Ceramite® precast shapes that provide superior wear resistance in hot or cold applications. Both products are ideal solutions for many molten metal contact applications. Visit Stellar Canada and Whetstone Technology at Booth 703 or on the Internet at www.stellarcanada.com for more information.

SUAL Group

#222

Moscow, Russian Federation

www.sual.com

SUAL Group is a fully vertically integrated aluminium company that ranks amongst the world's top ten aluminium producers. It comprises 19 businesses that are located in 9 Russian regions and are involved in the production of bauxite, alumina, primary aluminium, silicon, semi-finished and finished aluminium products. The Group has annual revenues of US\$ 1.7 billion* and 62,000 employees.

Annually, SUAL Group mines some 5 million tonnes of bauxite, refines more than 2.1 million tonnes of alumina, and manufactures 920,000 tonnes of primary aluminium. It also produces some 60,000 tonnes of silicon annually, as well as a range of aluminium fabricated products (including metal structures, foil, cable, cook-ware etc.).

*Including share from Associates and Joint Ventures.

T

Techmo Car s.p.a

#531

Limena, Padova, ITALY

www.techmo.it

Over the last 40 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.

Tecnac do Brasil

#223

Higienópolis, Rio de Janeiro, Brazil

www.tecnac.com.br

Founded in 1988, TECNAC DO BRASIL currently figures among the most experienced and qualified companies which reform machinery and equipment, perform industrial automation projects, electric panel assemblies, electric installations and provide consultation.

TECNAC DO BRASIL is in a position to meet the requirements of companies performing a wide range of activities, offering a safe, dynamic and punctual service.

Professional and determination are the fundamentals which sustain the partnership with our customers for years on end.

We will be displaying the Easy Change equipment in the TMS 2005. (equipment developed by Tecnac do Brasil). Easy Change equipment is used to change anodes under the aluminum electrolysis process. Easy Change allows swift changing and easy handling .

In addition to easy handling, it also offers:

- Greater stability in pot
- Reduced 24 hour adjustment
- Reduced Red stub
- Reduced burn off
- Reduced labor
- Elimination of Heat Stress
- 0.5 mm accuracy during adjustment

Thermal Ceramics

#400

Augusta, GA

www.thermalceramics.com

Thermal Ceramics, a worldwide leader in refractory and high-temperature insulation technology, offers solutions for the most demanding thermal management challenges. Our products include:

- 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 RPC® Boards and Shapes
- BTU-Block™ Microporous Insulation
- Kaowool® Paper and Felts
- Pyro-Bloc® Weld-On and Veneering Modules
- Superwool® 607® and Superwool 607® MAX™

Thermal-Tek/Michigan Inc.

#743

Cedar Springs, Michigan
www.thermal-tek.com

Thermal-Tek/Michigan presents our MR Multi Ply® Roof System. Over the last 20 years, Thermal-Tec has provided the highest quality, cost effective solution to the metal roof industry throughout the Midwest. Thermal-Tec's specialty is roofing in aggressive, caustic environments from Steel processing, Aluminum and Steel recycling, to Chemical recycling including extreme heat locations. We have an award winning; Nationally recognized Safety and Training program. We are simply the very best!

Thermo Electron Corporation

#230

Madison, Wisconsin
www.thermo.com

Thermo Electron Corporation is the world leader in analytical instruments. Our instrument solutions enable our customers to make the world a healthier, cleaner, and safer place. Thermo is an essential element in metals production. From raw material handling through every step of the metal production process, Thermo instruments provide critical process data in the lab and on the line. Experienced Thermo service engineers are available to evaluate specific parameters and help you optimize your production processes.

Thermcon Ovens B.V

#315

Geldermalsen, THE NETHERLANDS
www.thermcon.com

Thermcon Ovens BV, a member of the Otto Junker Group of companies, is a supplier of the complete state of the art casthouse package for the production of aluminium extrusion billets, rolling slabs and foundry ingot.

The delivery program for the casthouse 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. Together with other members of the Otto Junker group that 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

#209

Stockholm, SWEDEN
www.thermocalc.com

Thermo-Calc Software is a well-established supplier of thermodynamic calculations and kinetic simulations software. Among our many products you may find:

Thermo-Calc Classic (TCC) software for thermodynamic calculations in multi-component materials. Now also available with a Graphical User Interface (TCW), that makes this software very easy to learn and operate. The software may be applied to different types of materials, such as; all kind of steels, Ni-base superalloys, Al-, Cu-, Ti- and Mg- alloys, nuclear materials, minerals, slag systems, salts, ceramic systems, semi-/super-conductors and aqueous solutions. Calculations involve phase diagram calculations, calculation of all kinds of thermochemical properties such as activities and enthalpies etc., calculation of Pourbaix diagrams, solidification paths etc.

DICTRA is a highly advanced tool for simulating the kinetics of diffusion controlled phase transformations in multi-component alloys. Examples of processes that may be simulated are; carburizing and decarburizing, microsegregation during solidification, precipitate dissolution/growth/coarsening, interdiffusion in compounds etc.

Please see our display ad on page 22 of JOM.

TSL

#731

Mahwah, NJ
www.edax.com

EDAX/TSL provides a powerful line of material characterization tools including, OIM™, Delphi (Phase ID), ACT (Automated Crystallography for TEM) and Pegasus. OIM™ is a powerful tool for investigating key aspects of polycrystalline microstructures including local crystallographic textures and grain boundary analysis. Recently OIM™ has been enhanced with the addition of ChI-scan with Phase Cluster Analysis (PCA). ChI-Scan is a powerful tool for the Pegasus platform that combines the EDS and EBSD information gathered from a specimen to improve the speed and accuracy of measurements from multi-phase samples. The Pegasus platform combines EDS and EBSD in a single system.

Thorpe Technologies Inc

#514

Whittier, CA
www.thorpetech.com
sales@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. Sidewell 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, CA; Tel: (562) 903-8230. Projects in Mexico are handled by Thorpe Mexico SA de CV; Tel: (52) (81) 8335-2025.

Thorpe Technologies engineers and builds mill duty industrial furnaces and thermal processing equipment. Please stop by to talk to us about your equipment requirements.

Tianjiao International (Baotou)

#641

Burlingame, California

www.baotou.com

Tianjiao International Co. (www.baotou.com), located in the San Francisco area, is a professional global material supplier with a diversity of products ranging from raw materials to finished material components. Especially, Tianjiao is more expert in non-ferrous metal materials and rare earth materials. Tianjiao has opened its local office in Shanghai, China to enhance its global service. Tianjiao's products include sputtering targets, refractory metals (Ta, Nb, Mo, W, Ta, Ti) and their components, and rare earth metals and compounds such as Y, La, Ce, Pr, Nd, Sm, Gd, Tb, Dy, Eu. Tianjiao's philosophy is "Best Quality, Best Credibility, and Best Service!"

U

U.S. Dept. of Energy/Office of Energy Efficiency and Renewable Energy

820

Washington, DC

www.eere.energy.gov/industry

The U.S. Department of Energy Office of Energy Efficiency and Renewable Energy's Industrial Technologies Program (DOE-ITP) has formed partnerships with the most energy intensive U.S. manufacturing industries to accelerate the development of energy efficient technologies and processes. The DOE-ITP R&D projects with these industries will be highlighted. These partnerships support and enhance the global competitiveness and ecological sustainability of U.S. industry through strategic, leveraged investments in technologies that save energy, improve productivity, and reduce waste.

U.S. DOE FreedomCar & Vehicle Technologies Program

#202

Washington, DC

www.eere.energy.gov/vehiclesandfuels

The FreedomCAR and Vehicle Technologies Program supports the mission of the U.S. Department of Energy, Office of Energy

Efficiency and Renewable Energy, to strengthen America's energy security, environmental quality, and economic vitality in public-private partnerships that:

Enhance energy efficiency and productivity;
Bring clean, reliable, and affordable energy technologies to the marketplace; and

Make a difference in the everyday lives of Americans by enhancing their energy choices and their quality of life.

To that end, the FreedomCAR and Vehicle Technologies Program professionals work with industry leaders to develop and deploy advanced transportation technologies that reduce the nation's use of imported oil and improve air quality.

V

VEXTEC Corporation

#446

Brentwood, TN

www.vextec.com

VEXTEC Corporation (Nashville, Tennessee) offers computational material science software integrated within the finite element design environment.

VPS-MICRO™ (fatigue) simulates real world grain variability in large, geometrically complex products down to nanoscale devices. Using "smart" processing, all material grains that makeup the product are simulated and virtually assessed for crack initiation and growth as a function of use.

MICRO can be used for engineering life extension trade studies, material change-outs, manufacturing process sensitivity analysis, spare parts forecasting, and/or warranty cash-flow projections. MICRO has impacted products of the future including aerospace turbine engines, industrial turbines, automobiles, ship structures, and electronic devices.

W

Wagstaff Inc.

#825

Spokane, Washington

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 stand #825, contact us at info@wagstaff.com or www.wagstaff.com.

Please see our display ad on page 21 of JOM.

Whetstone Technology, LLC

#703

Cabot, PA

www.whetstone-ceramics.com

Ceramite: Superior Performance in Wear Resistant Applications

Whetstone Technology, Cabot PA and Stellar Canada Inc., Burlington Ontario are pleased to present Ceramite manufactured by Elkem Materials Inc. Kristiansand, Norway. Ceramite is a range of products incorporating inorganic composite materials and densely packed partial operating factor. Primary aluminum facilities around the world have used Ceramite products to solve problems in hot and cold environments for the past decade. A complete list of applications, products qualities and a group of product experts will be available throughout the TMS meeting. Booth 703.

Wienalco

#819

Velsen-Noord, THE NETHERLANDS

www.wienalco.com

WIENALCO is formed around a group of experts with decades of experience in the aluminium smelter industry. WIENALCO serves the industry with a wide range of aluminium smelter, carbon baking and graphitizing industry dedicated machines.

Modernisation in existing smelters and baking furnaces is our special expertise. Improvement of labour working conditions, improvements on machine efficiencies including adding new operation tools are recognised to be most valuable.

The scope of supply comprises:

- Pot Tending Machines (prebake, søderberg, 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 (including pre-heaters, dedusting)
- Tube Cleaning Machines
- Alumina Unloading Facilities (including dust free conveying and storage systems)
- Machine power supplies
- Rails, clips, underlayment
- Storage silos.

Z

ZIRCAR Ceramics, Inc.

#308

www.zircarceramics.com

Phone: 845-651-6600; Fax: 845-651-0441

E-mail: sales@zircarceramics.com

ZIRCAR Ceramics, Inc., Florida, New York, USA, is a manufacturing and International marketer of a wide range of Casthouse Consumables which include:

- Castertips & Nozzles for Twin Roll & Belt Continuous Casters
- Ceramic Foam & Fiberglass Cloth Filters
- Vacuum-formed Ceramic Fiber & Non-RCF Fiber Shapes
- Ceramic Fiber Textiles - Rope, Tape, Cloth
- Ceramic Fiber & Non RCF Paper & Blankets
- Precision CNC Machined & Precast Refractory Baffles, Floats, Dams
- Microporous Insulation Fabricator