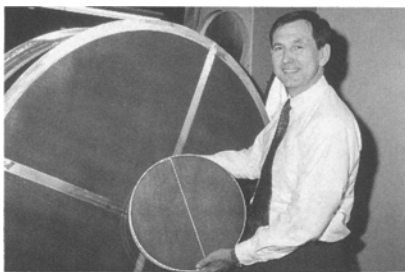


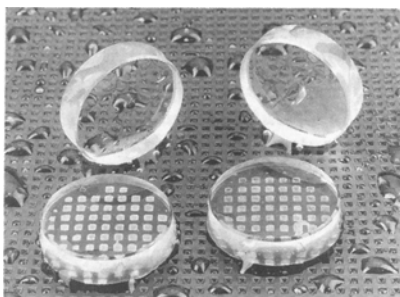
## Materials/Products

Munters Corporation's Cargocaire Division has introduced a *titanium gel desiccant wheel designed for wide ranging use, including highly saturated air stream applications*. The titanium gel wheel uses a patented process to retain more than 90% of its drying capacity for up to 10 years of operation compared to only 80% or less with other silica gel wheels. The titanium wheel also provides greater resistance to breakdown if the unit is saturated with water. For further information, contact Cargocaire Division, Munters Corporation, 79 Monroe Street, Amesbury, MA 01913-0640.



Munters Corporation—Cargocaire Division

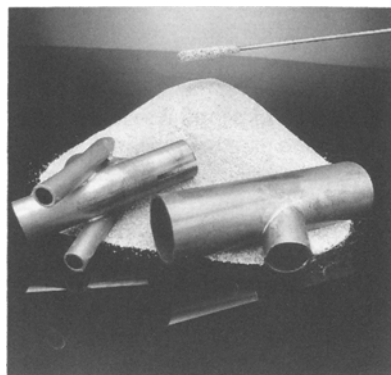
A line of *centrifuge cell windows fabricated from sapphire and single crystal quartz for OEM and retrofit applications* has been introduced by Meller Optics, Inc. These windows provide durability and chemical resistance and are  $19.03 \pm 0.03$  mm in diameter by  $0.5 \pm 0.10$  mm thick. Surface finishes are 30-5 for sapphire and 10-5 for the single crystal quartz per MIL-O-13830 within a central clear aperture of



Meller Optics, Inc.

16.00 mm. For further information, contact David Lydon, Meller Optics, Inc., 120 Corliss St., PO Box 6001, Providence, RI 02940; tel: 800/821-0180; Fax: 401/331-0519.

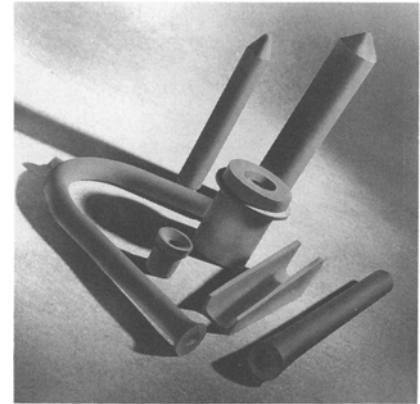
Force Industries has introduced Peterson #1 Blue Flux, a *high-performance flux used for brazing of cast and malleable iron and steel, or for torch brazing of brass, bronze, and copper*. This flux is effective even on rusty or greasy surfaces, destroying oxides and floating them to the surface, enabling creation of a strong bond. Other features include: a working temperature range of 1400 to 1800 °F, a melting point of 850 °F, and an extended shelf life. For further information, contact Michael McBride, Force Industries, 21 Industrial Blvd., Box 1029, Paoli, PA 19301; tel: 800/647-3575; fax: 800/647-2375.



Force Industries

*An inexpensive, high-performance material for use with molten aluminum* has been developed by Blasch Precision Ceramics. The oxide-bonded SiC is a cost-effective alternative to materials such as sialon, silicon nitride, and other ceramics, as well as having a strength three times that of silica, excellent thermal shock properties, high corrosion resistance, and extremely low wetting by molten aluminum. The SiC parts are available in complex shapes with fine edges and typical tolerances of  $\pm 0.005$  inch per linear inch.

For further information, contact Bud Webster, Blasch Precision Ceramics, 580 Broadway, Albany, NY 12204; tel: 518/436-1263; fax: 518/436-0098.

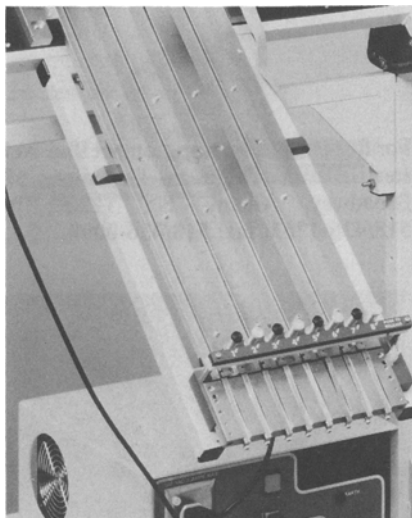


Blasch Precision Ceramics

*A new series of Vectra liquid crystal polymer (LCP) resins, offered at a 15 to 20% lower price than standard grade LCPs*, has been introduced by Hoechst Celanese Corporation. The new grades offer similar flow, dimensional stability and strength as standard grades, with a moderate reduction in toughness. Other properties include a UL94 VO flammability rating with 50% regrind at 0.87 mil thickness for K-130 grade. For further information, contact Hoechst Celanese Information Center, 114 Mayfield Ave., Edison, NJ 08837; tel: 800/235-2637.

*NEDOX synergistic coatings*, originally developed by General Magnaplate Corp. for application to steel, copper and brass, are now available to enhance the performance of aluminum and aluminum alloys. Such coated parts are ideal for cryogenic applications down to  $-250$  °F. They provide long-term abrasion resistance, prevent corrosive attack by most chemicals, humidity, and gases, provide previously unattainable levels of electrical conductivity, as well as preventing static buildup. The dry-lubricated, nonstick

surface reduces friction of moving or sliding parts. For further information, contact General Magnaplate Corp., 1331 Route 1, Linden, NJ 07036.



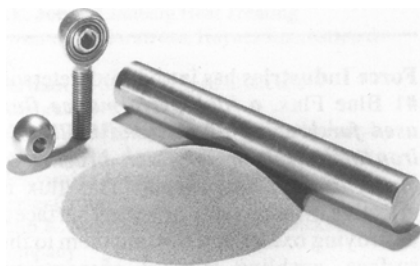
General Magnaplate Corp.

**ORPAC, Inc.** has introduced several products for high temperature applications. **ZINC NO-STICK** is a *ceramic paint that is totally non-wetted by molten zinc and its dross*, making it ideal for preventing galvanizing in unwanted regions such as threads, weld areas, and joints. **WHITE SILK** is a fast-drying aerosol spray dry film lubricant and release agent usable to above 2000 °F in all atmospheres for such applications as forging and extrusion lubrication. For further information, contact ORPAC, Inc., PO Box 5436, Oak Ridge, TN 37831; tel: 615/482-4635; fax: 615/482-1281.

## Processing/Equipment

**CK Worldwide** has introduced several *patented products for gas tungsten arc welding*. The Amptrak is a linear slide potentiometer that is mounted in the TIG torch handle and allows fingertip welding current control to the welder. The Flex-Loc is a torch design which features an adjustable head that can be moved to any position in a complete 360 degree rotation and then locked in that position. The Gas Saver series torch parts reduce argon gas consumption by as much as 40%, while providing more efficient shield gas coverage patterns. The CK Wedge Collet is a patented design which reduces resistance in the weld circuit, runs cooler, and sub-

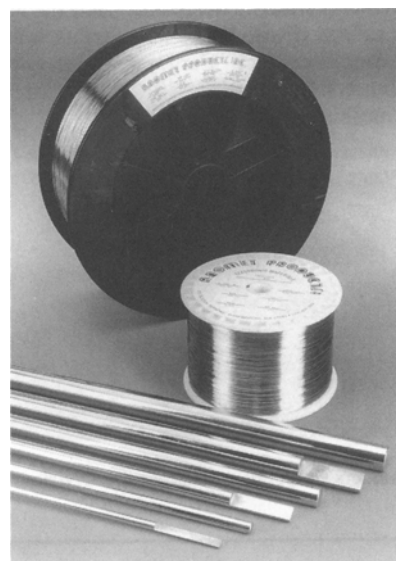
*Specialty metal powders produced by a process which ensures their cleanliness and high sphericity* for use in medical implants, powder metallurgy, laser welding, and copier toner carrier applications are available from **Nuclear Metals, Inc.** Medium particle size distributions range from 1000 to 45 microns and compositions include titanium, common and stainless steels, nickel and cobalt-base superalloys, and rare earth metals. For further information, contact John D. Nicholson, Nuclear Metals, Inc., 2229 Main St., Concord, MA 01742; tel: 508/369-5410; fax: 508/369-4045.



Nuclear Metals, Inc.

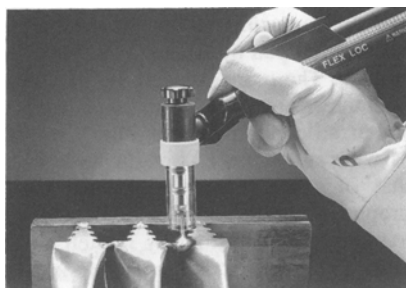
**ZYP Coatings, Inc.** has introduced several *high temperature paints and binders*. Zirconium oxide paints—available in eight different formulations—are ideal for use with reactive metal melting, as well as for protecting ceramics from high temperature reactions with metals, slags, and glasses. Seven binder/suspension liquids usable to 2000 °C have also been introduced that will permit researchers to produce custom paintable coatings simply by adding the powder of the material of interest. For further information, contact ZYP Coatings, Inc., PO Box 4005, Oak Ridge, TN 37831-4005; tel: 615/482-5717; fax: 615/482-1281.

*Nickel clad copper wire that features a metallurgical bond with complete hermetic sealing between the metals* rather than plating has been introduced by **Anomet Products, Inc.** Available with annealed through full hard tempers, this clad wire provides 45% IACS conductivity and is suitable for applications requiring high conductivity combined with temperature and corrosion resistance. Anomet Nickel Clad Copper Wire can be supplied as wire and rod from 0.010 to 1 in. diameter. The standard nickel ratio is 27%, with 10 to 40% Ni optional. For further information, contact Robert F. Gallant, Anomet Products, Inc., 830 Boston Turnpike, Shrewsbury, MA 01545; tel: 508/842-0174; fax: 508/842-0847.



Anomet Products, Inc.

stantially outlasts previous designs. For further information, contact Mike Richardson, CK Worldwide Inc., 3501C

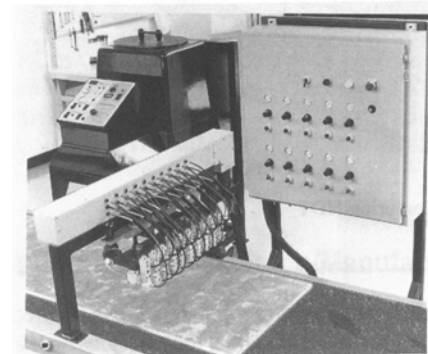


CK Worldwide Inc.

Street NE, Auburn, WA 98002; tel: 206/854-5820; fax: 206/939-1746.

*High-volume hot melt adhesive dispensing systems consisting of broad-array, multihead, subassemblies and sophisticated controls for individual heads* have been introduced by **Hot Melt Technologies, Inc.** The AV-600 series system can lay down broad swathes of hot melt in bead or spray patterns and are ideal for application to long parts passing beneath the applicator valves on a conveyor. The practical limit on width of application is

several feet and any type of hot melt can be applied at temperatures ranging from 200 to 450 °F. For further information, contact Hot Melt Technologies, Inc., 1759 Hamlin Road, Rochester, MI 48309.



Hot Melt Technologies, Inc.

**Davy International** has introduced a new concept in advanced Mini-Mill Cold Finishing Technology, CONCEPT 21, which comprises an entire family of process units that can be purchased separately or assembled into a totally integrated system exactly matched to each customer's specific requirements. Included in the product line is a surface treatment facility, a cold rolling facility with high quality flatness and profile control, a heat treating facility, a dedicated temper rolling facility, a continuous galvanizing line, a color coating line, and a tin plating line. A multilevel computer control system integrates these components together. For further information, contact Shelli Cosmides at 412/566-3330.

**TAFA Inc.** has added data logging capability to its family of Plasma, PlazJet, High Pressure/HVOF and Water Jet Coating Removal systems. This capability allows the operator to generate a printed report listing each of the operating parameters along with its setpoint, high, low, and average readings. It also records any alarms which may have occurred during the run. For further information, contact TAFA Incorporated, 146 Pembroke Road,

## Measurement/Testing/Evaluation

**StressTel Corporation** has introduced the T-Mike ES, a thickness measurement device that is 60% smaller than the previous model. Features include high speed scan-

Concord, NH 03301; tel: 603/224-9585; fax: 603/225-4342.

**S&K Products International** has introduced a cleaning and drying system specifically for products that cannot readily be dried by standard vapor phase drying or blow drying technology. Cleaning is accomplished using solvents followed by vacuum drying. The vacuum thermal system guarantees low moisture levels. The system also comes with manual or automated process control and produces no exhaust emissions of VOCs. For further information, contact Nancy Richman, S&K Products International 80 Red Schoolhouse Road, #102, Chestnut Ridge, NY 10977; tel: 914/425-6200; fax: 914/425-7602.



S&K Products International

A robotic welding system originally developed for the space program by **Robotics and Automation Corp.** has been redesigned to 1000 amp capacity for plasma welding torches. The new design incorporates a sliding mechanism on the arm that attaches to a locking mechanism on the device to be attached, which speeds changeover time for the various attachments to the arm. The welding current, water coolant, and welding gases can also be changed in minutes, permitting grinding of the weld to smooth the seam without

ning, alarm lights, and a difference function that displays the positive or negative difference between the thickness measurement and preset value. The Automatic Probe

requiring removal of the welded part and transport to another machine. For further information, contact Robert J. Lessels at 205/544-6539.

The Discovery TORQ-CUT 22 vertical machining center from **Bridgeport Machines, Inc.** offers a wider cutting range than any machine in its size or price class. It is capable of easily handling big, heavy cuts such as a 1-in. NPT pipe tap in mild steel. Large 40-taper tooling is accommodated on a bidirectional 22-station tool changer. The machine provides up to 125 foot-pounds of available torque, 25-7500 rpm of spindle speed, and a positioning accuracy of  $\pm 0.00025$  with  $\pm 0.00015$  repeatability. For further information, contact Bridgeport Machines, Inc., 500 Lindley Street, Bridgeport, CT 06606; tel: 800/243-2404.

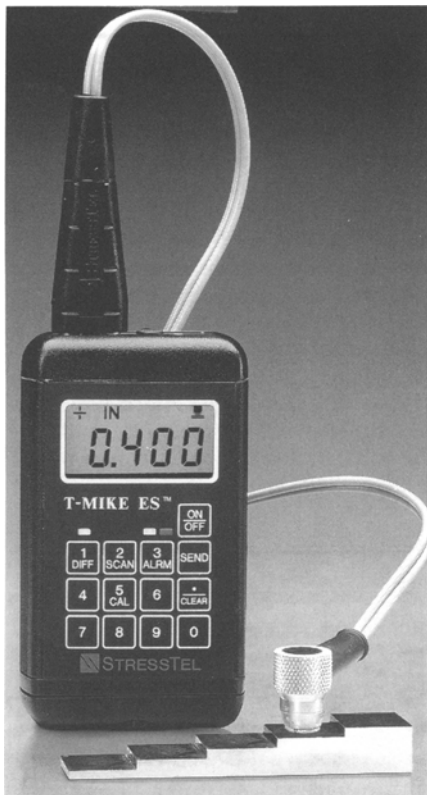


Bridgeport Machines, Inc.

**Krupp Engineering** has successfully produced the first fully dense, metal injection molded high-speed steel part using its patented KRUPP F2 powdered metal densification process. This process can produce odd and complex shapes not possible with other methods and when combined with injection molding, can significantly improve design flexibility in part geometry, tolerances, and strength. Little or no machining operations are required, since tolerances of  $\pm 0.001$  in. on 0.375 in. can be maintained. For further information, contact Krupp Engineering, tel: 313/426-2604; fax: 313/426-2450.

Zero makes compensation for probe delay constants, probe temperature, and probe wear fast and accurate. For further information, contact StressTel Corporation,

225 Technology Circle, Scotts Valley CA 95066; tel: 408/438-6300; fax: 408/438-7917.



StressTel Corporation

Micro Photonics Surface Test Division has published a short application note relating to the use of diamond indentation systems. *The application of the NanoTest instrument is discussed for hardness measurement, adhesion measurement, and surface roughness*, and it is shown how the instrument can be used in different modes (low load scratching and indenting) to obtain information about film adhesion. For further information, contact George Ferrio, Micro Photonics Inc., Surface Test, PO Box 3129, 4949 Liberty Lane, Allentown PA 18106-0129; tel: 610/366-7103; fax: 610/366-7105.

The LG2 Laser Thread Analysis System for gauging threads is available from Criterion Resources, Inc. The LG2 is a *non-contact computer controlled in-process OD thread gauging system capable of handling up to 20 in. OD OCTG thread forms*. Additional capacity of 0.120 to 42 in. OD is possible with system modifications. Accuracy is within  $\pm 0.001$  inch. For further information, contact Patrick J. Petrigan, Criterion Resources, Inc. 4801

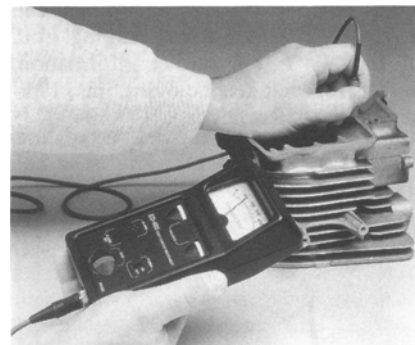
Woodway Drive, Suite 300E, Houston, TX 77056; tel: 713/964-2625; fax: 713/964-2708.

The Sintech Division of MTS Systems Corporation has introduced a *line of Material Testing Workstations, the Sintech G Series with advanced digital controller*. This line of ADC Electromechanical test machines are computer controlled, using TestWorks software. Capacities range from 1125 lbf to 67,240 lbf and are capable of speeds ranging from 0.00004 to 40 in./min (0.001 to 1000 mm/min). Other significant features are improved load and strain rate accuracy (the greater of  $\pm 0.5\%$  of reading or 0.01% of full scale). For further information, contact MTS Systems Corporation, Sintech Division, PO Box 14226, Research Triangle Park, NC 27709-4226; tel: 919/677-1610; fax: 919/677-2480.



MTS Systems Corporation

The ED-400 Portable Eddy Current Testing Unit from Centurion NDT, Inc. is small enough to be carried in one hand and is *capable of detecting surface cracks or similar flaws as small as 0.005 in. deep in ferromagnetic materials*. Weighing less than a pound, the instrument consists of a meter that indicates probe unbalance and an audible alarm to alert the operator. The unique "cross-coil" probe design renders the instrument virtually insensitive to background changes in magnetic permeability and requires no compensation for "lift-off" effect. For further information, contact Kathy Walsh, Centurion NDT, 707 Remington Road, Suite 9, Schaumburg, IL 60173; tel: 708/884-4949; fax: 708/884-8772.



Centurion NDT

*Alignment verification of material testing machines is now a matter of minutes with the ALV-2000 system introduced by Amsler Instruments*. The 12-channel system is specifically designed for alignment analysis and incorporates all necessary analog and digital functions in one unit. The ALV-2000 requires virtually no training and can either be operated in the stand-alone mode or in conjunction with a personal computer. For further information, contact Amsler Testing Inc., 1260 Independence Road, Walton, KY 41094; tel: 606/356-9200; fax: 606/356-8899.

Fischer Technology offers the Fischer-scope X-Ray System XDV, for *automated coating thickness measurement and analysis for difficult applications including dual and triple coatings, alloy coatings, and P% in electroless nickel coatings*. PC-based software eliminates the need for calibration standards. True focus positioning with dual magnification optics allows the user to perform accurate thickness measurement on test specimens of virtually any shape or size. Since measurements are independent of distance, a specimen can be measured where the measurement plane deviates from the set ref-

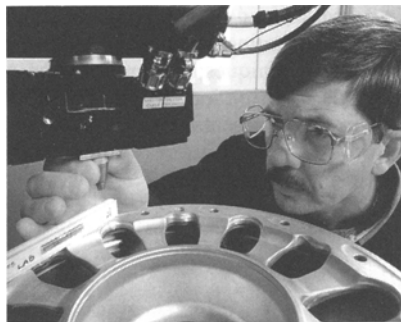


Fischer Technology, Inc.

erence plane by up to 90 mm. For further information, contact Fischer Technology, Inc., 750 Marshall Phelps Rd., Windsor, CT 06095; tel: 800/243-8417; fax: 203/688-8496.

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*For fast and accurate stress measurements of ceramics and metals, TEC Stress Analysis offers its X-Ray Diffraction Lab. The lab can nondestructively*



TEC Stress Analysis

## International Research/Manufacturing Centers

**SI Diamond Technology, Inc.**, through its Plasmatron Coating Systems Inc. subsidiary, has been awarded a two-year \$600,000 contract by the U.S. Army *to implement an in-line process of applying scratch resistant diamond-like coatings to optical fibers.* These coatings enhance the performance of fiber by providing a highly durable, abrasion resistant, hermetic seal without potentially requiring the use of plastic or polymer coatings. The process allows the fibers to be coated as they are produced, with minimum incremental cost to the overall production process. For further information, contact Marijane Ensminger, SI Diamond Technol-

ogy, Inc. 2435 North Boulevard, Houston, TX 77098; tel: 713/529-9040; fax: 713/529-1147.

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**Sandia National Laboratories and the University of New Mexico** have developed *a method to produce aerogels at room temperature and pressure*, thereby eliminating many of the hazards and the expense associated with conventional processing methods. By chemically modifying the interior surfaces of the mesh, a spongy framework is created that col-

lapses during normal evaporation at room temperature and pressure, then springs back to its original form. The result is a dry porous aerogel solid that can be as much as 98.5% air. The technique can produce both bulk and thin film materials, as well as porosities ranging from 10 to 98.5% by varying process parameters. For further information, contact Jeff Brinker, Sandia National Laboratories, Albuquerque, NM 87185-0167; tel: 505/272-7627.

## Literature/Data Sources

A brochure is available from **Rolled Alloys** that features *aircraft and aerospace superalloy welding wire and electrodes, heat resistant and corrosion resistant welding products.* Included are specifications, chemical compositions, and applications. For a copy, contact Rick McIntyre at 800/521-0331.

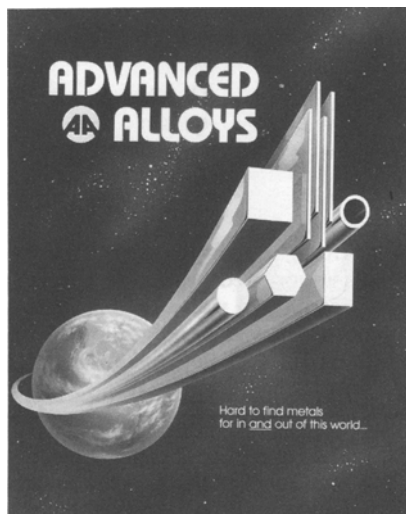
*metals in semifinished and fabricated forms.* The brochure is supplemented with a Products Availability insert listing specific metals available from inventory. For a copy, contact Donald Glassman, Advanced Alloys, Inc., 1014 Grand Blvd., Deer Park, NY 11729; tel: 516/595-7000.

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Introductory product literature is now available on **Nylatron GSM Blue cast nylon** from **Polymer Corporation**. Typical applications are profiled. Relative part life, limiting PV and compressive strength comparison charts are also included. Also available is a product bulletin which features actual tool life test results from a Midwest lighting manufacturer using Duraspin roller tools. For a copy of either, contact Kathy Bell, Polymer Corporation, PO Box 14235, Reading, PA 19612-4235; tel: 800/729-0101.

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**Advanced Alloys, Inc.** has produced a *six-page brochure that provides metal sources, approvals, guarantees, and certification of all standard and specialty*



Advanced Alloys, Inc.

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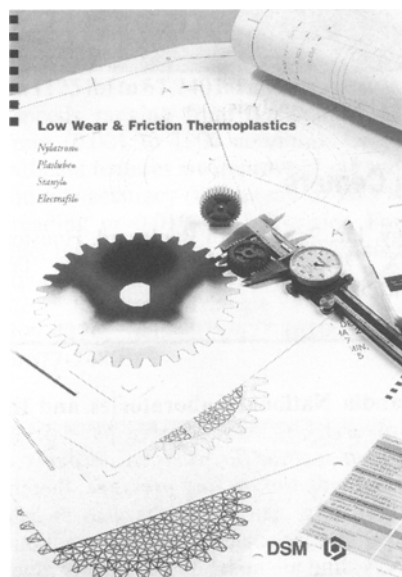
The **Materials Research Society** has published several proceedings on materials. *Thin Films: Stresses and Mechanical Properties V* covers the latest developments in research related to mechanical properties and performance in thin film materials, including microstructure and surface morphology, measurement techniques, and more. *Structure and Properties of Interfaces in Ceramics* features recent theoretical and experimental work from various disciplines that impact our understanding of interface chemistry, structure, and properties. *Hollow and Solid Spheres and Microspheres: Science and Technology Associated with Their Fabrication and Application* covers methods for the synthesis and fabrication, property measurements and characterization techniques, and the design and performance issues related to current and newly developing applications. For further information contact the Materials Research Society, 9800 McKnight Road, Pittsburgh, PA 15237-6006; tel: 412/367-3012; fax: 412/367-4373.

**Polymer Films in Sensor Applications: Technology, Materials, Devices and Their Characteristics**, published by Technomic Publishing Co., Inc. covers both scientific fundamentals and practical engineering aspects. The 400-page book also covers all types of sensors and applications. **The Proceedings of the International Conference on Composite Materials and Energy** covers new developments and applications in polymeric, ceramic, metal, and concrete composites. **Melt Crystallization Technology** presents a comprehensive guide to melt crystallization technology including principles, processes, equipment, and applications. To purchase a copy, contact Technomic Publishing Co., Inc., 851 New Holland Ave., Box 3535, Lancaster, PA 17604; tel: 717/291-5609 or 800/233-9936; fax: 717/295-4538.

Available free of charge, **Stainless Steel for Machining** from the Specialty Steel Industry of North America is a nine-page easy-to-understand booklet that uses text and charts to explain how the machinability of stainless steels is different than carbon or alloy steels and other metals. It describes the best ways to achieve maximum machinability from frequently used stainless steels and their free-machining counterparts. Also recently published is **Standard Practices for Stainless Steels Roofing, Flashing, Copings**. For a copy of either contact Brian Leslie, Specialty Steel Industry of North America, 3050 K Street, NW, Washington DC 20007; tel: 202/342-8630; fax: 202/338-5534.

DSM Engineering Plastics has published a 20-page brochure, **Low Wear and Friction Thermoplastics**. The brochure offers tech-

nical background on the phenomenon of friction, including definitions and measurement techniques; in-depth advice on materials selection for particular wear and friction environments; and property data for 56 specific grades. For a copy, call 800/35-DSMEP.



DSM Engineering Plastics

A six-page color brochure from **Hoechst Celanese Corporation** lists the **short-term properties of Fortron polyphenylene sulfide based on results of both ISO and ASTM test methods**. Fortron PPS Short Term Properties guide presents applications and typical physical, mechanical, thermal, and electrical properties data for 24 separate grades. For a copy, contact Hoechst Celanese Information Center, 114

for service to its Texas Eastman Division. Two plants received the first level Supplier Excellence award while another plant in Longview received the second level Silver Award for 100% on time and on specification for continuous supply.

**General Broach Company** has received the Q1 preferred quality award from Ford Motor Company. This award is granted to suppliers who meet rigorous quality standards established by Ford. Also receiving

Mayfield Ave., Edison, NJ 08818-3053; tel: 800/235-2637.

**Two technical reports analyzing the recyclability and life-cycle energy consumption of copper versus aluminum and other metals in car radiators** are now available from the **International Copper Association**. For a free copy of either contact Johan Scheel, International Copper Association at 260 Madison Avenue, NY, NY 10016.

**AlloyTech, Inc.** has announced a service called **AlloyQuote**, which is designed to help metals buyers locate hard-to-find metals. AlloyTech can take a single quotation and "broadcast fax" it to as many as 1750 U.S. and Canadian metals suppliers overnight. For further information, call 800/370-6915.

**InterPort Corporation** offers **Trakker**, a fully integrated manufacturing planning and control system, from order processing through invoicing. Trakker's functions include product costing, sales and production order processing, purchasing, production and inventory control, material requirements planning, and much more. Trakker now includes configure-to-order features allowing specification of options such as colors, finishes, hardware, etc. A direct link with cutting optimizers allows batching of production orders. Full featured accounting is also available to complete the system. Trakker is implemented in Microsoft Access, and is fully Microsoft Office compatible. For more information contact Inter Port, P.O. Box 381887, Germantown, TN 38183-1887.

the award is **Pratt & Lambert Industrial Coatings**.

**STOPOL, Inc.** has formed **STOPOL Business Services, Inc.** to buy and sell businesses, product lines, and licenses in the plastics market. Businesses served range in size from \$1 million to \$400 million in sales.

## In Business

**Davy International**, a Division of Trafalgar House plc, has acquired **Sheafer Townsend Ltd.**, a leading Canadian industrial contractor. The company has also formed a joint venture company called Davy Distington Limited with Korea's POSEC.

**Air Liquide America** has been honored with three awards from Eastman Chemical Company's Supplier Excellence Program



**AGA Gas, Inc.** has acquired the Midwest cylinder gas and welding products business of **Air Liquide America Corp.** AGA will take control of the cylinder gas and welding products assets and business of four facilities located in South Chicago and Wheeling, Illinois, Romulus, Michigan, and Euclid, Ohio.

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**Munters Corporation's Cargocaire Division** has opened the world's largest desiccant wheel manufacturing facility in Amesbury, MA. The 30,000 square foot plant is an ISO 9001 certified facility built to meet demand for a variety of wheel products.

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The Budd Company's subsidiary **Wau-paca Foundry, Inc.** is planning to build a new \$55 million casting facility near Tell City, Indiana. It is expected to be fully operational in the first part of 1997.

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**Carolina Rebuild & Machinery Sales, Inc.** has been appointed a **Bridgeport Machines, Inc.** full-line distributor. The company is now responsible for sales, service, parts inventory, and application support of Bridgeport products in North and South Carolina.

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**Howmet Corporation** has acquired **Turbine Components Corporation** of Branford, CT. The company will operate as a

wholly owned subsidiary of Howmet Refurbishment, Inc., a Howmet subsidiary.

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The Allentown, PA, manufacturing plant operated by **Houghton International Inc.** has achieved ISO 9002 certification. Houghton International manufactures specialty chemicals, oils, and lubricants for the metalworking, steel, automotive, and paper-making industries.

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**Cegelec Automation Inc.** has acquired the **Drive Control Systems Division of AEG Automation Systems Corporation.** The combined operation, based in Pittsburgh, integrates sales and marketing, engineering, commissioning, and field service into a singular business unit.

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**Selective Electronic, Inc.** has sold its 100th LaserPour System to Ford Motor Company's Cleveland Casting division in Cleveland, Ohio and its 101st LaserPour System to Valemar Birn in Denmark.

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**Quebec Metal Powders Limited** has increased its blending capacity with the addition of a 45,000 lb high-tech blender. The powder production capacity will increase by 30% with the addition of an annealing furnace which will be commissioned in April 1996.

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**Reynolds Machine & Tool** has purchased the **Snow Manufacturing Company**, a builder of drilling, tapping, and threading machines for secondary operations in the screw machine, die casting, stamping, and fastener industries.

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**Singleton Corporation**, a leading manufacturer of corrosion test chambers, has appointed **Comtel Instruments** as its exclusive sales representative for corrosion test chambers in Michigan.

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**Castrol Industrial North America, Inc.**, a manufacturer and marketer of metalworking fluids, has received the Saturn Quality Recognition Award and the Saturn Outstanding Achievement award for 1994. Each award recognizes the supplier's commitment to excellence.

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ISO 9001 certifications have been granted to the following companies: **Allsteel, Inc.; Batts, Inc.; Monarch Hydraulics, Inc.; Premier Ink Systems, Inc.; and Sun Metal Products, Inc.**

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**Superconductivity, Inc.** has announced the delivery of two Micro-SMES systems to Brookhaven National Laboratory and McClellan Air Force Base. These micro-superconducting magnetic energy storage systems use superconducting technology to solve electrical power quality problems.

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## Kudos

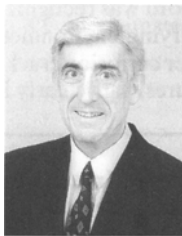
**Acme Metals Inc.** has appointed the following to its management team for its new MiniGrated steel mill: **Jerry R. Marsan**, manager, casting; **James D. Kennelly**, manager, automation; **David J. Rintoul**, manager, hot rolling mill operations and technology; and **W. Andrews Munson, Jr.**, manager, maintenance.

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**Metallurgical Associates, Inc.**, a new materials consulting and testing company, has appointed **Thomas C. Tefelske** as *President*, **Robert J. Hutchinson** as *Secretary*, and **Kerry J. Tetzlaff** as *Office Manager*.

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**Dr. George R. St. Pierre** has been appointed Chief Scientist for the **Materials Directorate, Wright Laboratory, Wright-Patterson Air Force Base.** He was previously Chairman of the Department of Materials Science and Engineering at Ohio State University.



Dr. G.R. St. Pierre

**E. William Ross Jr.**, Sales Development Manager for **Pelmor Laboratories, Inc.**, has been elected to the company's board of directors. He is responsible for the

global marketing and sales of Pelmor's line of high performance fluoroelastomer adhesives, sealants, coatings, and caulks.

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**Bill J. Bowling** has been named president of **Latrobe Steel Company**, a subsidiary of the Timken Company. He was previously executive vice president at the company.



Bill J. Bowling

The **Materials Research Society** has presented its 1995 Outstanding Young Investigator Award to **A. Paul Alivisatos** of the University of California-Berkeley for leadership in materials research, notably in the field of nanocrystals.

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**D. Richard Kauffman** has been appointed Manager, Sales & Marketing for **Duraloy Technologies, Inc.** He will be responsible for all marketing and sales efforts to Duraloy's existing markets, as well as new market development.

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**Wayne H. Gross** has been named managing director of the **International Gas Turbine Institute of the American Society of Mechanical Engineers.** He will oversee and develop a wide range of technical and continuing education programs, expositions, and conferences in support of gas turbine technology.

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**Lindberg Corporation** has announced the appointment of **Thomas F. Kratzer** as Division Manager of the Harris Metals operation. Lindberg Corporation provides heat treating services to a wide range of metalworking industries. **Jerry Sullivan** has been elected Vice President and Manager of Human Resources.

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**M.A. Hanna Company**, an international specialty chemicals company, has named **James K. Yuann** general manager, Asian operations.

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**Victor Chaker**, a principal engineer with the Port Authority of New York and New Jersey, has been named a 1995 recipient of **ASTM's Award of Merit** for his outstanding contributions to Committee G-1 on Corrosion of Metals in the fields of corrosion in soils and corrosion of reinforcing steel in concrete.

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**Norman Ramsey**, Higgins Professor of Physics, Emeritus at Harvard University, has received the **Nannevar Bush Award** of the National Science Board. The board is the policy-making body of the National Science Foundation. Ramsey helped to establish Brookhaven National Laboratory. **Matthey A. Fisher**, of the Institute for Theoretical Physics, University of California-Santa Barbara, has received the **Alan T. Waterman Award** from the National Science Foundation. He was recog-

nized for his pioneering contributions to the theory of disordered superconductors.

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**Kenneth M. Fox** has been promoted to director of finance and administration at the **Institute of Scrap Recycling Industries, Inc.** **Thomas K. Kollins** has been named director of marketing and **Clare Hessler** has been promoted to director of federal and state policy. **Marylou Primus** has been appointed government relations administrative associate and **Evelyn L. Haught** has been named director of communications, with **David K. Krohne** appointed as assistant director of communications.

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**International Specialty Products** has named **Van Rhonheimer** Vice President and Business Director, Industrial Markets. His responsibilities will include the company's coatings, solvents, dispersants, HI&I products, and other industrial products/applications.

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**Dr. Toru Arai**, developer of the Thermal Diffusion Process, recently joined the **Arvin TD Center**, Columbus, Indiana, as technical advisor. Dr. Arai will assist in exploring new applications for the TD Process and in developing new processing methods.



Dr. Toru Arai

**Dr. F. Peter Ford**, a materials scientist at the GE Research and Development Center, has received the W.R. Whitney Award of **NACE International.** Dr. Ford was recognized for his work in quantifying environmental factors responsible for corrosion cracking in engineered structures, particularly in electric power plants.

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**AOAC International**, the scientific association dedicated to analytical excellence, has named **Wallace H. Andrews** as the 1995 International Harvey W. Wiley Award winner in recognition of his outstanding contribution to analytical methodology.

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**DuPont Automotive** has named **John R. Lewis** as worldwide director, Automotive Finishes; **Henry B. Voigt** as director of



John R. Lewis



Henry B. Voigt

sales, marketing and development, **DuPont Automotive Engineering Materials** and **Engineering Polymers**; and **Ed Donnelly** as regional director, **Engineering Polymers/Engineering Materials** for **DuPont de Nemours International S.A.**, Geneva.

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**Hydro Magnesium** has named **Scott M. Fairchild** as its new Applications Development Manager at their Magnesium Market Development Center. In this position, Fairchild will be involved in identifying and pursuing new applications of magnesium alloys in the automotive industry.

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**Paul F. Fischer**, controller at **American Steel Foundries**, has been given additional responsibilities for MIS and environmental affairs at the company. **John Worries, Jr.** has been named Assistant Plant Manager at the Granite City, IL, plant. **Ronald E. Barker** has been named president and was previously executive vice president.

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**MQS Inspection Inc.** has named **John Stringer** as manager of its Hartford facility. He will be responsible for NDE services for the entire New England territory.



John Stringer

**The Budd Company's Stamping & Frame Division** has named **William J. Harper** to Vice President, Operations Staff; **Earl E. Kanstler** to Vice President, Engineering and Marketing, and **Virgil J. McGough** to Vice President, Manufacturing Engineering.

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**Lepel Corporation**, a manufacturer of induction heating products, has promoted



**Cliff Darnell** to Regional Sales manager of the Southeast territory. He will oversee six states in this area.



Cliff Darnell

**West Homestead Engineering and Machine Company** has appointed **F. Ronald Vidil** as Executive Vice President and General Manager of the newly formed Engineering Division. He will be responsible for organizing an engineering staff experienced in all aspects of rolling mill design to pursue the market for mill equipment supply on a global basis.

**Wally Harris** has been appointed Senior Applications Engineer for the **Pillar Michigan Induction Center**. His responsibilities will include estimating, conceiving, project management, and sales support for heat treat equipment.



Wally Harris

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## Miscellaneous

The automotive exterior plastics market consumed an estimated 910 million lb in 1994 and expected to grow at an annual rate of 3.2% to almost 1.1 billion lb by 1999, according to Business Communications Company. Thermosets are the largest in the resin/elastomer group, comprising about 35% of the total volume. In 1994, thermosets consumed 322.3 million lb and are expected to reach 358.3 million lb by 1999, an average annual growth of 2.1%. TPEs will experience the largest growth rate at 7.8% and reach 171 million lb by 1999. For plastics used under the hood, BCC has estimated 2.8 billion lb of resins/elastomers was used in 1994. By 1999, approximately 3.2 billion lb of resins/elastomers will be used, reflecting 2.7% average annual growth. To order a copy of either market report, contact Business Communications Co., Inc. 25 Van Zant Street, Norwalk, CT 06855.

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Total imports of specialty steel increased 12% to 177,800 tons in the 1995 first quarter, while a 23% market penetration of the United States remained virtually unchanged from the 1994 three-month period. Total apparent domestic consumption was at a record level of 776,000 tons versus

685,000 tons in the first quarter last year, according to the Specialty Steel Industry of North America. For the largest product line, stainless steel sheet and strip, imports in the first quarter were 88,000 tons, up 9%, while market penetration declined to 20% from 21% in last year's comparable period. Domestic consumption was up 16%.

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The annual cost of metallic corrosion in the U.S. economy is approximately \$300 billion, according to Battelle and the Specialty Steel Industry of North America. About one-third of the cost of corrosion (\$100 billion) is avoidable and could be saved by broader application of corrosion-resistant materials and application of best anticorrosive practice from design through maintenance. In 1975, metallic corrosion cost the United States \$82 billion, 4.9% of the Gross National Product. For a copy of this report, contact Battelle, 505 King Avenue, Columbus, OH 43201-2693.

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The rapid prototyping industry, including products and services revenue, grew by 99.7% in 1994, making RP an estimated

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\$198 million industry, according to Wohlers Associates. The 1995 market is expected to exceed \$318 million and the 1996 market is expected to reach \$475 million. For further information, contact the Society of Manufacturing Engineers at 313/271-1500.

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North American metal powder shipments increased by 18% in 1994 to 426,050 tons, compared with 359,750 tons in 1993, according to the Metal Powder Industries Federation. The powder metallurgy industry's growth is being fueled by the automotive market, where more P/M parts are being designed into engines, transmissions, anti-lock brakes and airbag units. GM, Ford, and Chrysler are increasing their purchases of P/M parts in North America and around the world, including bearing caps and powder forged connecting rods. Ford Motor Company has estimated that the usage of P/M parts in their cars grew from 21 pounds in 1989 to 38 pounds in 1994, with a goal of 50 pounds per car by the year 2000 with drivetrain applications leading the increase. For further information, contact Peter K. Johnson at 609/452-7700.

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