

**Detailing Products and Services for the 160 Companies
Taking Part in the TMS 2002 Exhibition**



Washington State Convention &
Trade Center - Hall 4A, 4B
Seattle, Washington
February 17–21, 2002

TMS 2002

131st Annual Meeting & Exhibition

EXHIBITION SHOW DIRECTORY

SHOW DATES AND TIMES:

Monday, February 18	12:00 Noon–6:00 PM
Tuesday, February 19	9:30 AM–5:30 PM
Wednesday, February 20	9:30 AM–3:00 PM

SPECIAL ATTRACTIONS DURING THE 2002 EXHIBITION:

MONDAY, 5:00–6:00 PM

Hosted Grand Opening Reception

Enjoy complimentary hors-d'oeuvres, music and cocktails while visiting the exhibits

TUESDAY, 11:45 AM–1:15 PM

Complimentary Lunch

Redeem the ticket in your registrants packet for a complimentary lunch item, hosted by the Exhibitors and TMS.

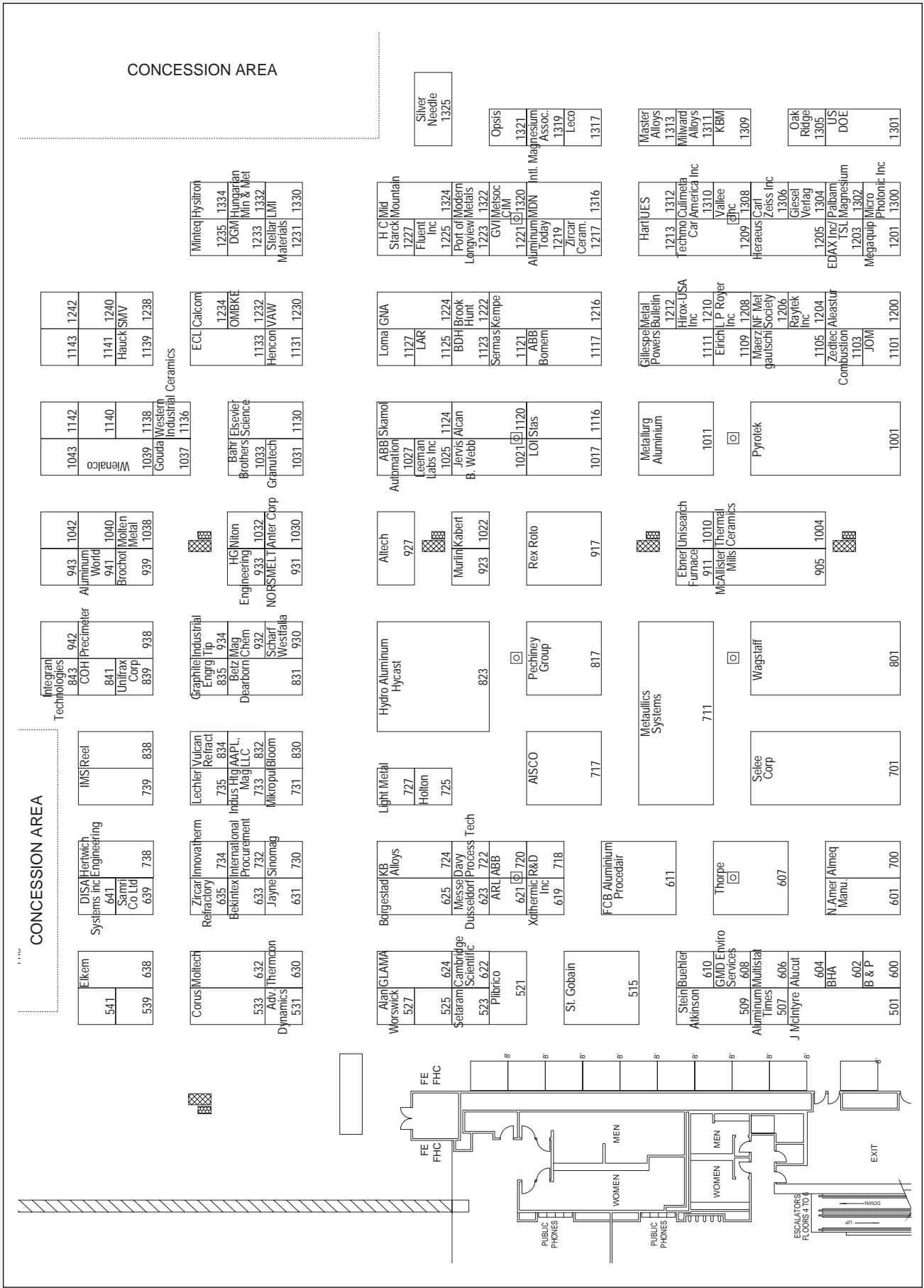
WEDNESDAY, 12:15–2:00 PM

Afternoon Snack

Join the exhibitors for a Seattle treat in the Exhibit Hall. A ticket can be found in registrants' packet for a complimentary cappuccino or ice cream treat, redeemable at stations throughout the exhibit hall.

FIND UP-TO-THE-MINUTE DETAILS ON THE MEETING AND EXHIBITION AT:
<http://www.tms.org/Meetings/Annual-02/AnnMtg02Home.html>

EXHIBIT FLOORPLAN



CONCESSION AREA

1143	1242	1235	1334	1227	H C Mid Starck Mountain	
1141	1240	DGM	Hungarian Min & Met	Fluent Inc	1225	1324
Hauck SMV	1139	1238	1332	Port of Modern Longview Metals	1223	1322
1139	1238	Stellar LMI Materials	1231	1330	GVW Weisoc CIM	1321
1043	1142	1131	1230	Aluminum Today	1221	1320
1039	1138	1131	1230	Zircal Ceram.	1219	1316
Gouda Westleth Industrial Ceramics	1037	1136	1130	1117	1216	1317
1043	1142	1114	1240	1117	1216	1317
Wenaco	1140	1131	1230	1117	1216	1317
1039	1138	1131	1230	1117	1216	1317
Gouda Westleth Industrial Ceramics	1037	1136	1130	1117	1216	1317

943	1042	939	1038	927	Altech
Aluminum World	1040	939	1038	927	Altech
Brocho Molten Metal	1039	939	1038	927	Altech
941	1040	939	1038	927	Altech
841	1040	939	1038	927	Altech
COH Precimeter	942	939	1038	927	Altech
942	1042	939	1038	927	Altech
IMS Reel	739	838	839	938	831
942	1042	939	1038	927	Altech
COH Precimeter	942	939	1038	927	Altech
841	1040	939	1038	927	Altech
Unifrax Corp	839	938	839	938	831
942	1042	939	1038	927	Altech
COH Precimeter	942	939	1038	927	Altech
841	1040	939	1038	927	Altech
Unifrax Corp	839	938	839	938	831

541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600
541	638	539	638	625	724	623	722	621	720	619	718	611	607	604	602	600

ALPHABETICAL LISTING OF EXHIBITORS

COMPANY	BOOTH #	COMPANY	BOOTH #	COMPANY	BOOTH #
AAPL LLC	832	Hencor BV	1131	Multistat Inc	606
ABB Bomem Inc	1117	Hereaus Electro-Nite Co	1205	Murlin Chemical Inc	923
ABB Inc.—Metal Refining Systems	1027	Hertwich Engineering	738	NITON Corporation	1032
ABB Industrie AG	720	Hirox-USA Inc.	1210	NKM	838
Advanced Dynamics Corp	531	Holton Machinery Ltd	725	Nonferrous Metals Society of China	1206
AISCO Systems Inc	717	Hungarian Mining & Metallurgical Soc	1232	NORSMELT	931
Alan Worswick Ltd	527	Hydro Aluminium HyCast AS	823	North American Mfg Co	601
Alcan Inc	1120	Hysitron Inc	1334	NV Gouda Vuurvast	1037
Aleastur	1200	Industrial Heating Magazine	733	Oak Ridge National Laboratory	1305
Almeq Norway AS	700	Industrial Tip	934	Opsis Inc	1321
Altech	927	innovatherm GmbH & Co KG	734	Palbam Metalworks	1302
Alu-Cut International	604	Insulation & Machining Svcs Ltd	739	Pechiney Group	817
Aluminium Times	507	Integran Technologies	843	Plibrico	521
Aluminium International Today	1219	International Magnesium Association	1319	Port of Longview	1223
Aluminium/Giesel Verlag GmbH	1304	International Procurement, Inc.	732	Precimeter Inc	938
Aluminium World	941	Jayne Industries	631	Procedair Industries	611
Anter Corporation	1030	Jervis B Webb Intl Co	1021	Pyrotek Inc	1001
B&P Process Equipment Systems LLC	600	JOM	1101	R&D Carbon	718
BDH Industries Inc	1123	Kabert Industries	1022	Raytek, Inc.	1204
Bahr Brothers Inc	1033	KB Alloys Inc	724	REEL	838
Bekintex North America	633	KBM Affilips BV	1309	Rex Roto Corporation	917
BetzDearborn	831	KEMPE International	1216	Saint Gobain Industrial Ceramics	515
BHA Group Inc	602	KHD Aluminium Technology GmbH	717	Samri Co Ltd	639
Bloom Engineering	830	LAR	1125	Schmitz + Apelt LOI	1017
Borgestad Fabrikker AS	625	Lechler Inc	735	Selee Corporation	701
Brochot	939	LECO Corporation	1317	SERMAS Industrie	1121
Buehler	610	Leeman Labs Inc.	1025	SETARAM	523
Calcom SA	1234	Light Metal Age	727	Silver Needle Inc	1325
Cambridge Scientific Abstracts	622	LMI Selcom AB	1330	SINOMAG	730
Canadian Overhead Handling Inc	841	LOI Inc	1017	SKAMOL	1124
Carl Zeiss MicroImaging Inc	1306	Loma Machine Mfg Inc	1127	SMV	1239
Corus Aluminium Walzprodukte	533	L.P. Royer, Inc.	1208	STAS	1116
Culimeta America Inc	1310	LVE Verfahrenselektronik	1017	Stein Atkinson Stordy Ltd.	509
Davy Process Technology AG	722	maerz-gautschi GmbH	1105	Stellar Materials	1231
DGM	1233	MagChem	932	SWS Scharf Westfalia GmbH	930
DISA Systems, Inc.	641	Master Alloys Co	1313	Techmo Car & Engineering	1209
Ebner Furnace	911	McAllister Mills	905	Thermal Ceramics	1004
ECL	1133	MDN/Air Hydro Power	1316	Thermcon Ovens BV	630
EDAX Inc./TSL	1203	Megaquip Ind Ltd	1201	ThermoARL	621
Eirich Machines Inc	1109	Metal Bulletin	1212	Thorpe Technologies Inc	607
Elkem Materials, Ceramite Products	638	Metallurg Canada Ltd	1011	U S Department of Energy	1301
Elsevier Science	1130	The Metallurgical Society of CIM	1320	UES Software Inc	1312
FCB Aluminium	611	Metaullics Systems Co	711	Unifrax Corp	839
Fluent Inc	1225	METEC 2003/Messe Dusseldorf NA	623	Unisearch Associates Inc	1010
Gillespie + Powers Inc	1111	Micro Photonics Inc	1300	Vallee Inc	1308
Glama Maschinenbau GmbH	624	Mid-Mountain Materials	1324	VAW Aluminium Technologie GmbH	1230
GMD Environmental Systems Inc	608	MikroPul	731	Vulcan Refractories	834
GNA Alutech Inc	1224	Milward Alloys Inc	1311	Wagstaff, Inc.	801
Granutech Saturn Systems Corp	1031	Minteq International Inc	1235	Western Industrial Ceramics	1136
Graphite Engineering & Sales	835	Modern Metals Magazine	1322	Wienalco	1039
GVI	1221	Moltech	632	Xothermic Inc	619
H.C. Starck	1227	Molten Metal Equipment Innovations Inc	1038	Zedtec Combustion Systems Inc	1103
H.G. Engineering Ltd	933			Zircar Ceramics Inc	1217
Hamilton Research & Technology	1213			Zircar Refractory Composites Inc	635
Hauck Manufacturing Co	1139				

PRODUCT/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

BHA Group, Inc.
Bloom Engineering
DISA Systems Inc.
GMD Environmental Systems
Mikropul
Moltech
OP SIS, Inc.
Procedair Industries

ALUMINUM INDUSTRY

WEAR PARTS

Industrial Tip
maerz-gautschi GmbH
Saint Gobain Industrial
Ceramics
Zircar Refractory Composites

ALUMINUM PROCESSORS

Corus Aluminium Walzprodukte
Loma Machine Mfg.

ALUMINUM PRODUCTION TECHNOLOGY & EQUIPMENT

ABB Industrie AG
ABB Inc, Metal Refining
Systems
Advanced Dynamics Corp., Ltd.
Aisco Systems, Inc.
Almeq Norway AS
Altech
Anter Corporation
BetzDearborn
Canadian Overhead Handling
Davy Process Technology
ECL
Eirich Machines, Inc.
Glama Maschinenbau GmbH
Hencor B.V.
Holton Machinery Ltd
Jayne Industries
Kempe International
LAR
LMI Selcom
LOI, Inc.
Loma Machine Mfg.
MDN
maerz-gautschi GmbH
Megaquip Industries, Ltd.
Moltech
Murlin Chemical, Inc.
Pechiney
Pyrotek Inc
Rex Roto Corp.
Sermas Industrie
SETARAM

Silver Needle
STAS, Ltd.
Stein Atkinson Stordy, Ltd.
Techmo Car & Engineering
Thermcon Ovens BV
UES Software, Inc.
VAW Aluminium-Technologie
Vallee, Inc.
Wagstaff, Inc.
Wienalco

ALUMINUM QUALITY

ABB Bomem, Inc.
Cambridge Scientific Abstracts
Leeman Laboratories, Inc.
MagChem, Inc.
Precimeter, Inc.

ALUMINUM REFINING SYSTEMS

ABB Inc, Metal Refining
Systems
Hydro Aluminium Hycast
Pyrotek, Inc.
STAS, Ltd.

ANODE:

ASSEMBLY

Almeq Norway AS
Altech
ECL
GNA Industrial Furnaces
Jervis B. Webb Company
Kempe International
KHD Aluminium
Technology GmbH
SWS Scharf Westfalia
SETARAM
Sermas Industrie
Universal Dynamics

CLEANING

Altech
Jervis B. Webb Company
KHD Aluminium
Technology GmbH
SWS Scharf Westfalia
Techmo Car S.p.A.

ROD STUB WELDING

Altech
Jervis B. Webb Company

TRANSPORTATION

Altech
Jervis B. Webb Company
SWS Scharf Westfalia
Techmo Car S.p.A.

AUTOMATION/COMPUTER

SIMULATION/SOFTWARE

ABB Industrie AG
ABB Inc, Metal Refining
Systems
Advanced Dynamics Corp.
Altech
CALCOM SA
GVI
Hamilton Research &
Technology, Ltd.
Jervis B. Webb Company
LMI Selcom
LOI, Inc. Industrial Furnaces
Loma Machine Mfg., Inc.
LVE Verfahrenselektronik GmbH
Thermcon Ovens BV
Thermo/ARL
UES Software, Inc.
VAW Aluminium-Technologie
Wagstaff Inc

BUTT CRUSHING/STRIPPING

Aisco Systems Inc
Altech
ECL
KHD Aluminium Technology
SWS Scharf Westfalia GmbH
Techmo Car S.p.A.

CARBON:

PASTE PRODUCTION & EQUIPMENT

Anter Corporation
B&P Process Equipment
and Systems
Davy Process Technology
Eirich Machines Inc
FCB Aluminium
Jervis B. Webb Company
KHD Aluminium
Technology GmbH
Pechiney
Wienalco

TECHNOLOGY AND SUPPLIES

Anter Corporation
FCB Aluminium
KHD Aluminium
Technology GmbH
Davy Process Technology
GNA Industrial Furnaces
Innovatherm Company
LVE Verfahrenselektronik
R & D Carbon, Ltd.
Sermas Industrie
SETARAM
Wienalco

CASTING

Advanced Dynamics Corp., Ltd.
Alan Worswick (Eng.), Ltd.
Almeq Norway AS
Canadian Overhead Handling
ECL
Holton Machinery Ltd
Hydro Aluminium Hycast
LAR
Loma Machine Mfg.
LVE Verfahrenselektronik GmbH
MAGChem, Inc.
maerz-gautschi GmbH
Murlin Chemical, Inc.
Pechiney
Pyrotek
Rex Roto Corporation
Universal Dynamics
VAW Aluminium-Technologie
GmbH
Vallee, Inc.
Wagstaff, Inc.

CEMENT

Molten Metal Equipment
Innovations, Inc.
Zircar Refractory Composites

CHEMICALS AND ADDITIVES

AAPL LLC
BetzDearborn
MagChem, Inc.
Master Alloys
Metallurg Aluminium
Murlin Chemical, Inc.
Samri Company Ltd.

CLEANING MACHINES/ SYSTEMS

MagChem, Inc.
Vallee, Inc.

CLOTHING – PROTECTIVE

L.P. Royer Inc.
Pyrotek Inc
Silver Needle Inc

COMBUSTION TECHNOLOGY

Bloom Engineering Co., Inc.
Hauck Mfg. Co.
North American Manufacturing
Thermcon Ovens BV
Xothermic Inc.
Zedtec Combustion Systems

CORROSION/SURFACE TREATMENT

BetzDearborn

CRANESCanadian Overhead Handling
ECL
Universal Dynamics
Wienalco**DEGASSING**Hydro Aluminium Hycast
Metallics Systems
Molten Metal Equipment
Innovations, Inc.
Pechiney
Pyrotek, Inc.
Saint-Gobain Industrial
Ceramics
SELEE Corporation
STAS**DROSS:****HANDLING/PROCESSING EQUIPMENT**Advanced Dynamics Corp
Aisco Systems Inc
Almeq Norway AS
Alu-Cut International, Inc.
Brochot SA
Glama Maschinenbau
Kempe International
Plibrico Company
Pyrotek, Inc.
Sermas Industrie
STAS
Vallee, Inc.**COOLING/REMOVAL**Alu-Cut International, Inc.
STAS**ENGINEERING AND CONSULTING SERVICES**ABB Industrie AG
Advanced Dynamics Corp., Ltd.
Almeq Norway a/s
Bloom Engineering
CALCOM SA
Gillespie+Powers Inc
GMD Environmental Systems
Hencon B.V.
Holton Machinery Ltd
Jervis B. Webb Company
Loma Machine Mfg.
maerz-gautschi GmbH
Mikropul
Plibrico Company
Pyrotek Inc
R & D Carbon, Ltd.Rex Roto Corp.
SWS Scharf Westfalia GmbH
Stein Atkinson Stordy Ltd
STAS
Techmo Car S.p.A.
Thermcon Ovens BV
UES Software, Inc.
Universal Dynamics
VAW Aluminium-Technologie
Wagstaff, Inc.**FILTRATION**BDH Industries
BHA Group, Inc.
Kabert Industries Inc
McAllister Mills, Inc.
Metallics Systems Co L.P.
Pechiney
Pyrotek, Inc.
Rex Roto Corp.
Samri Company Ltd.
SELEE Corporation
STAS
Zircar Ceramics, Inc.**FURNACES**ABB Industrie AG
Alu-Cut International, Inc.
Ebner Furnaces
Gillespie+Powers, Inc.
GNA Industrial Furnaces, Inc.
Jayne Industries
LOI, Inc. Industrial Furnaces
maerz-gautschi GmbH
Plibrico Company
Pyrotek Inc
R&D Carbon Ltd
SETARAM
Stein Atkinson Stordy, Ltd.
Thermcon Ovens BV
Thorpe Technologies
Xothermic Inc.**GRAPHITE PARTS**Graphite Engineering & Sales
Metallics Systems Co L.P.
Molten Metal Equipment
Innovations, Inc.
Pyrotek, Inc.
Sermas Industrie
SETARAM**GRAIN REFINERS/HARDENERS**Aleastur
KBM Affilips B.V.
KB Alloys, Inc.
Master Alloys
Milward Alloys
Metallurg Aluminium

Zircar Ceramics, Inc.

HF MEASUREMENT SYSTEMS – POT ROOMS/STACKSOP SIS, Inc.
STAS**INDUSTRIAL GASES**

Opsis, Inc.

INGOT & SOW CASTING HANDLING & STACKINGAdvanced Dynamics Corp., Ltd.
Aisco Systems Inc
Alan Worswick (Engineering)
Alu-Cut International, Inc.
Canadian Overhead Handling
Jervis B Webb Co.
LOI, Inc. Industrial Furnaces
maerz-gautschi GmbH
Megaquip Industries, Ltd.
Sermas Industrie
Thermcon Ovens B.V.
Wagstaff, Inc.**INSTRUMENTATION**ABB Bomem, Inc.
Anter Corporation
EDAX Inc./TSL
Hamilton Research &
Technology, Ltd.
Heraeus Electro-Nite Co.
Hysitron, Inc.
Leeman Laboratories, Inc.
LMI Selcom
LOI, Inc. Industrial Furnaces
maerz-gautschi GmbH
R&D Carbon
Raytek
SETARAM
Thermcon Ovens B.V.
Thermo/ARL
Unisearch Associates
Xothermic Inc.**LUBRICANTS**KB Alloys
MagChem, Inc.
Metallurg Aluminium
Pyrotek, Inc.**MASTER ALLOYS**Aleastur
Holton Machinery Ltd
KB Alloys, Inc.
KBM Affilips B.V.
Master Alloys Co.
Metallurg Aluminium
Milward Alloys, Inc.
Pyrotek Inc.

Zircar Ceramics, Inc.

MATERIAL HANDLINGAdvanced Dynamics Corp., Ltd.
Aisco Systems, Inc.
Almeq Norway a/s
Alu-Cut International, Inc.
BHA Group
BNZ Materials, Inc.
Canadian Overhead Handling
Glama Maschinenbau GmbH
GMD Environmental Systems
GNA Industrial Furnaces, Inc.
Jervis B. Webb Co
Kempe International
Loma Machine Mfg., Co., Inc.
maerz-Gautschi GmbH
Megaquip Industries, Ltd.
Murlin Chemical, Inc.
SWS Scharf Westfalia GmbH
Sermas Industrie
Techmo Car S.p.A.
Thermcon Ovens BV
Vallee, Inc.
Wienalco**MEASUREMENT/TESTING AND ANALYSIS**ABB Bomem Inc.
Anter Corporation
Buehler
CALCOM SA
EDAX Inc./TSL
Heraeus Electro-Nite
Hirox-USA, Inc.
Hysitron
Leco Corporation
Leeman Laboratories, Inc.
LMI Selcom
Niton Corporation
Opsis
R & D Carbon, Ltd.
Thermo/ARL
Unisearch Associates**MOLTEN METAL PUMPS**ABB Inc, Metal Refining
Systems
Alu-Cut International, Inc.
International Procurement
Metallics Systems Co L.P.
Molten Metal Equipment
Innovations, Inc.
Pyrotek, Inc.
STAS**PORT AUTHORITY**

Port of Longview

PROCESS EQUIPMENT

PRODUCT/SERVICES INDEX

ABB Inc, Metal Refining Systems
Alu-Cut International
B&P Process Equipment & Systems
Eirich Machines, Inc.
FCB Aluminium
Hamilton Research & Technology, Ltd.
Hencon BV
Jayne Industries
Jervis B. Webb Company
Kempe International
LOI, Inc. Industrial Furnaces
Pyrotek, Inc.
R&D Carbon, Ltd.
SWS Scharf Westfalia GmbH
SETARAM
Wienalco
Xothermic Inc.

PUBLISHERS

Aluminium Times
Aluminium International Today
Aluminium World
Cambridge Scientific Abstracts
Elsevier Science
Giesel/Verlag GmbH—
Aluminium
Industrial Heating Magazine
JOM
Light Metal Age
Metal Bulletin LLC
Metallurgical Society of CIM
Modern Metals
The Non-Ferrous Metals Society of China
OMBKE
R & D Carbon, Ltd.

RECYCLING/SCRAP PROCESSING

Advanced Dynamics Corp
Almeq Norway a/s
Gillespie+Powers Inc
Granutech-Saturn Systems, Inc.
Hencon B.V

Holton Machinery Ltd
LOI, Inc. Industrial Furnaces
LVE Verfahrenselektronik GmbH
Metallics Systems Co. L.P.
SWS Scharf Westfalia GmbH
Stein Atkinson Stordy, Ltd.
Thermcon Ovens
Thorpe Technologies

REFRACTORY & INSULATING: PRODUCTS

AAPL, LLC
BNZ Materials, Inc.
Borgestad Fabrikker AS
Culimeta America, Inc.
Gillespie & Powers, Inc.
Gouda Vuurvast N V
Jayne Industries
Kabert Industries Inc
maerz-gautschi, Ltd.
McAllister Mills, Inc.
Minteq International Inc
Murlin Chemical Inc
Plibrico Co.
Pyrotek, Inc.
Rex Roto Corp.
Saint-Gobain Industrial Ceramics
SELEE Corporation
Skamol, Inc.
Stellar Materials
Thermal Ceramics
Thermcon Ovens
Unifrax
Vulcan Refractories, Ltd.
Zircar Ceramics, Inc.
Zircar Refractory Composites, Inc.

MAINTENANCE/REPAIR

Borgestad Fabrikker AS
Gouda Vuurvast N V
Minteq International, Inc.
Plibrico Company
Unifrax

RESEARCH & DEVELOPMENT

Aluminium/Giesel Verlag
AAPL, LLC
CALCOM SA
Hirox-USA, Inc.
Leeman Laboratories, Inc.
Minteq International, Inc.
Oak Ridge National Laboratory
R&D Carbon Ltd
Thermo/ARL
Xothermic Inc.

SAWING SYSTEMS

Alu-Cut International, Inc.
Mag Chem Inc.
Sermas Industrie

SERVICE CONTRACTORS

BHA Group
CALCOM SA
R&D Carbon, Ltd
VAW Aluminium-Technologie GmbH

SOFTWARE

CALCOM SA
Elsevier Science
Fluent Inc
GVI
Hamilton Research & Technology Ltd
LOI, Inc. Industrial Furnaces
LVE Verfahrenselektronik GmbH
maerz-gautschi GmbH
UES Software Inc

VEHICLES FOR POTROOMS & CASTHOUSES

Brochot SA
Glama Maschinenbau GmbH
Hencon
Techmo Car & Engineering

Universal Dynamics
Vallee, Inc.

WATER COOLING & TREATMENT

BetzDearborn

X-RAY DIFFRACTION

Bruker AXS
Thermo/ARL

As a complement to the 2002 exhibition and technical program, TMS will feature exhibitor presentations of new technologies, equipment and process.

South Level 4, Room 401**SESSION I:****FURNACES, MELT TREATMENT, CASTING****Monday, February 18, 2002****11:40 PM**

Aluminum Scrap Recycling And Heat Treatment Furnaces
Tom Zamanski, LOI/Schmitz+Apelt

12:00 PM

Electromagnetic Stirring (EMS) of Aluminum Melts
Olof Sjoden, ABB Inc, Metal Refining Systems

12:20 PM

Options For Light-Gauge Scrap Recycling
Richard C. Chandler, President, Metallics Systems Co., L.P.

12:40 PM

Which Method to Choose for Alkaline Reduction? Either in the Pot Room Crucible or in the Casthouse?
Pierre Bouchard, STAS

1:00 PM

The Pechiney Jetcleaner –New Equipment Technology for In-Line Treatment of Molten Aluminium Alloys
John V. GRIFFIN, Pechiney Aluminium Engineering Inc.

1:20 PM

StopCast
Craig Johnson, Wagstaff, Inc.

1:40 PM

Metal Delivery Systems Employing Insulating Refractory Result in Real Energy Savings for the Aluminum Industry
James W. Lee, Rex Roto Corporation

SESSION II:**MODELING, CASTING, MISCELLANEOUS****Tuesday, February 19, 2002****11:40 AM**

Concept And Design Of A Modern Anode Press Center
Dr. Alfred Kaiser; Dr. Stefan Mähler, LAEIS BUCHER GMBH

12:00 Noon

Latest Developments for Two Main Types of Aluminium Casting Stations
Jean-Jacques Grunspan, Brochot

12:20 PM

Vallee Multi-Functional Vehicles Increase Productivity While Reducing Capital Costs
Charles R. Emond, Vallée Inc.

12:40 PM

Management, Molten Metal and Protective Clothing
Larry Stinson, Silver Needle Inc

1:00 PM

World Leading CFD Software
Aniruddha Mukhopadhyay and Yeong-Yan Perng, Fluent. Inc.

1:20 PM

Continuous Casting Simulation
Dr. Matthias Gaumann, CALCOM SA

1:40 PM

Advanced Anode Paste Preparation Plants
Dipl. -Ing. Berthold Hohl, Maschinenfabrik Gustav Eirich

NOTE: The complete presentation schedule, including abstracts, can be found on pages 131 and 132.

AAPL, LLC
#832

Urbana, Illinois

<http://www.sigma-aldrich.com/>

AAPL, LLC, 1302 W Anthony Drive, Urbana, IL 61802, 217-398-2806; fax: 217-398-2944; email: mwillis@sial.com. AAPL is a joint venture company between Aldrich Chemical Company, Inc and APL Engineered Materials. AAPL manufactures over 425 ultra pure inorganics and metals for high technology applications, including fuel cells, batteries, superconductors, medical imaging, and more.

Our products are among the best in the world in terms of metals purity, water content, and handling ease. AAPL uses proprietary techniques to produce anhydrous metal halides in beaded form, custom eutectic mixtures, distilled metals, and ultra pure salts from gram to ton quantities.

ABB Bomem, Inc.
#1117

Québec, Canada

Metallurgical Industry

<http://www.bomem.com>

ABB Bomem's Metallurgical Instruments offer many effective solutions to the aluminium industry for inclusion and hydrogen measurement. Several measurement technologies are patented and licensed exclusively to ABB Bomem for worldwide distribution by Alcan International Limited and N-TEC. ABB Bomem also offers metallurgical technical support and metallographic analysis service.

SEE OUR DISPLAY AD, COVER 4.

ABB Industrie AG
#720

Baden-Dättwil, Switzerland

www.abb.ch/industrie

Complete Project Management with Electrical Systems Integration

ABB is proud to deliver to the aluminium industry a truly comprehensive product and service portfolio for plant and project electrification.

We design and manufacture a range of electrical equipment renowned for its quality and designed to maximize end-to-end plant connectivity and automation efficiency. Then we install, optimize and service the equipment to ensure continuing and profitable results for our clients in aluminium.

We safeguard your investment in plant electro-technology through unmatched experience and a commitment to integration that defines the equipment we manufacture and how we put it to work for you. Our integrated, process-oriented approach to engineering, supply, construction and management (ESCM) allows us to tailor and optimize the right electrical solution for your project.

To meet and exceed your goals, look to ABB for a complete technology offering enhanced by the know-how and responsibility gained in hundreds of aluminium plants worldwide.

ABB Inc., Metal Refining Systems

#1025

Brewster, New York

<http://www.abb.com/>

ABB Inc is the worldwide leader for the design, manufacture and implementation of induction stirring systems, having delivered more than 1100 systems since 1947. The first ABB induction stirring system specifically designed for aluminium furnaces was delivered in 1969 and since then, more than 150 stirrers have been installed worldwide, on both melting and holding furnaces.

Induction stirring is a proven and acceptable technology used to increase productivity, to reduce operating costs and to enhance overall aluminium quality.

Stirring systems are available for furnaces sized from 5 tons to 150 tons. Sales and service are available throughout North America.

Advanced Dynamics Corp, Ltd.
#531

St. Bruno, Quebec, Canada

<http://www.advanceddynamics.com/>

Advanced Dynamics Corp. Ltd. designs and manufactures custom materials handling systems for primary aluminum smelters and secondary aluminum products producers.

PRIMARY PRODUCERS

- Carbon anode handling equipment for both green and baked anodes, rodding room and ring furnace maintenance equipment
- Aluminum ingot sawing and identification equipment for round logs, T ingots and sheet ingots
- Aluminum ingot handling systems including downenders, billet stacking systems, transfer cars and rotary turntables
- Aluminum casting equipment including sow casting carousels and crucible tilters

SECONDARY PRODUCERS

- Coil handling equipment including turnstiles, powered transfer cars, wrapping systems and upenders.
- Tube handling cooling systems for drawbench automation, extrusion handlingsystems including pullers and flying cutoff saws.

INTEGRATED CONTROL SYSTEMS

- Computer linked PLC controls with panelview access screens, programmable identification by pin of character stamp, ink jet or bar code.

Please call us at your convenience at: 450/653-7220 to discuss your equipment requirements and visit us at booth #531 at the 2002 TMS Show.

AISCO Systems, Inc.
#717

Burlington, Ontario, Canada

<http://www.aiscosystems.com>

Aisco Systems Inc. provides engineered machinery, systems and integrated process solutions for the non ferrous metals industry including aluminium rod shops and casthouses, zinc refineries and copper tankhouses.

RODDING ROOM: Aisco is a technical leader in supplying rodding room equipment, from anode loading/unloading, butt bath cleaning systems, butt and thimble presses and rod reconditioning equipment through to anode and rod mating stations and iron pouring systems.

CASTHOUSE: Aisco design and manufacture sow casting and foundry ingot casting systems, including stacking and strapping equipment for use in primary and secondary facilities. In addition, we provide sawlines with fully automated material handling for slab/t-bar and billets.

COPPER TANKHOUSE: Aisco produces copper anode preparation and tankhouse machinery and solutions to your tankhouse problems. Our unique carousel design provides high production rates and efficient use of plant space.

ZINC REFINING: Aisco has a licence with Asturiana de Zinc of Spain to manufacture zinc processing machinery for the cellhouse.

Please call Aisco to discuss your equipment requirements or visit us at booth #717 at the 2002 TMS Annual Meeting & Exhibition.

SEE OUR DISPLAY AD, PAGE COVER 3.

Alan Worswick, Ltd.
#527

Blackburn, England

<http://www.worswick.com>

For over 40 years Alan Worswick (Engineering) Ltd. has carried out a policy of continued innovative design and development of automated ingot production equipment for Al – Mg – Pb – Zn – primary & secondary ingot production, enabling them to offer the most comprehensive equipment range for all requirements from one source. Operation of it's own design office and manufacturing plant in Blackburn – England, means complete quality control (ISO9001 certified) of all processes 'in-house' ensuring the highest quality product and complete customer satisfaction.

Over the years this 'in-house expertise' has resulted in the receipt of many enquiries and subsequent orders for specialised machines for the non-ferrous metal industry including; billet stackers, anode casters, jumbo ingot/sow casters, Pb refining pot dross removal machines and automated gravity die-casting machines, in fact casters to produce everything from Zn balls to Al engine blocks.

To date, "Worswick" has built more than 300 casters and 100 stackers of various types and

would be pleased to discuss your requirements from either our existing extensive range, or for custom designed – special purpose machines at our Booth # 527 at TMS 2002 Annual Meeting Exhibition in Seattle, via our website at www.worswick.com or by email at sales@worswick.com.

Alcan International, Ltd.

#1120

Montreal, Quebec, Canada
<http://www.alcan.com/>

Aleastur

#1200

Asturiana de Aleaciones, S.A.
Pol. Ind. de Maqua, s/n AVILES
E33400 SPAIN
Phone: +34 98 5129038
E-mail: aluminium@aleastur.com
<http://www.aleastur.com>

Aleastur manufactures a comprehensive range of Grain Refiners and Master Alloys. The major concentration of products are AlTiB alloys produced in rod form and other shapes. Additional master alloys that compliment and complete Aleastur's range include AlSr, AlB, AlTi, AlZr, etc.

From receipt of orders to dispatch of goods, the dedication of Aleastur to quality and service is paramount. Since 1993 Aleastur has consistently maintained their Certificate of Approval for Quality Assurance (ISO 9002).

Aleastur is currently selling products in more than 50 countries and retains a global network of knowledgeable and experienced agents.

Almeq Norway AS

700

Langhus N-1405 NORWAY
www.almeq.com

ALMEQ Norway AS is an engineering and marketing company for a wide range of equipment and services to aluminium smelters. The company is a leading supplier of own equipment as well as an export and marketing partner for other well accepted manufacturers of machines and equipment for primary aluminium smelters worldwide.

Among own machinery engineered and produced in Norway are crucible and tube cleaners, potliners and various electric drying and preheating systems. In close co-operation with partners in Norway and abroad we deliver anode and metal transporters, hydraulic billet tongs, superstructures, potshells and cell hooding.

ALMEQ welcomes you to visit our exhibition stand at the TMS 2002 in Seattle. Mr. Jan D. Hansen and Mr. Knut Torgersen will be at the stand to answer any questions concerning our products and services.

Altech

#927

Lynghals 10,
110 Reykjavik, Iceland
Phone: +354 5252300; Fax: +354 5252319
<http://www.altech.is/>

EQUIPMENT AND ENGINEERING FOR
PRIMARY ALUMINIUM SMELTERS

ALTECH has supplied machines, robots and computer systems to the aluminium industry on all the five continents since 1987.

We kindly invite you to our booth number 927 for presentation of:

- ALTRACK - anode and rod tracking system
- ALVISION- visual inspection system for rods and anodes
- ALCODE-aluminium billet coding and tracking system
- Automatic Metal Skimmers for Crucibles
- Innovative equipment for Anode Rodding Shops:
 - Stub Protection System
 - Stub Straightening System
 - Casting Machines
 - Stub and Rod Repair Facilities
 - Complete Anode Rodding Shops

Alu-Cut International, Inc.

#604

Phone: 281/579-3377; Fax: 281/579-8819
E-mail: alucut@texas.net
21710 Moortown Circle
Katy, Texas 77450

Melting, holding, and homogenizing furnaces. Cooling chambers, charging machines, casting machines, saws, material handling, lubrication and briquetting systems.

Aluminium Times

#507

Shaveham-by-Sea, United Kingdom
<http://www.mmc.dircon.co.uk/>

Aluminium International Today

1219

Redhill Surrey, UNITED KINGDOM
www.aluminiumtoday.co.uk

"Aluminium Today" is the International English language journal dedicated exclusively to the aluminium production and processing industries.

Founded in 1988 and now published eight times a year, the journal consistently brings to its readers a wealth of technical features aimed at providing producers and processors with information on latest technologies and developments. Added to this is a regular digest of industry news, contracts, events, product reviews and conference coverage.

Aluminium Today's editorial team has a firm background in the sector, and worldwide experience of the present day industry providing topical coverage of the most significant events and advances.

Publisher, DMG World Media also organizes the leading international ALUMINIUM exhibition and conference in Essen, Germany, together with events in Europe, South East Asia and Brazil.

Aluminium World

#941

London, United Kingdom
www.aluminiumworld.com

ALUMINIUM WORLD is the only international review on process and product technology covering the entire spectrum of aluminium production with focus on the latest technologies, recently introduced processes, product concepts and future trends.

ALUMINIUM WORLD is published twice per year and brings all participants into direct contact with 9,000 selectively addressed decision-making executives and senior technical managers operating all major processing plants throughout the world.

ALUMINIUM WORLD is the most cost-effective publication in which to promote your products and services directly to the entire international aluminium community - www.aluminiumworld.com

Contact: John Travis +44 20 7616 0800

Anter Corporation

#1030

Pittsburgh, Pennsylvania
<http://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.

SEE OUR DISPLAY AD, PAGE 22.

B&P Process Equipment & Systems

#600

Saginaw, Michigan

<http://www.bpprocess.com>

B&P Process Equipment and Systems, Inc. (manufacturers of Baker Perkins machinery) is a supplier of specialized process equipment for the production of carbon paste, energetic material, plastics, industrial chemicals, and for chemical separation. We have supplied batch anode and cathode paste mixers to the aluminum industry since 1903. Many built since the 1930's are still in service. In 1952, the aluminum industry production requirements grew, and we offered the polykneader, which is a continuous carbon paste mixer. Today, our batch mixers and polykneaders are used worldwide in the production of carbon paste. B&P also offers a complete line of continuous pusher centrifuges for liquid/solids separation.

SEE OUR DISPLAY AD, PAGE 15.

Bahr Bros Mfg

#1033

Marion IN

www.bahrbros.com

BDH Industries

#1123

Chicoutimi, Quebec, Canada

<http://www.bdhtech.com/>

Bekintex North America

#633

Marietta, GA

<http://www.bekintex.com>

BetzDearborn

#831

Trevose, Pennsylvania

www.betzdearborn.com

BetzDearborn is the worldwide leader in providing 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.betzdearborn.com

BHA Group, Inc

#602

Kansas City, Missouri

<http://www.bha.com>

BHA Group, Inc. is a leading worldwide supplier of replacement parts and services for air pollution control equipment. BHA offers a wide range of innovative products, including Pulse Pleat® Pleated Filter Elements, BHA-TEX® expanded PTFE membrane filters, and CPM®. Particulate Detection Systems. Serving more than 50 industry groups across six continents, BHA is known globally for its quality products and troubleshooting expertise. With more than 25 years experience in the air pollution control business, there isn't a problem or situation that we haven't seen. Call your BHA representative at 1-800-821-2222 or visit our website at www.bha.com.

Bloom Engineering Co.

#830

Pittsburgh, Pennsylvania

<http://www.bloomeng.com>

Representatives from Bloom Engineering Company will be available to discuss Bloom's complete line of Ultra Low NOx™ burners for the nonferrous industry. These will include 1500 Series Cold Air Burners, 1630 Series Recuperative Burners and 1150 Series Regenerative Burner designs, currently the lowest NOx producing burners in the industry.

Bloom specializes in optimizing the burner combustion pattern required for the application. Burner designs are based on extensive experience obtained in the ferrous and nonferrous industries, and computer aided design techniques, to provide uniform, efficient heating for the process.

BNZ Materials, Inc.

#730

Littleton, Colorado

<http://www.bnzmaterails.com>

BNZ Materials, Inc. consists of two businesses which are appropriate to the metals industry. The Zelienople, Pennsylvania plant manufactures/markets Insulating Firebrick and complementary refractory products such as mortars, aggregates, castables and calcium silicate block. Insulating Firebrick are used in a variety of applications in the metals industry, from carbon baking furnaces to melting and holding furnaces.

The Billerica, Massachusetts plant manufactures a line of calcium silicate boards under the Marinite trademark. They are machined into various parts for conveying, containing, and forming aluminum, lead, zinc, tin and other non-ferrous metals. These parts include spouts, floats, launders, distribution plates, head boxes, baffles, headers, tips, rings, distribution boxes, stoppers, basins, snouts, orifice plates, hot top and ingot mold liners as well as parts in the metal han-

dling and casting systems of many casting machines.

Borgestad Fabrikker AS

#625

Porsgrunn, Norway

Borgestad Fabrikker AS founded in 1887, started as brickworks but grew rapidly into a producer of quality refractories. In 1996, Höganäs 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 downtime periods kept at a minimum.

Brochot SA

#939

Tremblay FRANCE

The BROCHOT company designs, manufactures, carries out the installation, provides after sales services, provides spare parts of special machines and complete plants for the primary aluminium and magnesium industries. With its three departments, Brochot -Syprim - Berger, BROCHOT proposes the full range of equipment necessary for aluminium smelters:

BROCHOT

- Electric pot ramming machines
- Ingot casting & stacking lines
- Dross handling equipment (Ekumax)

SYPRIM

- Anode cooling
 - Anode handling and storage
 - Anode rodding shop
- BERGER
- Special vehicle for anode & molten metal transport
 - Furnace charging & tending vehicles

Come to our booth #939 and find out more on our latest developments and discuss innovative solutions to your equipment.

Buehler, Ltd

#610

Lake Bluff, Illinois

<http://www.buehler.com/>

BUEHLER, Ltd., of Lake Bluff Illinois, introduces the ISOMET 5000 Linear Precision Saw and the OMNIMET Modular Imaging System. The ISOMET 5000 is an automatic linear feed saw with sampling positioning to 2 um, LCD, touch pad controls, programmability, automatic serial sectioning, and speeds of 200-5000 rpm. The OMNIMET Modular Imaging System is modular system designed to fit your digital imaging needs

and budget. Initially select between basic Image Capture and Report, Archiving, Simple Push Button Imaging, or Full Flexible Image Analysis. Upgrade later as your needs or applications change. See us at Booth #610 and at [www. Buehler.com](http://www.Buehler.com).

C

CALCOM SA

#1234

Lausanne, Switzerland
<http://www.calcom.ch>

Calcom is committed to developing and providing software and services to engineers that enable them to produce sound and cost-competitive metal components. This involvement has brought Calcom to being recognized as the reference partner on a global scale in foundries and metal forming plants.

At TMS, we will be exhibiting our software calcosoft, the only software on the market which is truly tailored for the needs of continuous and semi-continuous casting processes. This computer simulation package is fast, easy to use and accelerates the development of evolving industrial applications. This software gives a new perspective in finding solutions to novel casting processes, alloy selections and geometry changes.

Cambridge Scientific Abstracts

#622

Bethesda, Maryland
<http://www.csa.com/>

Cambridge Scientific Abstracts publishes a wide variety of databases covering all aspects of science and technology. Databases are delivered through the new Internet Database Service Version 5.0, featuring site-wide access with unlimited use. Databases offered through this service include METADEX, Sociological Abstracts, Aquatic Sciences & Fisheries Abstracts (ASFA), and the NTIS Database. Other features include the Web Resources Database, which provides searchable links to Internet information sources in the sciences; Recent References Related to Your Search, a citation-only current-awareness service; and full text document acquisition features including Links-to-Full text and Link-to-Holdings modules.

Canadian Overhead Handling

#841

Mississauga, Ontario, Canada
www.coh.ca

COH specializes in building custom overhead cranes for the most demanding conditions. The exhibit will feature video, photos and literature on some of our installations including powerhouse cranes, automotive (frame handling, frame turnover and body marriage), aluminum industry (automatic anode stacking, hot metal, ingot handling and pot shell transporting), steel mill,

transfer cars, automatic bulk handling for the cement industry and aircraft maintenance teleplatforms.

SEE OUR DISPLAY AD, PAGE 16.

Carl Zeiss, Inc.

MICROSCOPY & IMAGING SYSTEMS

#1306

Thornwood, NY
<http://www.zeiss.com/>

Visit the Carl Zeiss booth to discuss the latest upright and inverted industrial microscopes for materials, QC/QA, metallography & research. All feature famous ICS infinity optics, & Zeiss quality. Ask about our new KS MAT automated image analysis & archiving software, microhardness, and confocal/topographic microscopy.

Corus Aluminium

Walzprodukte GmbH

#533

Koblenz, Germany
<http://www.corusgroup.com>

The name Corus Aluminium Walzprodukte GmbH stands for one of the world's leading providers of tailor-made, high-quality aluminium products. This is evidenced by our excellent position as one of the chief suppliers for the international aircraft and aerospace industry which also constitutes the most important market sector today. Plate and sheet of more than 100 various alloys are used by this industry, and we are involved in an ongoing process of further developing the special properties of these materials.

We also count among the market leaders in supplying the automotive and vehicle industry, machine tooling and mould sector, as well as the shipbuilding industry.

A great deal of what applies to the aircraft and aerospace industry also applies to shipbuilding. Here, aluminium is also increasingly gaining in importance thanks to its lightness and various features of performance that are demanded.

Culimeta America Inc

#1310

N Charleston SC
www.culimeta.com

FLEXIPOR® is manufactured by a brand new and patented process of production. Insulating materials Flexipor® shows further advantages in the field of microporous insulation. Flexipor® boards are ideal materials to insulate curved surfaces. Industry applications include Aluminum, Steel, Glass and other applications where refractory linings are essential for effective efficiency and energy savings. Our boards are available for temperatures up to 1922°F.

D

Davy Process Technology AG

#722

Pratteln, Switzerland
<http://www.kvaerner.com>

Since Kvaerner acquired Buss CPS AG, it has since been known as Kvaerner Process Technology (Switzerland) AG or KPT and 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 tonne/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.

Deutsche Gesellschaft für Materialkunde e.v.

#1233

Frankfurt, Germany
www.dgm.de

DISA Systems Inc

#641

North Carolina
www.disagroup.com

DISA with North American headquarter in North Carolina presents its air pollution abatement solutions for the Primary and Secondary Aluminum Industry. DISA is a worldwide organization with more than 30 years of experience in energy efficient and cost effective solutions to the ferrous and non-ferrous metal industry. DISA supplies individual units or complete solutions in the range from 5,000 to 300,000 CFM and has many solutions with emission levels below 0.0005 gr./dscf.

E

Ebner Furnaces

#911

Linz, Austria
www.ebner.cc

Ebner Furnaces, Inc and Ebner industrieofenbau will display the latest technology related to high performance furnaces for the aluminum industry. Of particular importance are the furnaces for solution heat treating aluminium plate and pusher type furnace for re-heating and homogenizing aluminium ingots. Ebner also supplies equipment for solution heat treating and aging of aluminum castings and extrusions and batch type annealing ovens for aluminum strip coils and aluminum foil.

ECL Company

#1133

Ronchin, France
http://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

#1203

Mahwah, New Jersey
www.edax.com/

EDAX/TSL has been at the forefront of research and development of the Electron Backscatter (EBSD) technique. Today, the product line includes OIM™, Delphi, ACT and Pegasus. OIM™ is a powerful tool for investigating key aspects of polycrystalline microstructures including local crystallographic textures and grain boundary analysis. Delphi is phase identification by electron diffraction. ACT, Automated crystallography in the TME, brings OIM-type capabilities to the TEM, allowing fast and easy indexing of spot diffraction patterns, indexing Kikuchi diffraction patterns and determining grain size distributions and grain maps. The Pegasus system is the powerful

combination of chemical and structural analysis provided by EDS and EBSD techniques within the single environment.

Eirich Machines, Inc.

#1109

Gurnee, Illinois
http://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-pro-nounced 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 life-time of any mixer, minimum 20 years life expectancy, without rework.

SEE OUR DISPLAY AD, PAGE 16.

Elkem Materials

#638

Kristiansand, Norway
www.elkem.no

Elkem is one of the world's leading suppliers of metals and materials. Elkem's main products are ferroalloys, silicon metal, aluminium, carbon and microsilica. The products are essential in the manufacturing of a wide range of products needed in today's society. Elkem serves the steel, foundry, chemicals, electronics, and aluminium industries.

Elsevier Science

1130

New York NY
www.elsevier.com
www.lightmetals.net

The Journal of Light Metals (JLM) is a new refereed archival journal to be published by Elsevier Science, which serves both the academic and industrial sectors by providing an enhanced web component as well as four printed issues per year. The journal publishes original work which advances the knowledge base of light metals in the domains of processing, microstructure development and resultant properties and performance.

JLM gives light metals researchers access to the world's light metals research in one comprehensive website. The web component consists of additional abstracts and full text links, patents, proceedings and relevant review papers from other journals. Visit the stand for a demonstration of this site and your free sample copy.

Also available on the stand are free copies of

Materials Today, Elsevier Science's leading magazine for the materials community. Sign up today!

Elsevier Science, the world's largest publisher of scientific, technical and medical journals, is part of Reed Elsevier plc, a leading provider of information to the scientific, legal and business communities.

F

FCB Aluminium

#611

Givors Cedex, France
http://www.fcb-group.com/

FCB Aluminium is the world leader in supplying complete green anode plants, with about 40 paste plants supplied all over the world. Depending on customer's requirements, FCB Aluminium will supply either complete new green anode plants, or some particular process sections (crushing & screening, fines grinding, proportioning, preheating & mixing, vibrocompacting & anodes cooling...etc). FCB Aluminium is also able to upgrade any anode plant or Söderberg paste plant or to convert a Söderberg plant into a prebake green anodes plant while updating the technology and increasing the capacity if needed.

FCB Aluminium is also a major supplier of other units in smelter carbon plants which are:

- bath grinding with totally air swept autogenous mill
- anode butts crushing
- liquid pitch storage
- spent pot lining grinding

FCB Aluminium has developed a wide range of equipment to be incorporated in such plants.

Fluent Inc

#1225

Lebanon, NH
http://www.fluent.com/

Fluent Inc. is the world's leading vendor of Computational Fluid Dynamics (CFD) software and consulting services. CFD software is used to predict fluid flow, heat/mass transfer, chemical reactions, and related phenomena. It enables the materials engineer to visualize aspects of performance that cannot be seen/measured in physical prototypes. CFD provides many competitive advantages: shorter design cycles, fewer prototypes and physical testing, troubleshooting/optimization of existing processes.

Typical applications include steelmaking, furnaces, degassing, casting/solidification, mold filling, aluminum production, extrusion, nanoparticle production, coatings, semiconductor manufacturing, chemical vapor deposition (CVD), deposition/etching, rapid thermal processing, aerosol transport, plasmas, and many others.

SEE OUR DISPLAY AD , PAGE 11.

G

Giesel Verlag GmbH
#1304

Isernhagen, Germany
www.giesel.de

Giesel Verlag is the publisher of ALUMINIUM International journal for industry, research and applications. ALUMINIUM 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.

Gillespie+Powers Inc
#1111

St. Louis, Missouri
www.gillespiepowers.com

- Furnace upgrading and modification-improving efficiency, melt rate and pollution control.
- Sow preheating with our patented reverse flow melter.
- Decoating with our patented mass flow recirculation system, all types of scrap.
- Controlled variable scrap feed systems for conveying, submerging, and salt feed. Two styles of submerging devices.
- Unique designs to resolve specific problems-eliminate water cooling, sealed charging, flat removable roofs, low profile doors and others.
- In the recycling industry, systems include bale breaking, shredding, separation, decoating, vortex submerging, melting and holding furnaces including rotary furnaces, and transport ladles.

Glama Maschinenbau GmbH
#624

Gladbeck, Germany
<http://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

GMD Environmental Systems Inc

608
Fort Worth TX
www.gmdenv.com

GMD Environmental Systems, Inc. engineers, designs and manufactures Environmental Equipment and Systems for Air Pollution Control. Products include "Shaker" and Pulse Type Dust Collectors (Baghouses and / or Fabric Filters); Totally Enclosed Treatment Systems (TETS™) for the treatment of Acid Gases including Sulphur Dioxide (SO₂), Sulphur Trioxide (SO₃), Hydrogen Chloride (HCl) and Hydrogen Fluoride (HF); and Totally Enclosed Treatment Systems (TETS™) for Hazardous Dust Conditioning including Lead (Pb), Cadmium (Cd) and Chrome (CH).

Emphasis is on FURNACE EMISSION CONTROL SYSTEMS.

GNA ALUTECH, Inc.
#1224

9495 Trans-Canada Hwy
St-Laurent, QC H4S 1V3
Phone: (514) 956-1776
Fax: (514)956-0286
<http://www.gna.ca>

GNA Alutech Inc. is a supplier of furnaces and related material handling systems to the aluminium industry. Innovative engineering capability and process knowledge make GNA a superior quality supplier of casthouse furnaces and systems equipment for both primary and secondary producers. GNA also has strong capabilities in cathode and anode assembly systems with several installations in the carbon sector of modern aluminum smelters.

Gouda Vuurvast N.V.
#1037

Gouda, Netherlands
www.goudarefractories.com

For more than 100 years Gouda Vuurvast is a manufacturer and supplier of high quality refractory materials. Gouda Vuurvast is a Dutch company with production plants in The Netherlands, close to the world's largest harbour: Rotterdam.

Unlike other refractory manufacturers Gouda Vuurvast has specialised in the demands and needs of a few industries out of which the aluminium industry is the most important.

In addition to our products Gouda Vuurvast offers a complete range of services:

- Inspection and trouble shooting
- refractory design and engineering
- construction and construction supervision
- project management
- training

The full range of products and services give the opportunity to handle small and large projects and also to offer long term full service maintenance contracts.

Our worldwide supply flexibility and expertise make Gouda Vuurvast the company for solving all your refractory problems.

Granutech-Saturn Systems Corp.
#1031

Phone: 972-790-7800; Toll
Free: 877-582-7800
Fax: 972-790-8733
E-mail: size-reduction@mac-corp.com
201 East Shady Grove Road
Grand Prairie, TX 75050
www.granutech.com

Manufacturer of shredding, grinding and granulating equipment for size/volume reduction of waste/scrap materials including scrap metals and plastics, MSW, waste-to-energy and hazardous waste markets, drums, pallets, ferrous/non-ferrous scrap, as well as complete turnkey systems for processing crumb rubber from scrap tires. Our line also includes mobile, portable and stationary auto flatteners and baling equipment, including the "Big MAC" flattener which sets the industry standard for available features, durability, performance and reliability.

SEE OUR DISPLAY AD, PAGE 28.

Graphite Engineering & Sales
#835

Greenville, Michigan
<http://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:

- nuts and bolts
- brazing fixtures
- degassing shaft and rotor
- canister inserts
- run-out plates
- molds
- secondary billet casting rings
- heating elements
- electrodes
- crucibles
- sintering trays
- sintering boats

Visit Graphite Engineering & Sales Co at booth #835 to discuss your graphite requirements.

COMPANY PROFILES

GVI

#1221

Chicoutimi, Quebec, Canada

www.gvi.qc.ca

GVI develops worldwide high performance "troubleshooting & training computer-based solutions" to the industrial and manufacturing market, specifically to the aluminium, plastic, pulp and paper industries. They are mainly designed to help organizations become more competitive by increasing the personnel's autonomy and knowledge while capitalizing on their competence. As a result, companies improve many of their fields of activities such as production, training, quality management and know-how management. Our "troubleshooting & training computer-based solutions" are great tools. User-friendliness and ease of use make them easy to learn.

H

H C Starck

#1227

Cleveland, Ohio

www.hcstarckus.com

H.G. Engineering Ltd

#933

Toronto, Ontario, Canada

Since the founding of H.G. Engineering Ltd. (H.G.E.) in 1973, we have focused on providing quality engineering and project management services to the metallurgical industry. We offer multidisciplinary services that include process, mechanical, piping, civil, structural, electrical and instrumentation engineering as well as project and construction management services, taking full advantage of numerous strategic alliances with selected technology providers. Our non-ferrous capabilities encompass both hydrometallurgical and pyrometallurgical systems that fully comply to environmental standards.

Hamilton Research & Technology Ltd

#1213

Calcutta, WB, India

<http://www.hamiltonresearch.com>

Hamilton Research & Technology Ltd. (HART) provides Process Automation for the Aluminium Industry. Specialised in retrofitting of modern Distributed Control Systems for existing Aluminum Smelters and Carbon Anode Baking Furnace.

HART's distributed control system for Aluminum Smelters uses individual Electronic Pot Controllers (EPC) as Distributed control elements connected in a multi drop master slave mode to the Master Computer System. Proprietary control algorithms are customized to suit parameters of individual smelters for optimizing current efficiency. Systems has been implemented in major Aluminum smelters in India (Hindalco, Malco) and abroad (SaAz & BrAz in Russia).

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 infra red communication system designed for communication between field modules and master computer eliminates frequent maintenance.

Hauck Manufacturing Co.

#1139

Lebanon, Pennsylvania

<http://www.hauckburner.com/>

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

Hencon B.V.

#1131

Ulf, The Netherlands

E-mail: info@hencon.nl

SPECIAL VEHICLES FOR THE ALUMINIUM INDUSTRY

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

The delivery program covers the complete range for potroom (Söderberg and prebaked) and 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
- Pot Trimming Vehicles
- Anode Spading / Tamping Trucks
- Side Loading Forklift Trucks
- Platform Lifting Trucks

At the TMS 2002 Exhibition, Hencon will be present at booth no. 1131, where the products of the delivery program will be shown.

SPECIFIC NEW DEVELOPMENTS ARE:

- Combined Furnace Charging / Skimming Machine
- Compact Hot Metal Transport and Tilting Vehicle
- New type Multipurpose Vacuum Cleaner H-3000

Heraeus Electro-Nite Co.

#1205

Philadelphia, Pennsylvania

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

Heraeus Electro-Nite Co., the world's largest developer and producer of sensors for the molten metal industry, will be exhibiting several sensors for the primary aluminum smelter.

The Cry-O-Therm™ "Superheat" sensor has been developed to provide the potline with an almost instantaneous reading of the bath and liquidus temperatures. It is being shown that direct measurements of the liquidus temperature in industrial cells by the Cry-O-Therm probe is clearly advantageous compared to the alternative methods for determining the liquidus temperature.

The Positherm-AL© Type "S" disposable thermocouple and DT-280 digital temperature measuring system provide the potroom operator with a faster, more accurate, and more reliable temperature of the cryolite bath. The companion datalogger allows the operator to store the information collected over the course of the day and download it directly into the computer at the end of his shift.

Stop by the HEN booth to learn more about our sensors for the primary aluminum smelter.

Hertwich Engineering

#738

Braunau, Austria

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 140,000 tpy, fully automatic billet sawing and stamping plants, briquetting presses, fully automated billet and log stacking systems complete with bundle manipulation. Also featured will be the compact remelt facilities and horizontal casting systems Hertwich Engineering supply.

Hirox USA

#1210

www.hirox.com

3-D HI-SCOPE video microscope systems for quality inspection of microscopic objects. Dynamic 360 rotation with oblique angle viewing provides high resolution 3-D image with great depth-of-field available magnification range 1x – over 4000x. Video ready to color printer, VCR or PC for documentation, image analysis and measurement. The most advanced quality inspection system for process control, failure, analysis and research development. Email: inquiry@hirox-usa.com.



**Hydro
Aluminium
Hycast**

HYDRO ALUMINIUM HYCAST

#823

Sunnalsóra, Norway

<http://www.light-metals.hydro.com/>

**THE HYCAST SIR
NEW STATE OF THE ART IN-LINE MELT-REFINING**

Hydro Aluminium Hycast a.s. will present a new and revolutionary in-line melt-refining unit at TMS 2002 Annual Meeting and Exhibition in Seattle, Washington, USA.

Hydro has taken a step forward when it comes to in-line technology, compared to what has been available on the market up till now. Hydro Aluminium is recognized as one of the leading aluminium companies of the world, and has put technology development based on own experience and customer input in focus.

The new I-60 SIR unit has been developed by Hycast together with Hydro's R&D centre at Sunndalsøra, Norway, and with input from the primary and secondary casthouses in Hydro.

Why develop a new in-line unit? Well, our customers listed up several features they were looking for, but there was not such unit available on the market. The major list of features our customers wanted and which is successfully offered are:

- New, unique, patented rotor and reactor technology.
- A unit with excellent metallurgical performance on all elements, even on particles and oxides, to avoid further down-stream filtering for most of the alloys. Comparing the results from the SIR with other published material on other degassing/ filter units, Hydro has never seen anything like it.
- Drain-free reactor, meaning that the metal is drained back to furnace, or can be drained to casting machine at the end of cast as a fully automatic operation.
- Simple installation and small foot-print. The SIR is a very compact unit, with all major components integrated in one machine. That means that we just need a few hook-ups to be up running in a few days.
- Low operation cost per tonne produced metal. Cost is of great importance in all business, regardless of good performance or other features. The SIR will absolutely give a very low operation cost compared to others.



- HSE aspects has definitely been put in focus when developing the SIR unit. You would probably know that Hydro has a very high standard when it comes to this, and we are happy to say that the SIR is meeting these standards.

In addition to above features, one of the most important messages that was given by several of the Cast-house Managers was: "I want a unit that is just sitting there, making me able to produce day after day with the same quality".

After long term testing and verification in Hydro cast-houses, Hycast is happy to give the Cast-house Manager what he wants.

See us at booth 823 at TMS 2002.

See our display ad, page 5

COMPANY PROFILES

Holton Machinery Ltd

#725

Phone: +44 (0) 1202 581 881

Fax: +44 (0) 1202 581 789

E-mail: sales@holton-conform.com

Holton Machinery Ltd

Albany house, Elliott Road, West Howe
Bournemouth, Dorset, BH11 8JH, England
www.holton-conform.com

Holton Machinery Limited manufactures the Holton Conform™ range of continuous rotary extrusion machines which are now in profitable production in 22 countries around the world. The company is a world leader in continuous rotary extrusion, with over 20 years experience and the backing of its multinational parent company, The Outokumpu Group.

Capitalising on its new Holton Conform™ 2000 machine, Holton has taken orders for 6 new Conform™ lines in the last nine months as well as for a number of major refurbishment projects. Holton continues to challenge the accepted norms in applications for Conform™ and is spearheading new technologies and metallurgical processes through partnerships with universities and industrial technical centres.

Hysitron, Inc.

#1334

Minneapolis, Minnesota

<http://www.hysitron.com/>

Hysitron is a leading manufacturer of nano-mechanical test instruments for advanced materials characterization. Tests include hardness, fracture toughness, elastic modulus, friction, wear and scratch resistance of bulk materials, ultra-thin films, nanostructures (MEMS) and nanocomposites. The TriboScope® interfaces to a commercial AFM or the TriboIndenter®, with SPM mode imaging, allow pre and post indent in-situ imaging. Advanced features such as Acoustic Emission, Full Automation, Stiffness Mapping and Dynamic Stiffness Measurement are available. Sample testing and contract analysis are offered at our USA headquarters.

Industrial Heating Magazine

#733

Pittsburgh, Pennsylvania

<http://www.industrialheating.com>

Industrial Heating is the leading thermal processing journal in the world. As the industry's largest and most preferred publication, Industrial Heating has over 22,100 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.

Industrial Tip

#934

Monroe, North Carolina

www.industrialtip.com

Industrial Tip Manufacturing (ITM) makes ceramic fiber casting tips and related parts for use in the continuous casting operation. Using unique manufacturing techniques, ITM has developed a superior casting tip that combines excellent compatibility with aluminum contact as well as exceptional thermal characteristics, making these boards the ideal choice for sheet casting.

Innovatherm Company

#734

Phone: 0049-6033-9696-0

Fax: 0049-6033-9696-9

E-mail: dmaiwald@innovatherm.de

Butzbach Germany

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.

Insulation & Machining Svcs Ltd

#739

Southport, Merseyside, United Kingdom

www.ims-insulation.com

Based in Southport, Merseyside, UK, and with offices over the country and strategically placed throughout the world, IMS is able to supply insulation materials on a truly world-wide basis.

IMS offers a vast product range, supported by experienced and trained personnel. IMS utilises its own in-house comprehensive machine shop fully equipped with the latest state of the art CNC machinery.

IMS works in conjunction with many of the worlds leading suppliers of insulation materials, and with their support you can be assured that you will be receiving products of outstanding quality with full manufacturer's support.

Integran Technologies

#843

Toronto, Ontario, Canada

www.integran.com

Integran Technologies Inc is a metallurgical nano-technologies company, which provides customers a competitive edge in the marketplace through licensing of its proprietary advanced materials and coating technologies, (i.e. GBE™,

Nanoplace™, Electrosleeve™). Through cost-effective metallurgical process modifications, Integran engineers materials and coatings on a near-atomic scale, to yield 'super materials' which meet the demanding functional and structural requirements of tomorrow's products. With a fully equipped laboratory for pilot scale synthesis and characterization of materials, Integran's team of scientists, engineers, and technologists are dedicated to facilitating and accelerating the technology transfer process, and the widespread commercial application of its advanced metallurgical processes.

International Magnesium Association

1319

McLean VA

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, 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 manufacturers and consumers.

International Procurement Inc

#732

Wexford, PA

International Procurement Inc is in business to contract, manufacture and sell the ISIDOROV inductive stirring device. This technology is covered by a US Patent in ISIDOROVs' name.

The equipment can be retrofit on existing melting or holding furnaces and will:

- reduce the energy to melt
- increase furnace production
- improve alloy distribution
- reduce melt loss

This system is mounted on the side of the furnace, is small, efficient and inexpensive compared to other inductive systems.

Visit our booth and let us explain how our system operates, and how it can reduce costs for you.

J

**J. McIntyre Machinery Ltd
#501**

*Dunkirk, Nottingham, England
www.jmcintyre.co.uk*

McIntyre Machinery designs and builds a complete range of metal recycling equipment including: shears, balers, furnaces, aluminium/steel can sorters and compactors, and equipment for prototype and/or product destruction. The company is also the inventor of the TARDIS aluminium dross processing system as a result of which it gained the Queen's Award for Enterprise 2000—the UK's highest commercial prize—in the innovation category. There are now more than 120 TARDIS units in successful operation in organization such as Alcoa in the USA and Brazil, Aluar in Argentina, Alba in Bahrain, Alusaf in South Africa, Hydro plants throughout the world, Nordic Aluminium in Iceland, Hayes Lemerz, Bonnell, Nichols and Noranda in the USA, Aluminij in Bosnia and Elvan in Greece.

A TARDIS 1048 machine will be displayed on the company's stand at TMS.

**Jayne Industries, Inc.
#631**

*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 #631 to further discuss your anchor and hardware requirements.

**Jervis B Webb Co.
#1021**

*Farmington Hills, Michigan
http://www.jervisbwebb.com/*

Jervis B. Webb Company is a recognized leader in the field of engineered material handling systems and equipment. Our high-volume bulk conveyors bring mined ores from the mine-mouth to the aluminum refinery, using overland transport belt conveyors, automatic ship loaders and unloaders, bucket elevators, and screw conveyors.

In the smelting plant, our full line of power and free conveyors and integrated material handling products are computer controlled to efficiently automate rod/anode assembly, and green or baked anode operations.

OUR PRODUCT LINE INCLUDES:

- automated guided vehicles
- power and free conveyors
- roller and heavy-duty chain conveyors, automated storage and retrieval systems
- and custom designed automation equipment for butt removal and anode or slab handling

From raw materials handling and transport . . . to anode, molten metal, and cast ingot handling . . . to automated storage of work-in-process and finished product . . . The Jervis B. Webb Company has over 40 years of material handling and control experience in the Aluminum Industry.

**JOM
1101**

*Warrendale PA
www.tms.org/pubs/journals/JOM/jom.html*

Published monthly by TMS, The Minerals, Metals & 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

**KB Alloys, Inc.
#724**

*Reading, Pennsylvania
http://www.kballoys.com*

KBAlloys, Inc. and Anglo Blackwells Ltd. produce Aluminum-Based Master Alloys including TIBOR®, TITAL®, AND TICAR® grain refiners, binary hardeners and special purpose alloys, including BORAL®, Strontium-aluminum, strontium-boron (STROBOR®) and beryllium-aluminum. The master alloys are available in a variety of convenient to use forms including coiled rod, cut rod, ingot and KORRECT BAR®. With the use of statistical process control, KBAlloys controls its processes from alloy conception through all the manufacturing steps, including raw materials, process monitoring, and product testing to on-time delivery of quality products.

This traditional quality system is now even stronger with certification of all our facilities to ISO 9002 standard by the British Standard Insti-

tute. If consistency in product performance is important to your success, selecting KBAlloys or Anglo Blackwells as a vendor is your critical path to success. Our technical specialists and field sales engineers can assist you in creating the best master alloy for your needs, increasing your production, solving problems and improving the performance of your aluminum alloys. Please see us at our booth or contact us at www.kballoys.com.

**KBM Affilips B.V.
#1309**

*Phone: +31 412 681311;
Fax: +31 412 635594
E-mail: info@kbmaffilips.com
Oss, The Netherlands
http://www.kbmaffilips.com*

KBM AFFILIPS is dedicated to the development, manufacture and marketing of specialty master alloys for the metallurgical industry. The company is backed by manufacturing facilities located in The Netherlands (KBM) and Belgium (AFFILIPS). Both KBM and AFFILIPS are fully ISO 9000-ISO 14001 approved and offer the most complete range of master alloys for the metallurgical industry.

Products for the Aluminium industry include AlTiB, AlTiC, AIB, 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 1309 or contact our office.

**KHD Aluminium
Technology GmbH
717**

*Cologne, Germany
Effective April 1st, 2001 Outokumpu from Finland has acquired KHD Aluminium Technology GmbH from Deutz AG, Cologne / Germany.*

KHD Aluminium Technology GmbH specialises on plant and equipment for the production of carbon anodes and electrodes required in the primary aluminium and other metals industries.

For the aluminium industry, KHD Aluminium Technology GmbH designs, supplies and installs green anode plants, anode handling systems, rodding plants, butts crushing plants, pot line equipment and is the world-leading supplier of vibrating compactors for forming of green anodes, cathode blocks and electrodes, with more than eighty units supplied to the aluminium and carbon products industries.

COMPANY PROFILES

Kabert Industries

#1022

Phone: (630) 833-2115;

Fax (630) 833-9298

Villa Park, Illinois

<http://www.kabert.com>

Since 1960, Kabert Industries, Inc. has been furnishing the aluminum industry with casting supplies. Fiberglass cloth, an inexpensive and effective method of nonferrous molten metal distribution and filtration, is specially woven for the aluminum industry. In addition to roll goods, the cloth can be cut and sewn into mini channel bags, trough socks and 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

#1216

Geelong, VIC, Australia

<http://www.kempe.com.au>

Kempe International is a leading global engineering service-based company providing turnkey facilities, specialized equipment, engineering consulting and maintenance support services to the aluminium smelting industry.

Kempe's services can be offered independently or as a package and include:

- Engineering Design & Project Management
- Manufacturing
- Equipment Supply
- Turnkey Project Work
- Site Project & Shutdown Coordination
- Maintenance Engineering
- Fluid Power Supply & Services

Our commitment to customer service is supported by an ever growing in-house branch network on a global basis.

Our clients include smelters in Australia, New Zealand, U.S.A., Brazil, South Africa, Mozambique and Dubai.

L

LAR

#1125

63 Road 169

Metabetchouan, Quebec G0W 2A0, CANADA

LMI Selcom

#1330

Partille, Sweden

<http://www.lmint.com/cfm/index.cfm>

LaserPour® Molten Metal Level

Control Solutions

The LaserPour® Aluminum Level Control Systems from LMI Selcom are high-speed, closed-loop control systems that automatically and precisely regulate the level of molten metal in a mold, launder, headbox or tundish.

Using real-time level measurements, the systems control the metal level from start-up through the filling stage to finished casting. Metal flow from the tilting or stationary furnace is also controlled to assure accurate and consistent fill rate to the desired level.

LMI Selcom's products for aluminum level control provides automatic, easy-to-use, reliable and virtually maintenance free solutions and they offer proven benefits to the customer.

SEE OUR DISPLAY AD, PAGE 13.

LOI, Inc.

#1031

Canonsburg, Pennsylvania

<http://www.loi.de/en/indexsa.html>

LOI, Inc. features the Twin-Chamber melting furnace, for melting contaminated aluminum scrap without using salt. This process is based on low-temperature carbonization and subsequent incineration of the contaminants, making it an environmentally compatible solution.

Aluminum Melting

Delivery of complete systems for melting/recycling of various Al materials and scrap, including flue gas purification, metal circulation using electromagnetic pumping, and charging equipment.

DESIGN AND MANUFACTURE OF:

- Round, top charge, melting furnaces
- Tilting, holding furnaces
- Twin-chamber melting furnace for contaminated scrap

HEAT TREATMENT

Heat treatment systems for structural Al parts (wheels, cylinder heads, axle guides, etc.) for continuous and non-continuous operation, for the following processes:

- Solution annealing
- Quenching
- Artificial aging systems for extruded Al profiles
- Coil Annealing systems for single or multiple coils

SEE OUR DISPLAY AD, PAGE 8

L P Royer Inc

#1208

LAC-DROLET, QUEBEC, CANADA

<http://www.lproyer.com/>

Design and manufacturing of safety footwear, metalworking industry, chemical, electrical, forestry work.

LVE Verfahrenselektronik GmbH

#1031

Essen, Germany

<http://www.lve-gmbh.de>

LVE is specialised in the automation and optimization of thermal processes for the aluminum industry. Special knowledge and experiences are available in anode baking and casting technology. Products are ProBake advanced firing systems for anode baking furnaces and CMMS, an optimized charging calculation and melting management system for primary and secondary casthouses.

Lechler, Inc

#735

445 Kautz Rd., St. Charles, IL 60174

(800) 777-2926; Fax (800) 444-7069;

E-mail: metals@lechlerusa.com

<http://www.lechler.com>

Lechler has specialized in the design, manufacture and maintenance of fluid application systems for both the ferrous and non-ferrous metals industries since it began in 1879. Lechler will exhibit a range of engineered fluid application systems, services and nozzles including roll cooling headers, roll wipers, SELECTOSPRAY systems for differential roll cooling, WHISPERBLAST Blow-off headers, gas conditioning nozzles and systems for pollution control and many other fluid application systems for cooling, coating, and cleaning.

Leco Corporation

#1317

St. Joseph, Michigan

<http://www.leco.com/>

Leco offers you Image Analysis Systems, Microindentation Hardness Testers, Metallographs and other top quality instruments for all of your analytical and metallographic needs. Stop by our booth #1317 at the 2002 TMS Annual Meeting Exhibition and find out how LECO Corporation can provide you with the right solutions to all of your analytical and metallographic needs. Or visit us today at www.leco.com

Leeman Labs Inc

#1025

Hudson, NH

www.LeemanLabs.com

Pulsar is a precise, accurate and cost-effective spectrometer for current and future material chemistry requirements. The pulsed sputtered technology offered by Leeman Labs Inc. (LLI), Hudson, NH, combines the attributes of the three conventional methods—spark emission, X-ray fluorescence (XRF) and combustion analysis – into one, easy-to-use system for ALL ANALYSES. All materials may be analyzed for seventy-one different elements from trace (ppm) to 100% concentration levels. Depth-profiling and solution analyse are also available with Pulsar. Cutting-edge inductively coupled plasma (ICP) and trace mercury analyzers are LLI fortes. For more information, visit our booth #1025, or visit our new website at www.LeemanLabs.com

Light Metal Age

#727

San Francisco, California

<http://www.lightmetalage.com>

For almost 60 years, Light Metal Age magazine 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.

Loma Machine Mfg. Co.

#1127

Fax: (914) 636-0344

New Rochelle, New York

The state of the art billet casting operation has been designed and built by LOMA Machine of New York. Our "Easycast" Hot Top System of aluminum was developed for the production of aluminum alloy extrusion billets. The unit is based on a closed Mold System patented, and simultaneously as many as over 100 multiple strands can be cast in one set-up. Less than 1 percent of the metal is lost in the form of "gate" on top of the billet, which is a great improvement compared to the scrap loss involved in conventionally cast billet.

Contact Loma by fax or visit us at Booth #1127

M

maerz-gautschi GmbH

#1105

Taegerwilten, Switzerland

<http://www.maerz-gautschi.ch>

maerz-gautschi Industrial Furnaces / Aluminium Division in Tägerwilten, Switzerland, offers, as a result of the extensive experience gained in the aluminium industry world-wide, thoroughly developed and proven products ranging from individual items of equipment to complete casthouses.

Melting and Holding Furnaces for casting directly from smelter reduction cells or integrated in remelt lines; Ingot Casting and Stacking Machines for foundry ingots, Horizontal and Vertical Casting Machines for rolling slabs and extrusion billets to produce the universal feedstock for remelt, rolled and extruded products; Heat Treatment Furnaces - batch or continuous type - for further treatment are the main products of the company.

Collaboration with Technical Institutes, experienced companies such as HPI, SAG, VAW and ongoing relationships with our customers creates the inspiration for a prosperous future. maerz-gautschi's use of the latest technology provides the aluminium industry with efficient installations according to latest standards.

MagChem, Inc.

#932

Boucherville, Quebec, Canada

<http://www.magchem.com/>

Specialized Casting and Sawing Lubricants

MagChem Inc. is a leader manufacturer and designer of high tech casting and sawing lubricants.

MagChem casting lubricants have been developed to provide the following properties:

- High flash point, low smoke formulations
- Ecological acceptance in the DC process
- High thermal stability
- Low volatility
- High lubricity
- Stable lubricant film at the molten metal-mold interface
- Low oxidation properties at high temperatures

MagChem sawing lubricants are critical to ensure the integrity of the surface and the quality of the cut. High heat extraction properties, elimination of staining in heat treat stages and high lubrication values are distinct advantages provided by MagChem sawing lubricants. These lubricants are formulated with anti-oxidation and lubrication additives.

MagChem has also developed a full line of quality products for aluminum wire drawing and strip rolling.

Master Alloys Co.

#1313

Munster, Indiana

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.

McAllister Mills, Inc.

#905

Independence, Virginia

<http://www.mcallistermills.com>

McAllister Mills is a world class producer of thermal barrier products. Today, McAllister Mills serves the thermal insulation market with over 1300 off the shelf woven and non-woven products. Our new non-woven family of products is ideally suited for the temperatures and applications seen in the non-ferrous industries. All of our products are produced from thermally efficient raw materials including, E-Glass, M.H.T. Glass, Silica, and bio-soluble vitreous silicate fiber.

Whether you need gasket material for the furnace or engineered systems for your pot line or soaking pit, McAllister Mills will be there to supply a quality product you can count on.

MDN

#1316

Mukilteo, WA

<http://www.macvalves.com>

The MAC Distributor Network (MDN) is a world-wide network of closely coordinated, independent MAC Valve distributors. MAC valves is a manufacturer of pneumatic valves with manufacturing facilities in the United States, Belgium and New Zealand. The MDN has assisted in the development of industry specific valve modifications, including the AirSaver directional valve assembly that can dramatically reduce crust breaker cylinder compressed air consumption. Cost saving benefits of the AirSaver apply to both upgrades and new construction. Input from MDN members around the world is incorporated into proven designs which are supported globally.

COMPANY PROFILES

Megaquip Ind., Ltd.

#1201

E-mail: sales@megaquip.com
Delta, British Columbia, Canada
<http://www.megaquip.com/>

MEGAQUIP INDUSTRIES LTD. specializes in the design and manufacture of unique heavy duty mobile and industrial equipment utilized in Aluminium Smelters and other industries.

- Our reputation as a "Key Supplier - Partner", highlights our corporate strengths -
- The ability to define both the task and the required solution.
- The willingness to do whatever is needed for any particular design requirement.

After developing some 49 prototypes, we still hold a 100% success rate.

If you expect satisfaction through value analysis and project teams, we can assure your success - MEGAQUIP - part of your team!!!!

Messe Düsseldorf North America

#623

Chicago, Illinois
<http://www.mdna.com/>

At booth 623, Messe Düsseldorf North America will have visitor and exhibitor information available for:

- GIFA 2003, 10th International Foundry Trade Fair with WFO Technical Forum,
- METEC 2003, 6th International Exhibition for Metallurgical Technology with Congress and
- NEWCAST 2003, International Trade Fair for Casting Products—a new event exclusively for casting products which will be held concurrently to the already world renowned trade fair trio GIFA, METEC and THERMPROCESS from June 16–21, 2003 in Düsseldorf, Germany.

Over 2,000 exhibitors and 96,000 visitors from around the globe are expected to attend these trade fairs.

Metal Bulletin LLC

#1212

London, United Kingdom
<http://www.metalbulletin.com>

For more than 80 years, Metal Bulletin has been reaching metals producers, semi-fabricators, traders, end users, recyclers and capital equipment suppliers in more than 100 countries. Metal Bulletin and its sister publication, Metal Bulletin Monthly, are more widely known and respected in the international metals markets than any other metals publications. In addition to MB and MBM, Metal Bulletin Journals publishes numerous research reports, directories and databooks for every segment of the ferrous and non-ferrous metals industries. Metal Bulletin also arranges metals conferences throughout the world and provides an on-line metals information service, www.metalbulletin.com.

Metallurg Aluminium

#1011

Burlington, Ontario, Canada
Rotherham - UK, Newfield - NJ,
São João Del Rei - Brazil,
Rjukan - Norway, Munguia - Spain
<http://www.metallurgaluminium.com>

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

With its five manufacturing facilities, located in the UK, USA, Brazil, Norway and Spain, 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 and hardeners.

Our wide range of compacted powder products includes Chrome, Copper, Iron, Manganese, Nickel and Titanium in our flagship ALTAB™ products and briquettes.

We continuously provide innovative products aimed at reducing costs in the cast house. Recent innovations include TiCAI 315™ & TiCAI 330™ grain refining rods, 8% Boron Al (8BAI™) rod & castcut™, Sr-Al & TiBAI Quicksol Bar™, Strobloy™, TiBAlloy™ and ALTAB™ 100% Ti.

Consistently high quality is secured through statistical process control and rigorous quality assurance programs. All Group members are registered to one or more of the following quality standards: QS 9000, ISO 9001, or ISO 9002.

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

#1320

Phone: (514) 939-2710;
Fax: (514) 939-9160
3400 de Maisonneuve W. #1210
Montreal, QC H3Z 3B8 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, 1,700 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
- Mineral processing

MetSoc would like to take this opportunity to invite you to visit Booth 1320. See you in Seattle!

Metallics Systems Co. L.P.

#711

Solon, Ohio
www.metallics.com

Metallics Systems is a leading supplier of engineered solutions for handling and processing non-ferrous molten metals. With the recent acquisition of EMP Technologies, Metallics has enhanced its ability to help improve productivity, reduce energy consumption, increase metal recovery rates, and improve product quality. Metallics 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 LOTUSS™ 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

Metallics Systems is a certified ISO 9001 company.

SEE OUR DISPLAY AD , COVER 2

Micro Photonics Inc

#1300

Allentown Pennsylvania
www.microphotonics.com

Micro Photonics supplies nano-hardness testers, micro-scratch testers and tribometers for measuring thin film hardness, adhesion, and wear resistance; ellipsometers and reflectometers for measuring thin film thickness and optical properties; non-contact 2D and 3D profilometers for measuring surface topography; x-ray microtomographs for measuring material microstructure; and CCD cameras for x-ray imaging.

SEE OUR DISPLAY AD, PAGE 7.

Mid-Mountain Materials

#1324

Phone: 1-800-382-2208

Seattle, Washington

www.mid-mountainmaterials.com

Mid-Mountain Materials, Inc. is an international company specializing in the design and manufacture of advanced high temperature resistant industrial textiles, coated fabrics, custom sewn parts and technical insulation components. With an emphasis in problem solving, Mid-Mountain engineers sealing & thermal solutions for energy efficiency/environmental compliance in the Aluminum Industry.

Since its founding in 1976, Mid-Mountain Materials has experienced steady growth, rapidly expanding the manufacturing facility. Mid-Mountain sustains this growth through new product development, implementation of advanced manufacturing processes and strategic partnerships to meet the growing demand for specialty high temperature products.

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

MikroPul

#731

Pittsburgh, Pennsylvania

www.mikropul.com

MikroPul, a Beacon Industrial company, offers complete turnkey air quality system design and implementation capabilities including process analysis, system design, equipment supply, installation, start-up and testing.

MikroPul invented the pulse jet dust collector in 1956 but also has considerable experience and a proven line of products including cyclones, cartridge collectors, reverse air collectors, shaker collectors, wet and dry scrubbers, wet electrostatic precipitators and gas coolers.

As a world leader in dust control and product recovery systems, MikroPul has offices throughout North America and also in Australia, France, Germany, South Africa, South America and the United Kingdom. MikroPul is headquartered in Charlotte, North Carolina.

MikroPul Pittsburgh has been established specifically to serve the Metals Industries (steel, foundries and non-ferrous).

Milward Alloys, Inc.

#1311

Lockport, New York

<http://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 # 1311 to discuss your special needs.

Minteq International, Inc.

#1235

Slippery Rock, Pennsylvania

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.

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 furnace shut down
- Eliminates costly downtime for maintenance and repair

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

Modern Metals Magazine

#1322

Chicago, Illinois

www.modernmetals.com

For more than fifty years, Modern Metals has reported on the full range of metals and forming processes, reaching corporate executives, engineers and purchasing managers within the original equipment, service center and primary metal producing markets. Metalworking professionals read Modern Metals to find the most efficient and cost-effective materials and machinery, and to discover how trends in the global marketplace may effect their corporate objectives. Among metalworking magazines distributed to both service centers and OEMs, no other publication matches Modern Metals' service center circulation.

Moltech

#632

Carouge, Geneva, Switzerland

MOLTECH PRODUCTS FOR ALUMINUM CELLS

In over twenty years of research, the MOLTECH Group has developed products and processes for aluminum electrowinning, includ-

ing TINOR Aluminum-wettable Protective Cathode Coating, OPANOR Anode Oxidation Protection and EXCELNOR Side Wall Oxidation Protection, which have been tested extensively in laboratories and commercial Cells and are now available for commercial use.

The ultimate goal of MOLTECH research is the development of the NOVANOR non-carbon non-consumable anode to replace carbon anodes, thereby improving Cell performance, reducing pollution in their fabrication and use, and in residue disposal.

NOVANOR anode laboratory test results are very promising and pilot scale tests are now in process. MOLTECH invites everyone to visit its stand at TMS, which will feature innovative MOLTECH products including NOVANOR.

Molten Metal Equipment Innovations

#1038

Middlefield, Ohio

<http://www.mmei-inc.com>

Molten Metal Equipment Innovations, Inc. is a dynamic and innovative company that designs and manufactures people-friendly equipment for the aluminum industry. Products include molten metal circulation, transfer and gas injection pumps, scrap melting systems and rotary degassers. We specialize in the ability to customize any of our products to meet our customers' unique needs. MMEI invests heavily into engineering, upgrading of existing equipment and new products. We are fully staffed to offer a variety of services to our customers. This includes on-site installation and start-up of the initial equipment. Contact us at 440-632-9119 and our web site at www.mmei-inc.com.

Multistat Inc

#606

<http://www.multistat.com/>

Multistat develops and markets Multistat Optimizer™ and Multistat ModelViewer™, the world's leading software products for modeling, model visualization and optimization for both life and materials science research.

Our software is designed for scientists and engineers at R&D facilities to organize scientific data, share information, and develop, analyze, and simulate novel compounds and processes.

Multistat is completely focused on visualization and optimization software and works in close partnership with its customers and partners, enabling them to get the best possible performance from our products Multistat Optimizer™ and Multistat ModelViewer™.

Our software is also designed to be embedded in different software products and solutions as a component, making leading edge visualization and optimization accessible to a wide range of customers and applications.

COMPANY PROFILES

Murlin Chemical, Inc.

#923

Phone: (610) 825-1165;

Fax: (610) 825-8659

E-mail: general@murlinchemical.com

West Conshohocken, Pennsylvania

www.murlinchemical.com

Murlin Chemical, Inc. manufactures both natural and synthetic bone ash at its plant in West Conshohocken, PA, USA. These products are supplied to the world wide non-ferrous metals industry.

Aluminum Grade Natural Bone Ash is accepted by the Aluminum Industry as the premier release agent. Application of bone ash to a mold, a refractory trough, a surface, or a tool, which will be exposed to molten aluminum provides a consistent barrier against attack by the molten metal. Quick release of a casting or any solid metal, which may cling to the exposed surface, is a major benefit.

Plan to visit us at booth 923 to learn more about the advantages gained by using bone ash in your foundry.

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

N

Niton Corporation

#1032

Billerica, Massachusetts

<http://www.niton.com/>

NITON® Corporation, headquartered in Billerica, MA, specializes in non-destructive alloy analysis instrumentation.

NITON's portable alloy analyzers have led the industry in sales since their introduction in 1998. At just 2.5 lbs, the XL II-800 is the only truly hand-held high-performance alloy analyzer in the world. It is the ideal choice for fast nondestructive analysis and rapid grade identification of ferrous, non-ferrous and high-temp alloys.

In 2002, NITON will be introducing a number of exciting new products with capabilities and features never before seen in the industry. Stop by TMS Expo booth #1032 and witness the future of alloy analysis instrumentation.

SEE OUR DISPLAY AD, PAGE 18.

The Nonferrous Metals Society of China

1206

Beijing CHINA

Norsmelt

#931

Montreal, Quebec, Canada

Norsmelt is the newly formed agency administered by HGE for the marketing of the Noranda's copper smelting technologies. Norsmelt's objec-

tives are to contact prospective clients, determine their business needs, and promote the technology to prospective green field and retrofit users. For all information relating to smelting with the Noranda Process Reactor and associated equipment such as concentrate injection, tuyere pyrometry, and automatic punching, or for information about Noranda's new continuous converting process, Norsmelt is at your service.

North American Manufacturing

#601

Cleveland, Ohio

<http://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 where applicable.

North American has been providing systems for the aluminum industry for better than forty years, specializing in energy savings and melt rate optimization.

OMBKE/Hungarian Mining and Metallurgical Society

1232

Budapest HUNGARY

<http://www.tms.org/International/OMBKE.html>

OMBKE was founded in 1892 at Selmecbánya. Its mission statement: Service of the universal interests of the Hungarian mining and metallurgy. Publications: Monthly periodicals: Mining and Metallurgical Transactions (since 1868), Fuel and Gas and conference proceedings. OMBKE counts more than 4000 members including coal, mineral and oil miners, ferrous and non-ferrous metallurgists as well as foundry-men. The booth introduces the M³ International Congress on European Perspectives in Mining and Metallurgy (Vienna, 29-31 May 2002) being organized by BVÖ (Austria), GDMB (Germany), OMBKE (Hungary) and ICSOBA (International societies, co-sponsored by TMS and many other sister societies.

Oak Ridge National Lab.

#1305

Oak Ridge, Tennessee

www.ornl.gov

The US Department of Energy, Office of Industrial Technology, is managing a national effort to research, design, develop, engineer and test new and improved materials for industrial use as well as more profitable uses of existing materials. This effort, called the Industrial Materials of the Future Program, seeks partners who have material problems or solutions. The Oak Ridge National Laboratory exhibit displays current Program status, including successes.

Opsis, Inc

#1321

San Marcos, California

<http://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.

SEE OUR DISPLAY AD, PAGE 14.

Outokumpu Aluminium Technology

#717

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 Aluminium 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 Aluminium Technology to be the technology and service partner of choice for the aluminum industry.

e-mail: aluminum.technology@outokumpu.com

CANADA: Aisco Systems Inc.

1551 Corporate Drive

Burlington, Ontario L7R 3Y5

Tel. +1 905 335 0002

Fax +1 905 335 9643

GERMANY:

Lurgi Metallurgie GmbH

Ludwig-Erhard-Strasse 21

D-61440 Oberursel
 Tel. +49 6171 96930
 Fax +49 6171 9693 273
 KHD Aluminium Technology GmbH
 Dillenburger Strasse 69
 D-51105 Köln
 Tel. +49 221 822 6686
 Fax +49 221 822 6707

See our display ad, cover 3.

P

Palbam Metalworks

#1302

En harod Ihud, Israel

Palbam Metalworks is currently the major stainless steel equipment manufacturer in Israel with over 60 years of experience. The factory is well equipped with updated fabrication technologies. Regarding Magnesium, Palbam specializes in :

- Plastic processing technologies of Magnesium in the field of deep drawing, bending, rolling and forging.
- Laser cutting technologies for use with sheet Magnesium.
- Peripheral and longitudinal automatic welding, as well as manual welding of a wide variety of Magnesium alloys.
- We have an existing capability in machining Magnesium parts.

Palbam carries out a combination of all of the above mentioned technologies in the fabrication of a variety of products.

Pechiney Group

#817

Mamaroneck, New York
www.pechiney.com

With an annual alumina production of nearly 2 Mt. and aluminium production of 1 Mt., Pechiney is one of the major producers.

The Aluminium Pechiney Technology has always been very innovative and has set many records, particularly for power consumption, cathode performances and environmental protection (more than 2800 AP 18 cells and 2,000 AP-30 cells are operated around the world).

Pechiney Aluminium Engineering markets the Pechiney Group's Technologies for casthouse equipment. They are specialists in the areas of degassing and filtration, including its recently improved Alpur TS system, automatic DC casters and continuous strip casters using the Jumbo 3C process. They are also suppliers of technical assistance in the manufacture of flat-rolled aluminium products, for rolling and finishing or basic engineering, and operating know-how for turn key plants.

Plibrico Company

#521

Chicago, Illinois
<http://www.plibrico-usa.com/>

Plibrico Company celebrates its 87th 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

#1223

Phone: (360) 425-3305
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 #1223 or call (360) 425-3305.

Precimeter, Inc.

#938

Birmingham, Michigan
<http://www.precimeter.com>

Precimeter's business idea is to be the leading manufacturer of non-contact measurement and control products for industrial applications with the highest total customer value. This will be achieved through quality, reliability and service mindedness.

Procedair Industries

#611

Montreal, Quebec, Canada
www.procedair.com/

Supported by the experience of over 120 installations worldwide in the aluminum industry, PROCEDAIR provides technical and economical solutions for any environmental project, either for greenfield smelter or revamping of existing plants, so as to meet the most stringent air pollution regulations. Technologies on display will include alumina injection dry scrubbing systems for potline and anode bake furnaces, coke fines injection dry scrubber for carbon plants, SO₂ wet scrubber using soda ash or sea water, lime/sodium bicarbonate injection dry scrubber for delacquering kilns and melting furnaces.

Pyrotek Inc

#1001

Spokane, Washington
<http://www.pyrotek-inc.com>

Our mission is to provide innovative solutions to customer needs utilizing our global resources. With extensive technological resources and experience, Pyrotek offers aluminium producers, casters and fabricators a comprehensive range of high temperature products, metal treatment systems and technical services.

Pyrotek provides a complete line of products and processing solutions for:

- Pot Rooms
- Carbon Bake
- Metal Treatment
- Centrifugal Casting
- Ingot Casting
- Pig Casting
- Wire Casting
- T-Ingot Casting
- Strip Casting
- Billet Casting
- Rolling Mills
- Extrusion and Fabrication

Pyrotek has over 60 locations worldwide and an extensive team of sales engineers for in-plant consulting on melting, treating, transferring, filtering and casting processes. getinfo@pyrotek-inc.com

Pyrotek Inc., 9503 E. Montgomery, Spokane, WA 99206 USA

R

R&D Carbon, Ltd.

#718

Zurich, Switzerland

<http://www.rd-carbon.com/>

R&D Carbon Ltd. serves the petroleum coke, pitch and aluminum industries.

- Research and Development: Basic research is carried out to better understand relationships between raw material properties and process parameters.
- Technical Services: Raw material evaluations for anodes, cathodes, and other carbon products are performed in bench or pilot plant scale. Technology audits and in-plant process optimisation are carried out at customer's plants.
- Laboratory Test Equipment: Easily operated and reliable test instruments have set worldwide standards for testing carbon products.
- Bake Furnace Process Control: An integrated bake furnace firing and process control system guarantees high productivity, low energy consumption and consistent anode quality.
- Training: Special training courses in the basics of anode manufacture are offered in our training centre or at customer's location.
- Engineering: A new process for green anode manufacturing allows the reduction in investment and operating cost. In cooperation with leading engineering companies our patented anode technology is marketed worldwide.

Raytek

#1204

Santa Cruz, California

www.raytek.com

Raytek engineers fixed-mount sensors that are integrated into industrial processes to provide continuous temperature monitoring and control. The Raytek Automation Division produces the Compact®, Thermalert®, Marathon Series™ and Process Imager Series™ that provide temperature measurement for continuous web or discrete batch manufacturing processes. Using temperature measurement as a monitoring system can provide data needed to optimize throughput and minimize downtime. For further information, visit us at www.raytek.com.

REEL

#838

St-Cyr-au-Mont-d'Or FRANCE

www.reel.fr

Rex Roto Corporation

#917

Fowlerville, Michigan

<http://www.rexroto.com>

Rex Roto Corporation is a leading worldwide supplier of refractory for the light metals industry.

Our products and services include:

- Pyroform refractory for hot-top billet casting systems and ingot distribution pans
- High Performance Metal Delivery Systems from furnace to casting station
- Electric heaters for launder systems and filter bowls
- Thimbles, inserts, joint and patch compounds and other consumables

Rex Roto Corporation has a team of Engineers, Designers, and Metallurgists to aid in the complete design of your Metal Delivery System. Come visit us in Booth #917 to discuss your application.

S

Saint Gobain Industrial Ceramics

#517

Phone: (508) 795-4081

Worcester, Massachusetts

<http://www.refractories.saint-gobain.com>

The Non-Ferrous Metals Group, a business unit of Metallurgy Solutions, Saint-Gobain Ceramics & Plastics, Inc. will exhibit at the 2002 TMS Annual Meeting Exhibition. The Non-Ferrous Metals Group represents the former AnnaWerk, Norton Company, Carborundum Company and Savoie Refractaires. Non-Ferrous Metals provides specialty refractories for molten metal containment and other critical metal contact applications. Refractory products for the aluminum industry include reduction cell sidewall bricks and blocks, melting/holding furnace ramp and hearth bricks, castables and mortars, immersion heater and thermocouple protection tubes for degassing equipment. Non-Ferrous Metals also supplies specialty and proprietary materials for critical areas in filter systems, molten metal pumps, troughs and dry vibration cements for coreless induction melting/holding furnaces. Non-Ferrous Metals products for the copper industry include shaft furnace liners, bricks, burner components, associated mortars and ramming cements, low moisture/high strength castables for launders, spoons and other critical metal contact applications.

Non-Ferrous Metals, Metallurgy Solutions is a worldwide business of Saint-Gobain Ceramics & Plastics, Inc. with a North American office located in Worcester, Massachusetts (telephone: 508-795-4081).

SEE OUR DISPLAY AD , PAGE 19

Samri Company, Ltd

639

Kimpo-shi. Kyung Ki-Do. KOREA

www.samri.co.kr

SAMRI Company Ltd is one of the largest and oldest foundry suppliers in Korea with three sales offices and two manufacturing plants. For the non-ferrous metal industry, Samri produces vari-

ous kinds of fluxes and ceramic foam filters. SAMRI also imports master alloys, SIC crucibles, and refractories.

You can check the outstanding quality of our ceramic foam filters displayed at our booth. Please visit our booth at TMS 2002 Exhibition, or check the website at <http://www.samri.co.kr>

Selee Corporation

#701

Hendersonville, North Carolina

<http://www.selee.com>

SELEE Corporation is the premier supplier of ceramic foam filters, advanced ceramic products and services for use in the metals industries. SELEE has maintained market and technical leadership by developing strong partnerships with customers. These partnerships allow customers to share SELEE resources to satisfy their quality and profitability goals.

SELEE Corporation is the only ceramic foam filter and refractories supplier in the world to achieve ISO 9001, QS-9000 and Ford Q1 quality certifications. This means SELEE Corporation will deliver to you on time the best quality products in the industry.

A partnership with SELEE provides our customers access to these resources:

- Commitment to Innovative New Products
- Advance Engineered Filter Bowls, Preheat Systems and Refractories
- Applications Engineering Team
- Fully Equipped Metallurgical Lab
- Dedicated Customer Service Team
- Global Direct Sales Force and Distribution Network
- R&D Pilot Plant Facility for:
- Rapid Prototyping
- Innovative New Product Development
- TQM Programs that Provide:
- Continuous Improvement
- Full Product Certification
- Self Directed Work Teams
- On-site Customer Training Programs

Sermas Industrie

#1121

Saint Quentin Sur Isere, France

<http://www.sermas.com>

SERMAS INDUSTRIE is a customer-oriented company specializing in design, construction and commissioning of machines for the aluminium industry.

Complete sawing systems for slabs, T-bars and billets including:

- Band Saw (cut rate up to 1100 sq. in/min)
- Chips suction system
- Handling equipment (downenders, conveyors, stop positioner, crops evacuation, etc.)
- Packaging equipment (scale, stamping, ink marking stacking, strapping, etc.)

Typical output:

- One cut T-bar every 57 seconds

- One slab (cut at both ends) every 8 minutes
- Ladle skimming and cleaning machines
- Cathodes machines
- Anode machines (cooling tunnel, handling systems and rodding show equipment)

Your contact at SERMAS: Jean-Christophe Garcin; Phone: 33 4 76 7 42 42; Fax: 33 4 76 93 67 76; Email: sermas@sermas.com

SETARAM

#523

Caluire, France

<http://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.

Silver Needle, Inc.

#1325

Toll Free 1-800-863-7733

Kellogg, Idaho

www.silverneedle.net

Aluminized and Vinex® Clothing: Protection From Molten Aluminum and Metal Splash

Our company started in a foundry: 14 years working and producing safe yet comfortable clothing. We listen because we know the frustrations of not being understood, of wearing clothing that doesn't fit, rubs, scratches and confines. Give us the opportunity to work for you and see if Silver Needle can make a difference.

WE ARE YOUR SOURCE FOR:

- Technical briefs: Discover which fabric will protect the best
- MSDS for fabrics
- Test kits: Determine which fabric works best. Do your tests on site!
- Design requirements

Information Central - Call our toll free number: 1-800-863-7733

SEE OUR DISPLAY AD, PAGE 22.

Sinomag

#1222

Beijing, China

www.sinomag.com/

Skamol Americas, Inc.

#1124

Nykøbing Mors, Denmark

<http://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 has an extensive know-how on optimizing insulation solutions in aluminium 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.

The paper "Ageing of Refractory Pot Lining Materials in Aluminium Electrolysis Cells" will be presented by Rikke Weibel, R&D Manager, in the technical session, "Aluminum Reduction Technology: Cathode Materials—Joint Carbon Technology", Wednesday, February 20, 2002 at 10:20 AM.

SMV—Sunnhordland Mek.

Verksted AS

#1239

Skaanevik, Norway

STAS

#1116

Chicoutimi, Quebec, Canada

<http://www.stas-unigec.com>

LA SOCIÉTÉ DES TECHNOLOGIES DE L'ALUMINIUM S.T.A.S. LTÉE

STAS is a dynamic and entrepreneurial company specialising in the commercialisation of new technologically advanced equipment. Industry sectors include aluminium and mines serving a global market place on a custom-made basis through the service of representatives in the Americas, Europe, Asia, Australia and Africa.

STAS is located in Quebec, Canada. World-class R&D facilities provide a continuing flow of new equipment to be commercialized; they include the Alcan R&D Centre, the Noranda Technological Centre and the Hydro-Québec Research Centre at Shawinigan.

STAS is a recognized leader in its innovative abilities to develop and fabricate sophisticated equipment which lower costs for its customers as well as improving quality - using the latest in programmable automation controls. Examples include compact degassing equipment, rotary injectors, dross coolers, filters, crucible cleaners, automatic guidance systems, etc.

Stein Atkinson Stordy, Ltd.

#509

Wombourne, Wolverhampton,

United Kingdom

<http://www.s-a-s.co.uk>

Stein Atkinson Stordy Ltd (SAS) has over 85 years of experience in supplying the Aluminium

Industry with a variety of equipment including High Speed Coil Annealers, Foil Annealers, Melting Furnaces (Tilting, Static, Round Top, Side Well), Holding Furnaces (Tilting & Static), DC Casters, Shoe Pusher Furnaces & IDEX® Decoating/Drying Technology.

Projects can be totally installed, supply only or even partial design. We can also advise on up-grading existing equipment. Our highly regarded In-house Systems Division, designs, tests and builds Control Systems (Instrument, PLC or SCADA) to meet the end user's exact requirements.

Stellar Materials, Inc.

#1231

Northville, Michigan

Thermbond is a unique refractory technology with features and benefits unavailable in traditional refractories. Thermbond is completely and naturally non-wetting to aluminum. Thermbond bonds permanently to other refractories so existing linings may be veneered and repaired rather than replaced.

Thermbond may be cast, troweled, gunned, hot-gunned, pumped, or rammed for permanent repairs or new installations.

SWS Scharf-Westfalia Industrial Systems GmbH

#930

Hamm, Germany

<http://www.scharf-westfalia.de>

SWS Scharf-Westfalia has been in business in the aluminium industry since 1972.

Scharf Westfalia designs, develops, manufactures, and supplies turn key plants and systems as well as components for the Aluminium Industry.

The Aluminium division is responsible, amongst others, for state-of-the-art turn key Anode Rodding Shops, Anode Handling and Storage, as well Butt and Bath Treatment Plants for the Aluminium Industry.

The following systems are presenting our main product line:

Turn key plants, as well as individual equipment, for:

- Anode Rodding Shops
- Cleaning and handling of bath and butt material
- Baked and green anode handling and storage systems
- Cooling tunnel for anode butts and bath material
- Crucible cleaning
- Fully automated transport system for green and baked anodes
- Anode traverse beam for the handling of anodes in the electrolyte cell

T

Techmo Car s.p.a.

#1209

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.

Thermal Ceramics

#1004

Augusta, Georgia

<http://www.thermalceramics.com>

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

Products include:

- Kaocrete® and Kaolite® Castables
- "K" Insulating Firebrick and Mortars
- Firebrick
- Cerox® Refractory Fired Shapes
- TR-19®/TR-20® Structural Board Insulation
- Kaowool® Blanket/Strip/Bulk Ceramic Fibers
- Kao-Tex® Textiles
- Kaowool® and RPC® Boards and Shapes
- BTU-Block® Microporous Insulation
- Kaowool® Millboard
- Kaowool® Paper and Felts
- Pyro-Bloc® Weld-On and Veneering Modules

At the coming TMS Show in Seattle, among the products we will highlight are Superwool® 607® and Superwool 607® Max®, new high temperature non-ceramic fiber insulating materials available in various forms such as bulk, blanket, boards and modules.

Thermcon Ovens B.V.

#630

Geldermalsen, The Netherlands

<http://www.thermcon.com>

Thermcon Ovens B.V. is a leading specialist in the design and delivery of aluminium casthouse equipment such as charging machines, melting furnaces, holding furnaces, metal filter boxes, d.c. casting machines and homogenizing/cooling facilities. State of the art aluminium scrap recycling facilities capable of handling contaminated aluminium scrap in full compliance with the latest very strict European leg-

islation, are supplied to the recycling industry. These recycling facilities have time after time proven to meet or exceed the most stringent environmental regulations in the world.

Revamping and modernization of existing equipment is also undertaken.

Thermcon also undertakes the design and implementation of computer control systems at machine level, level 2 as well as the connection to plant wide computer networks.

All equipment is custom designed and exactly tailored to the requirements of the customer.

ThermoARL

#621

Dearborn, Michigan

www.thermoarl.com

For over 60 years, Thermo ARL has been a leading innovator in analytical instrumentation. Thermo ARL's current product offering includes a series of optical emission (OE) spectrometers known for precision, accuracy and reliability. In addition, Thermo ARL manufactures sequential and simultaneous X-Ray fluorescence (XRF) instrumentation featuring: integrated XRD, fast gearless goniometer, small footprint and large X - Y sample changer. Both XRF and OE spectrometers are available as fully automated laboratories.

Thorpe Technologies, Inc

#607

Whittier, California

<http://www.thorpetech.com/>

Thorpe Technologies Inc, a professional engineering organization, focuses exclusively on the design, development, engineering, and construction of industrial furnaces, delacquering systems, thermal oxidizers, and related thermal technology.

Aluminum product line includes:

- Apros-based technology delacquering systems
- Rectangular Melting Furnaces
- Sidewell Melting Furnaces
- Dry Hearth Melting Furnaces
- Round Top Charge Melting Furnaces
- Tilting Melting Furnaces
- Rotary Melting Furnaces
- Stationary Holding Furnaces
- Tilting Holding Furnaces
- Batch Homogenizing Furnaces
- Continuous Homogenizing Furnaces

Thorpe Technologies Inc is headquartered in Whittier, CA; Tel: (562) 903-8230 with a branch office serving the eastern United States located in Gulf Shores, AL; Tel: (334) 968-6211.

Projects in Mexico are handled by Thorpe Mexico SA de CV; Tel: (52) (8) 335-2035. Projects in Brazil are handled by Thorpe do Brasil Ltda; Tel: (55) (11) 5579-0092.

For 86 years the Thorpe industrial furnace design group has provided industrial furnace design and engineering services to clients

throughout the United States and abroad. The Thorpe Technologies Inc organization is one more step to do an even better job in the rapidly changing, and increasingly technical, furnace design marketplace.

U

UES Software, Inc.

#1312

Annapolis, Maryland

<http://www.thorpetech.com/>

UES Software Inc is a dynamic leader in providing material process simulation and design software. The software packages being displayed increase productivity, cut costs, improve quality performance, and control environmental hazards.

Demonstrations of the powerful thermochemical software for predicting phase behavior and properties, kinetic software for solving and modeling chemical reactions, and material specific databases for modeling processes will be available. Also being presented will be ProCAST®, an invaluable tool throughout the world, used to simulate the behavior of industrial casting applications.

U.S. Dept. of Energy/Office of Industrial Technologies

#1301

Washington, DC

www.oit.doe.gov

The U.S. Department of Energy's Office of Industrial Technologies (DOE-OIT) has formed partnerships with the most energy intensive U.S. industries to accelerate the development of energy efficient technologies and processes. The DOE partnership with the Aluminum Industry will be highlighted. The DOE-OIT Aluminum Partnership funds R&D to address the research needs of the Aluminum industry as identified in the Aluminum Industry Technology Roadmap. The Aluminum Partnership supports and enhances the global competitiveness and ecological sustainability of the U.S. aluminum industry through strategic, leveraged investments in technologies that save energy, improve productivity, and reduce waste.

Unifrax Corporation

#839

Niagara Falls, New York

<http://www.unifrax.com/>

Unifrax Corporation, a global leader in the development and manufacture of high temperature ceramic fiber and soluble fiber products, introduces Foamfrax™ Insulation, an advanced high temperature technology for furnace lining applications. New Foamfrax Insulation offers exceptional energy savings, installation speed and lining performance for upgrades of existing fiber linings, lining over refractory, and furnace lining patches or refits.

Unifrax insulation products have been providing innovative heat management solutions for a broad range of industries, committed to solving high-temperature application problems and providing exceptional value to our customers. Unifrax Corporation corporate headquarters is located in Niagara Falls, NY. For more information contact Unifrax at 716-278-3800.

Unisearch Associates

#1010

Concord, Ontario, Canada
<http://www.unisearch-associates.com>

UNISEARCH ASSOCIATES INC. was founded in 1980, as an R&D and specialty Instrument Company. It pioneered and became world-leaders in the use of Unisearch introduced its LasIR system of instruments in 1994. These instruments extend our TDLAS technology to the use of telecommunication Tunable Diode Lasers. Applications include air quality measurements, fence-line monitoring, CEM and process control. Unisearch also offers FTIR systems.

UNISEARCH maintains a strong R&D focus to retain its leadership in existing products and to develop new product lines. The Company offers Measurement Services. Industrial and Government clients have used our well-equipped mobile laboratories, as well as air-born platforms, in a number of measurement programs.

UNISEARCH's full staff of installation and service experts complements our worldwide sales representative network.

V

Vallee Inc

1308

Saint-Alban QC Canada
vallee@vallee.qc.ca

Vallee inc. has for mission to conceive, design, build and offer an innovative line of articulated lift trucks and adapted handling tools for fabrication, transformation, extraction and heavy handling services enterprises, including Aluminum plants, principally in the North East of North America and in the whole world.

We will become the leader in this field by offering complete solutions fulfilling demands with high efficiency.

Our project managers and technical teams are continually listening to our customers to keep on developing new tools and vehicles for their current and emerging needs—tools and vehicles that will help them to obtain better performance. We have to be sure that we are offering better solutions on a timely basis.

VAW Aluminium-Technologie GmbH

#1230

Bonn, Germany
<http://www.vaw-atg.de>

VAW Aluminium-Technologie GmbH (VAW-ATG), a subsidiary of VAW aluminium AG, is specialised in tailor-made modernisation projects for aluminium smelters. The core competencies of VAW-ATG comprise process modeling, process control, aluminium and carbon technology, casthouse technology as well as technical engineering.

The enhanced version of the proprietary VAW process control system ELAS will be presented, together with the "intelligent" crust breaker/feeder development. Significant improvements in the ELAS control algorithm together with the powerful breaker/feeder system are a step forward to a Zero-Anode-Effect operation of reduction cells. The window-oriented graphical user interface of the ELAS pot control system is an outstanding instrument for the retrieval of operational data and in-depth analysis of exception states of reduction cells.

SEE OUR DISPLAY AD, PAGE 22.

Vulcan Refractories Limited

#834

Cheadle, Staffs United Kingdom
<http://www.vulcan-refractories.co.uk/>

Vulcan Refractories have a long-term commitment to the supply of quality refractories and industrial ceramic materials. The company has over 30 years experience in the manufacture of high duty refractory materials for use in high temperature or aggressive atmosphere applications. The product range is based around 3 main material groups:

- Silicon Carbide
- Alumina and Mullite
- Zirconia

Major applications are:

- Primary aluminum-Silicon nitride bonded silicon carbide blocks for lining primary reduction cells
- Secondary aluminum-Silicon carbide, alumina and aluminum titanate shapes for flow control, launder and furnace tapping areas
- Copper-Silicon carbide linings for melting and holding furnaces
- Powder metallurgy-Zirconia, alumina and aluminum titanate flow control nozzles

W

Wagstaff, Inc.

#801

Spokane, Washington
info@wagstaff.com
www.wagstaff.com

Wagstaff, Incorporated, Spokane, Washington USA - established in 1946, and known worldwide for manufacturing customized equipment for direct chill aluminum casting of rolling ingot and extrusion billet. Wagstaff customers, located in over 44 countries around the world, have long known the benefits of high quality Wagstaff MaxiCast™ Hot Top Billet Casting Tables equipped with the Wagstaff AirSlip™ Air Casting Process. Also known for its leading technology in Wagstaff ShurCast™ Casting Machines, Wagstaff AutoCast™ Automated Casting Control System, and Wagstaff LHC™ Low Head Composite Casting System. Wagstaff quality innovations are invented, first built and tested at Wagstaff.

Western Industrial Ceramics

#1136

Tualatin, Oregon

Wienalco

#1039

Velsen-Noord, The Netherlands
<http://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.

X

Xothermic Inc

619

Apopka FL

www.xothermicinc.com

Xothermic Inc. of Apopka Florida was established in 1992 as a product Research and Development company. The company now manufactures combustion equipment for Primary Industry utilizing its patented burner designs. The equipment supplied covers burner and flow control train, PLC, Siemens and Allen Bradley, for the flow train as well as other related operations connected to the process. This equipment is installed worldwide in glass, secondary aluminum and scrap lead processing facilities. Xothermic Inc. provides onsite startup assistance and recommendations. Principal systems provided cover oxy-fuel burners, hybrid oxygen-air burners, oxy-oil burners and the flow control equipment associated with each.

Z

Zedtec Combustion Systems Inc

#1103

Dewsbury, West Yorkshire, United Kingdom

www.zedtec-usa.com

ZCSI provides combustion systems and services for both the primary and secondary aluminium industries:

Full automatic reduction cell fuel bake-out systems, for improved heat distribution, smoother cell start-up, earlier cell stabilization and prolonged pot life;

Modernization of melting/holding furnaces using E-Jet Ultra low NO_x high velocity regenerative burners, for increased melt rates, improved fuel efficiency and reduced emissions;

Turnkey supply of state-of-the-art Rotary Tilting Furnaces capable of processing throughputs of up to 35,000 tpy whilst achieving high recovery rates. If required, ZCSI can operate and maintain the furnaces on behalf of customers.

Zircar Ceramics, Inc.

#1217

Florida, New York

Phone: (845) 651-600;

Fax: (845) 651-0441

E-mail sales@zircarceramics.com

<http://www.zircarceramics.com>

For more than a dozen years, ZIRCAR has been synonymous with high quality, soft castertips for use in the continuous casting of thin aluminum strip. We are now introducing several new high quality castertip products for use on just about every type of twin roll thin strip caster being used today. ZIRCAR Castertips are combinations of shot free fiber and inorganic binders and are used in the production of pin hole free foil. Castertip Type ASQ is our soft tip. Type Z-290 is a medium density tip. Z-450 is a high density, hard tip. All of these tip products are also produced in NON RCF compositions as well. Many other ZIRCAR Casthouse products are also available.

Zircar Refractory Composites Inc

635

Florida NY

www.zrci.com

ZIRCAR Refractory Composites, Inc has developed a new family of Fused Silica Composites. Type RSLE-57 is a low expansion high strength reinforced silica matrix composite product. It exhibits exceptional non-wetting properties when used in contact with molten aluminum, zinc, lead, tin and other non-ferrous metals, making it useful in numerous casting, conveying, containing and forming applications. RSLE-57 is the ideal material for use as Dams, Spouts, Floats, Launderers, Head Boxes, Baffles, Headers, Tips, Rings, Distribution Boxes, Stoppers, Basins, Snouts, Transition & Orifice Plates and Hot Top & Ingot Mold Liners. RSLE-57 is 100% organic free and contains no refractory ceramic fibers, (RCF's). It is fully machinable with conventional tooling. It is also available in cylinder form as Type RSLE-501 and moldable form as Type RSLE-56 Moldable.

SEE OUR DISPLAY AD, PAGE 27.