

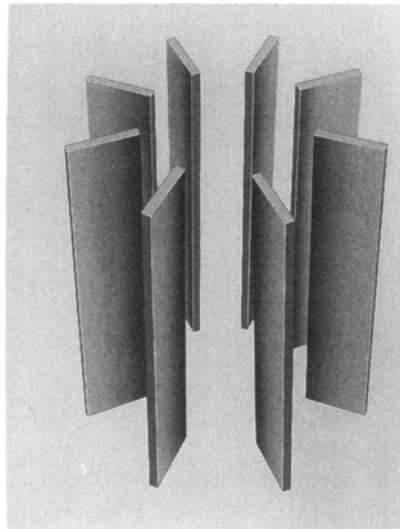
MATERIALS/PRODUCTS

Research Corporation Technologies has patented a *salt-water resistant cement* produced by marine bacteria that can be used in coatings, sealants, and adhesives for marine and medical uses. The marine polysaccharide adhesive viscous exopolymer (PAVE) bonds to plastic and metals and is stable in sea water over a wide range of acidity and temperature. The technology has been licensed to Oceanix Biosciences Corporation to develop a marine adhesive. For further information, contact: Research Corporation Technologies, 101 North Wilmot Road, Suite 600, Tucson, AZ 85711-3335; tel: 602/748-44400; fax: 602/748-0025.

Hoechst Celanese Corporation has developed two grades of glass-reinforced acetal copolymer resins, Celcon GC25T and GC25TF, that have *greater tensile strength and impact resistance* compared to competing 25% glass-reinforced acetals. Originally developed for use in heavy-duty truck and bus applications, the resins are being tested in food-contact and potable-water applications. Impact resistance is improved by as much as 38% against conventional glass-reinforced resin. For further information, contact Hoechst Celanese Corporation, 26 Main Street, Chatham, NJ 07928; tel: 201/635-2600; fax: 201/635-4165.

ZYP Coatings, Inc. has introduced two *paintable alumina coatings* designed for specialty R&D uses. Type A-1 is an alumina-bonded paint yielding 100% Al₂O₃ upon drying that is water based. Type A-2 is a silica-free water-based formula that yields a very hard, abrasion-resistant coating with minimal reduction in alumina purity. For further information, contact ZYP Coatings, Inc., PO Box 208, Oak Ridge, TN 37831; tel: 615/482-5717.

Magnadize surface enhancement technologies from General Magnaplate Corp. have been developed for magnesium and its alloys. These coatings *provide various degrees of wear resistance (Rc 35-60), corrosion resistance and lu-*

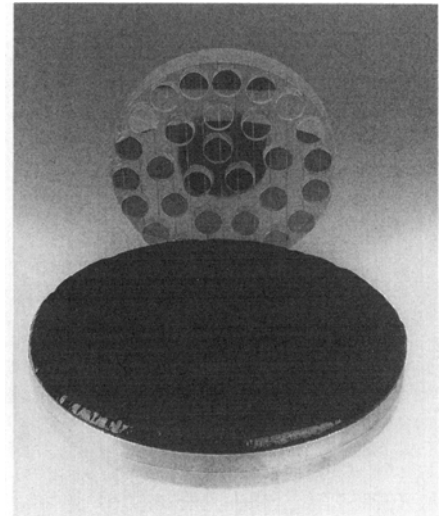


General Magnaplate

bricity, and exceptional resistance to water, steam, oils, acids, and alcohols. The coatings offer a coefficient of friction as low as 0.04 in a temperature range from -100 to +550 °F. For further information, contact General Magnaplate, 1331 Route 1, Linden, NJ 07036; tel: 908/862-6200; fax: 908/862-6110.

Ardrox Inc. has introduced a line of *fluorescent magnetic particles*, the ULTRA-GLO series, for nondestructive testing. The series was developed for use in the MPI process in the aerospace and general metal working industries. These products demonstrate superior brightness, particle durability, and low background resulting in improved indication resolution over prior materials. For further information, contact Michael White or Thomas Myroup; tel: 708/295-1660; fax: 708/295-8748.

A *full line of optical lapping pitch for blocking, lapping, and polishing* that comes in five hardness grades is available from Meller Optics. The pitch requires no screening or mixing, features melting points ranging from 52 to 87 °C, and sim-

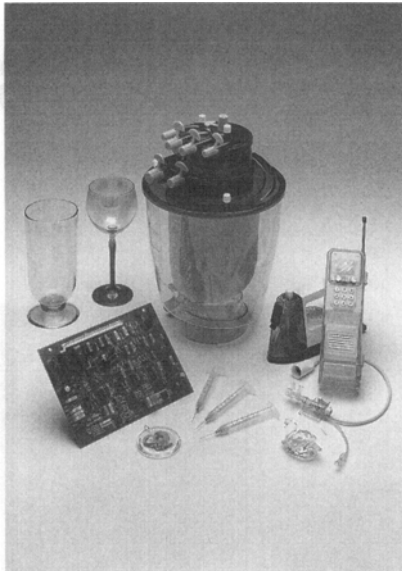


Meller Optics, Inc.

ply needs to be sliced, melted, and poured. It is also free of petroleum byproducts. For further information, contact David Lydon, Meller Optics, Inc., 120 Corliss St., PO Box 6001, Providence, RI 02940; tel: 800/821-0180 or 401/331-3717; tax: 401/331-0519.

A full range of *rigid and flexible mica products providing superior thermal, electrical, chemical, and mechanical properties* are available from Cogebi Inc. The products are made by impregnation of mica flake with resins dependent on the intended application and are produced in sheets, punched parts, flexible laminates and tapes. Mica in most chemical agents, has good compression resistance, and a large modulus of elasticity. For further information, contact Cogebi Inc., 14 Faraday Drive, Dover, NH 03820; tel: 603/749-6896; fax: 603/749-6958.

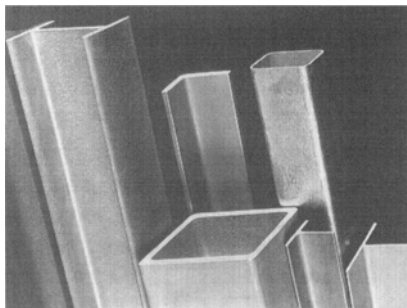
The Dymax Corporation has announced a line of *faster curing adhesives* for light initiated, solvent-free bonding, tacking, sealing and encapsulation on an expanded array of substrates. Designated Ultra Light-Weld, the adhesives combine the advantages of both visible and UV curing



Dymax Corporation

mechanisms, curing upon exposure to wavelengths from 300-500 nanometers. The adhesives form high strength, structural bonds to glass, metals, and plastics, and are 100% solvent and ODC free. For further information, contact Dymax Corporation, 51 Greenwood Rd., Torrington, CT 06790; tel: 203/482-1010; fax: 203/496-0609.

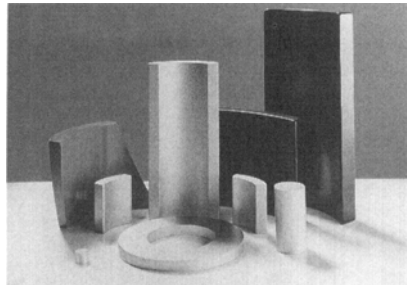
Lightweight beryllium structures that can be extruded in a wide variety of custom shapes for aerospace and other applications are available from **Nuclear Metals, Inc.** NMI beryllium structures feature a high strength-to-weight ratio with extreme stiffness and can be extruded in T-shapes, I-beams, angles, and as rectangular or cylindrical tube. The extrusions weigh about 2/3 as much as aluminum, have tensile strengths from 00 to 120 Kpsi, and a Young's modulus of 42 X 106. For further information, contact John D. Nicholson, Nuclear Metals, Inc.,



Nuclear Metals, Inc.

2229 Main St., Concord, MA 01742; tel: 508/369-5410; fax: 508/369-4045.

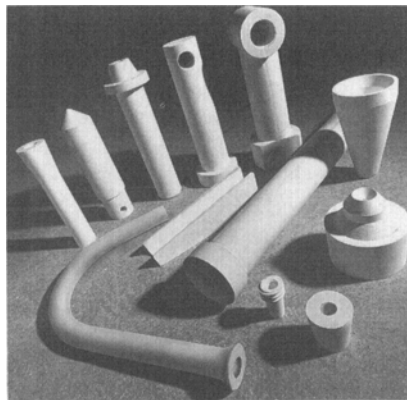
Vacodym 411 WZ, a new grade of rare-earth permanent magnet, has been introduced by **Vacuumschmelze**. Formulated on a neodymium-iron-boron base, the material is a cost-effective substitute for applications that until now required samarium cobalt magnets. The magnet features an operating temperature up to



Vacuumschmelze

410 °F with an extremely high coercivity of Hcj-41 kOe at room temperature and Hcj-17 kOe at 302 °F. It also features linear demagnetizing curves even under strong opposing fields and is produced by die-pressing for reduced costs in large production quantities. For further information, contact Vacuumschmelze, 186 Wood Avenue South, Iselin, NJ 08830; tel: 908/494-3530.

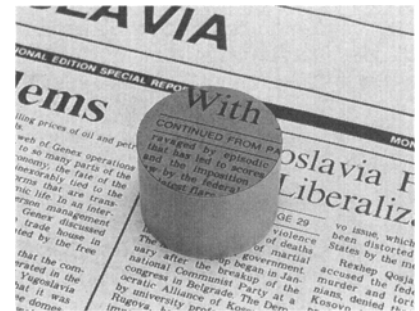
A line of **sialon-bonded alumina parts for aluminum processing** has been developed by **Blasch Precision Ceramics**. The parts are available in complex shapes with fine edges and typical tolerances of +0.005 in./linear in. They have uniform density and porosity, as well as excellent erosion resistance. Shapes that are avail-



Blasch Precision Ceramics

able include immersion heater tubes for molten aluminum, thermocouple protection tubes, riser tubes for die casting, tapping blocks for degassing systems, and linings for smelters. For further information, contact Bud Webster, Blasch Precision Ceramics, 580 Broadway, Albany, NY 1204; tel: 518/436-1263; fax: 518/436-0098.

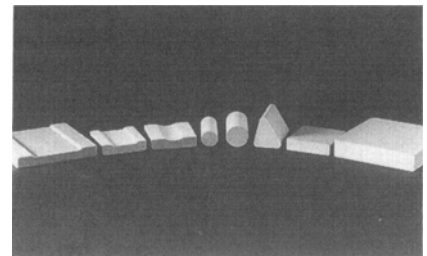
Hamamatsu Corporation has introduced a **fiber optic plate that can take the place of conventional plastic or glass optics** in a wide variety of applications. The plates consist of bundles of optical fibers, each several micrometers in diameter, that form a single, flat plane. Because they have no



Hamamatsu Corporation

focal point, the distance between the sources of the image and the image sensor is dramatically reduced. The plates have virtually no distortion or optical loss, making them outstanding in low-light situations. Typical applications include copiers and fax machines. For further information, contact Hamamatsu Corporation at 908/231-0960.

Refrac-T-Back is a ceramic backing material introduced by **Esab** which **replaces steel or copper backing bars**. It supports and shapes the molten puddle for a one sided, single pass rot weld. It does not distort with heat and resists moisture. A



Esab Group, Inc.

wide variety of shapes and sizes are offered to fit different joint configurations. The tape eliminates back gouging and rewelding, enhances the back-side weld appearance and can significantly lower fabrication costs. For more information, contact Esab Group, Inc., 801 Wilson Avenue, PO Box 517, Hanover, PA 17331; tel: 800/933-7070; fax: 717/637-9859.

PROCESSING/EQUIPMENT

A combination of artificial intelligence with laser guidance and advanced cutting tool technologies has **dramatically reduced costs in the overhaul and repair of gas turbine engines**. The Autonomous Selective Cutting system, developed jointly by **SeamX, Inc.** and **Kennametal Inc.** enables a cutting tool to eliminate worn parts of the honeycomb seals while leaving the parent ring virtually untouched. The system requires no special programming or machine modifications and has quick setup. Turnaround time for ring overhaul has been reduced from 70 to 15 days.

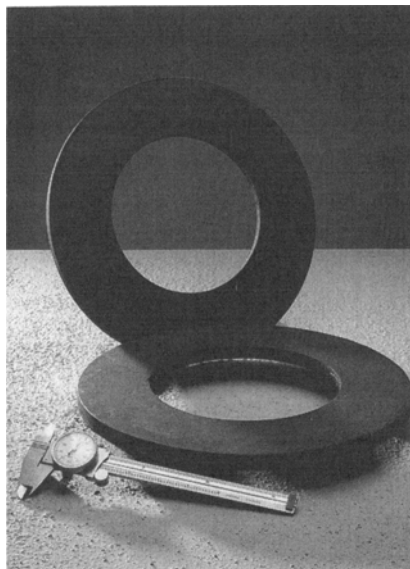
AAC Engineered Systems has introduced the Saturn 3000, the **world's largest and most automated centrifugal barrel finishing system**. The Saturn 3000 uses a unique double centrifugal barrel and turret design that significantly increases throughput, while eliminating down time for high-volume manufacturing operations. The system is 30 times faster than traditional vibratory finishing equipment and can process over 50,000 lbs of parts per day. For further information, contact Fred Thum, AAC Engineered Systems, 202 Cindel Drive, Unit 3, Cinnaminson, NJ 08077; tel: 609/829-4500.

The Swenson Shear from **ASC Machine Tools** is a **portable, electrically controlled, self-contained hydraulically powered shear for cutting flat or profiled metal sheets**. Since the shear is portable and self-contained, it can be taken to the field. Composed of a heavy cast iron ram riding upon large, chrome-plated guide posts, the shear is actuated by a heavy-duty, hydraulic cylinder mounted on an upper die shoe. The upper shear blades are mounted on a shear blade holder bolted to a ram. The lower shear blades are also mounted on a shear blade holder bolted to a stationary lower die shoe with back-ups. For further information, contact ASC Machine Tools, Inc., N. 900 Fancher Rd., PO Box 11619,

Micromold Products, Inc. has introduced Fluor-o-flo, a complete line of virgin TFE pipe and NPT threaded fittings. This piping system has **excellent corrosion resistance, high purity, and high temperature capability (from cryogenic temperatures to 500 °F)**. In comparison to other materials, Fluor-o-flo can be more cost effective

Spokane, WA 99212-1619; tel: 509/534-6600; fax: 509/536-7658.

Textron Specialty Materials has dramatically reduced the time needed to produce carbon-carbon brake discs used for aircraft and race cars. The **proprietary RD process** can densify a disc in a single 8-h cycle with



Textron Specialty Materials

a uniform density of 1.85 g/cc throughout the entire part. This is 100X faster than the conventional chemical vapor infiltration process. The process also requires lower capital requirements and less inventory work-in-process. For further information, contact Textron Specialty Materials, 2 Industrial Ave., Lowell, MA 01851; tel: 508/452-8961.

The EZ-Path ROMI Version 1.1 lathe from **Bridgeport Machines** is designed to let users **quickly switch from manual to automatic operation**. The operator can also override automated sequences when

in severe corrosive applications, is easier to cut and install, easier to reuse, and is available in smaller pipe sizes. For further information, contact Micromold Products, 200 Corporate Blvd., South, Yonkers, NY 10701; tel: 914/969-2850; fax: 914/969-2736.

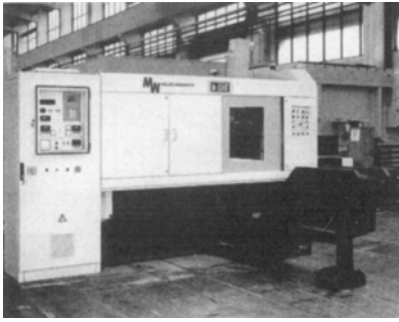


Bridgeport Machines

manual turning is more appropriate to the application. The machine is easy to program and built-in routines allow automatic turning, facing, threading, grooving, drilling, and boring without the need to program codes. Other features include variable power feeds and the "H-be" design for running larger sized parts. For further information, contact Bridgeport Machines, Inc., 500 Lindley St., Bridgeport, CT 06606; tel: 800/243-4292.

Drake Manufacturing has introduced a new series of CNC internal grinders, which **offer precision bore, face, contour, and taper grinding of materials from ferrous metals to ceramics**. Capable of grinding to tenths, with excellent feedback resolution, the grinders feature hydrostatic ground ways and quill, precision ball-screws and preloaded ballnuts, sealed glass feedback scales, and high frequency spindles with speeds to 120,000 rpm. The grinders also have automatic loading and unloading equipment, in-process and post-process gaging, and SPC measurement and data acquisition systems. For further information, contact Drake Manufacturing, 4371 N. Leavitt Rd., Warren, OH 44485; tel: 216/847-7291; fax: 216/847-6323.

A special heat treatment and vacuum casting technique, the Vacural process, has



Muller Weingarten Corporation

been patented by **Muller Weingarten Corp.** The new process allows *reduced porosity in light-weight castings without sacrificing other material properties*. The process also eliminates the need for more expensive manufacturing alternatives by

TESTING/MEASUREMENT/EVALUATION

CLI International, Inc. in conjunction with the **Materials Properties Council, Inc.** have formed an international group to *examine the newly developed 'Double Beam specimen of evaluation of steels for resistance to stress oriented hydrogen induced cracking (SOHIC)*. CLI International will provide round robin participants with machined DB specimens and the test procedure document. The participating companies will conduct laboratory tests and examine the specimens, returning the test data to CLI International for final analysis and report. An in-plant round robin program is also planned to test in actual process environment. For further information, contact Dr. Russell D. Kane or Ms. Delia Cuellar, CLI International, Inc., PO Box 691505, Houston, TX 77269-1505; tel: 714/444-2282; fax: 713/444-0246.

Advanced Super "L" hydraulic universal testing machines with a wide variety of new tooling accessories for *rapid-sequence production testing of fasteners*



allowing even thin-wall castings to remain highly ductile, weldable, and heat treatable. Muller Weingarten also offers injection units with an exclusive twin circuit multiplier system, which enables separate preset control for each of the three phases of the die casting cycle. For further information, contact Muller Weingarten Corporation, 3121 Disney Avenue, Cincinnati, OH 45209; tel: 513/841-6200; fax: 513/841-6250.

Elwell-Parker has delivered two 125-ton automatic guided vehicles to a large aluminum producer for *transport up to five, 25 ton aluminum ingots*. The vehicle employs a unique lift table which precisely places the ingots to and from transfer stands and staging areas. Other features include a floating suspension system, bi-

have been introduced by **Tinius Olsen Testing Machine Co.** The machine is ideal for tension tests of fasteners up to the 300,000 lb. range or more and the test can be completed without having to remove the heaviest tools. Tooling can also be easily changed as needed. For further information, contact Tinius Olsen Testing Machine Co., Box 429, Willow Grove, PA 19090-0429; tel: 215/675-7100; fax: 215/441-0899.

To achieve even greater precision, **ASTM B 311, Standard Test Method for Density Determination for Powder Metallurgy Materials Containing Less than Two Percent Porosity** has been revised. The standard also now covers high density P/M materials for metal injection molding and powder forging. An interlaboratory study is planned to help define the precision with which density specifications should be set. All laboratories interested in participating should contact Dr. W. Brian James, Hoeganaes Corporation, River Road/Taylor Lane, Riverton, NY 08077; tel: 609/829-2220.

Metorex Inc. has introduced a new *program designed to reduce the amount of time needed to calibrate the X-MET 880 alloy analyzer*. Called MSG (Metal Standard Generation), the program automates the calibration process and requires only 12 alloy standards and 14 pure element samples to be measured. Using the MSG Sys-

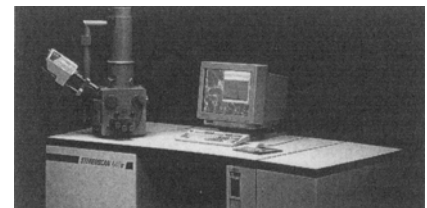


Elwell-Parker Electric Company

direction travel, and on-board diagnostic system. The Vehicle System Manager controls the travel and operation based on logic and application data developed during system simulations. For further information, contact Elwell-Parker Electric Company, 4205 St. Clair Avenue, Cleveland, OH 44103; tel: 216/881-6200 or 800/848-4373; fax: 216/881-7555.

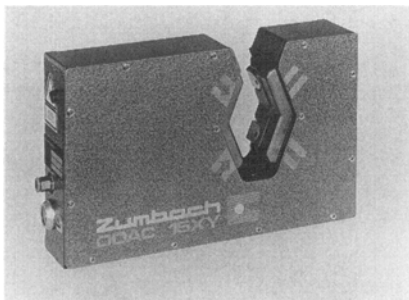
tem, a full standard alloy calibration can be accomplished in about 5 hours for low alloy steel, stainless steels, tool steels, Cu-based alloys, and Ni/Co-based alloys. For further information, contact Metorex Inc., 1900 NE Division St., Suite 204, Bend, OR 97701; tel: 800/229-9209.

Leica Inc. has introduced the Stereoscan S400 alpha series of scanning electron mi-



Leica Inc.

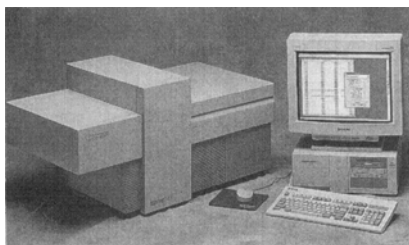
croscopes. The series is the result of a cooperative project with Fisons Kevex, resulting in *full integration of the Windows-based "sigma" X-ray analysis system with any one of the S400 series SEMs*. Leica has also introduced the Stereoscan 420c, a cryogenic specimen preparation system integrated with the S420 SEM. This system allows the preparation and transfer of frozen hydrated specimens to the SEM or viewing and analysis, including liquid specimens such as emulsions and suspensions. For further information, contact Leica Inc., 111 Deer Lake Road, Deerfield, IL 60015; tel: 800/248-0123; fax: 708/405-0030.



Zumbach Electronics Corp.

Zumbach Electronics Corp. has introduced a novel, *high-performance sensor designed for critical gauging of ultra-fine products*. The ODAC 15XY J will deliver accurate readings on solid, opaque and transparent materials to a minimum diameter of 0.015 mm (0.0006 in.) in its super micro configuration and 0.04 mm (0.0016 in.) in the standard versions. It has a measuring field of 16 mm (0.64 in.) in the X and Y axes. For further information, contact Zumbach Electronics Corp., 140 Kisco Avenues, Mt. Kisco, NY 10549; tel: 914/241-7080; fax: 914/241-7096.

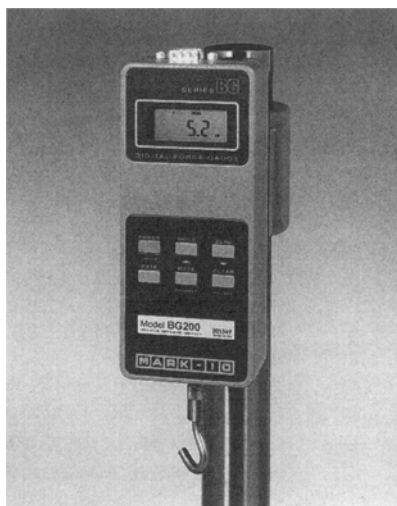
Molecular Dynamics has introduced the PhosphorImager 445 SI, a *fast, storage phosphor, filmless autoradiography imaging system*. The system accommodates samples as large as a full-size squeezing



Molecular Dynamics

gel (35 X 43 cm) and has a dynamic range that is linear over five orders of magnitude. There is no need to perform multiple exposures for different lengths of time to achieve accurate results. For further information, contact Victoria Barrett, Molecular Dynamics, 928 East Arques Ave., Sunnyvale, CA 94086-4520; tel: 800/333-5703 or 408/773-1222; fax: 408/773-1493.

Mark-10 Corporation has developed a *high capacity digital force gauge Model BG200*. The Model BG200 is the smallest 200-lb capacity force gauge on the market.



Mark-10 Corporation

Features include: peak force memory, selectable units of measurement, low battery indicator, and selectable automatic shut-off after a specified time of inactivity. For further information, contact Mark-10 Corporation, 458 West John St., Hicksville, NY 11801; tel: 516/822-5300; fax: 516/822-5301.

Kaiser Aluminum's Center for Technology is now offering its' knowledge to outside aluminum producers to help solve their specific problems. The Analytical Chemistry, Engineering Properties and Metallography Groups provide *superior material evaluation services* with the latest in testing equipment, including light and electron optics, direct reading optical emission spectrometers, and a complete stress corrosion test laboratory. The latter can conduct failure analysis, chemical compositions and structures, stress corrosion resistance, and furnace brazing developments. For further information, contact Kaiser Aluminum's Center for Technology, PO Box 877, 6177 Sunol Blvd., Pleasanton, CA 94566; tel: 800/690-1969; fax: 510/847-4400.

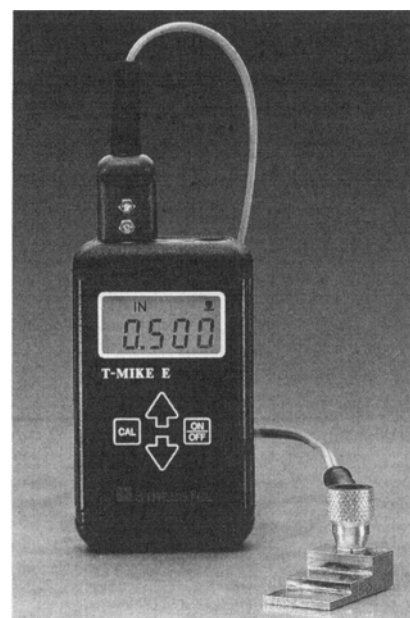
Monsanto Company's Rubber Instruments Business has updated its Monsanto Processability Tester (MPT). The MPT, a capillary rheometer, measures the viscoelastic properties of unvulcanized rubber compounds, raw polymers, and other thermoplastics. It *automatically measures the viscosity, die swell, and stress relaxation of viscoelastic materials* at conditions encountered in processing. The update includes digital temperature control for both barrel and piston temperatures, a new op-



Monsanto Company

tical die swell detector, and computer control and analysis. For further information, contact Monsanto Rubber Instruments, 2689 Wingate Ave., Akron, OH 44314; tel: 216/745-1641 or 800/356-9886.

The T-Mike E, an *ultrasonic thickness gauge*, has been introduced by **StressTel Corporation**. The instrument is ergonomically designed to fit comfortably in anyone's hand, has an environmentally sealed, water resistant case and keypad, and weighs only 11 oz. Other features include an amber colored display to reduce eye strain, automatic calibration with auto probe zero, and extended battery life. For



StressTel Corporation

further information, contact StressTel Corporation, 225 Technology Circle, Scotts Valley, CA 95066; tel: 408/438-6300; fax: 408/438-7917.

An ultrasonic microstructural analyzer, jointly developed by the **Pacific Northwest Laboratory** and the Saginaw Division of the General Motors Corp., received

INTERNATIONAL RESEARCH/MANUFACTURING CENTERS

The U.S. Department of Commerce's **Technology Administration and the Society of Manufacturing Engineers** has announced that the *U.S.-Japan Manufacturing Technology Fellowship Program* is recruiting engineers to participate in the

a 1994 R&D 100 Award. The analyzer *estimates the hardness depth of heat-treated steel components in seconds* by using a high-frequency ultrasonic wave without destroying the components. This information provides information on the strength and wear resistance of hardened steel components. Amplitude changes are detected by a sensor, which are used to estimate hardness depth from calibration

data. The analyzer is being evaluated at GM's Saginaw Division and has the potential to analyze particle distribution in metal matrix composites. Proposed modifications may also enable it to determine metal grain size and detect microcracks in ball bearings. For further information, contact Kevin Whattam at 509/375-3617.

UNIVERSITY VIEW

The **American Society of Mechanical Engineers Solid Waste Processing Division** has announced its 1995 scholarship program to *encourage engineering students to enter careers in solid waste management*. Awards total \$14,000 and all undergraduate engineering students and graduate students currently enrolled in a solid waste management program at an accredited North American university are eligible to apply. The deadline for submission is February 1, 1995. For further information, contact Junius W. Stephenson,

1995-96 program. Engineers participating in the program receive 300 hours of university-based Japanese language and cultural training and complete one month of orientation and training in Japan, prior to joining their host company. The applica-

tion deadline is March 1, 1995. To obtain an application, contact the Japan Technology Program; tel: 202/482-0356; fax: 202/219-3310.

ASME Solid Waste Processing Division Scholarship Chairman, 38 Sunset Road, Demarest, NJ 07627; tel: 201/767-1998.

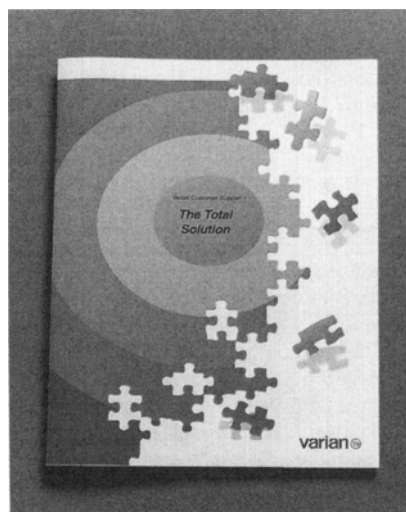
Michigan State University junior and senior students electing to major in MSU's School of Packaging will be eligible for a *new scholarship* to be funded by the **Petroleum Packaging Council**. The award is \$1,000 per semester during the balance of the students' undergraduate term. In addition to demonstrating financial need,

successful candidates also will have maintained and will continue to maintain an overall grade point average of 3.0 For further information, contact Dr. Bruce R. Harte, Director of the School of Packaging, Michigan State University, East Lansing, MI 48824-1223 or Irene O. Kreer, Administrator, Petroleum Packaging Council, 35 East Wacker Dr., Suite #1780, Chicago, IL 60601-2201.

LITERATURE/DATA SOURCES

AlloyTech has introduced a metals information service called AlloyFax, which offers *instant access to comprehensive, updated information to aid in cost effective metals selection and procurement*. Reports are available to users 24 hours a day, using fax-on-demand delivery, detailing such factors as mechanical, physical and corrosion resistant properties, cost factors, availability in terms of US mill production capabilities and distributor stock support. To access the service call 800/370-6915.

Varian offers a brochure describing the *range of after-sales support services* available for its chromatography and spectroscopy instrument customers. The brochure contains information about the technical assistance hotline, on-site visits, support agreements, training, parts and supplies, and the TeleDiagnostics system.



Varian Analytical Instruments

For a copy, contact Varian Analytical Instruments, Dept. VIS213, PO Box 9000, San Fernando, CA 91341-9981; tel: 800/926-3000.

Verlag W. Sachon recently published the official directory of the Federation of German Industries entitled **BDI-GERMANY SUPPLIES** and the Buyer's Guide of the Central Association of the electric and electronic industry. These new publications offer an *updated and quick survey of products and manufacturers in German industry*. Data from the Buyer's Guide are available on CD-ROM or via on-line databases. Both are available directly from Verlag W. Sachon GmbH + Co, Schloss Mindelburg, D-87714 Mindelheim, tel. 49-8261-9 99-0, fax 49-8261-9 99-180.

The **Society of Manufacturing Engineers** has introduced several publications on a variety of topics. **Rapid Tooling, Rapid Parts**, is a videotape describing how rapid prototyping systems and processes can help cut time and cost in the product development cycle. The **1994 Bibliography of Technical Resources on Plastics in the 90's** provides a file of current resources including technical papers, books, and videotapes, as well as periodicals categorically listed for quick reference. Also available is the **1994 Bibliography of Composite Manufacturing Technical Resources** with similar information. For further information, contact SME, One SME Drive, PO Box 930, Dearborn, MI 48121-0930; tel: 313/271-1500; fax: 313/271-2861.

A single-page literature sheet by **General Magnaplate Corporation** describes a **variety of custom spot-coating and surface treatment techniques**. Described in detail are brush plating, plasma and flame spraying, superfinishing, polishing, and solid

Now you can have equipment parts custom spot-coated and rebuilt quickly and profitably!

Finally... there's no more need for you to order expensive replacement parts or have entire worn parts coated in an expensive, environmentally troublesome chrome plating bath. Take the smart route and have your parts spot-treated on-site at our state-of-the-art, surface enhancement facility in Arlington, Texas.

Here's what we can do for you:

- Brush Plating**
 - We'll build or re-manufacture parts to include more than 100 different types of plating. It covers every region and rebuilds components of gears and shafts.
 - Rebuilds damaged, pitted, or worn parts.
 - Plating of flat, cylindrical, or spherical parts.
 - Plating of wear strips on rollers.
 - Plating of wear strips on rollers.
 - Plating of wear strips on rollers.
 - Plating of wear strips on rollers.
- Plasma & Flame Spray**
 - Our plasma spray technique provides superior surface protection and repair.
 - Plasma spray is used to repair worn surfaces.
 - Plasma spray is used to repair worn surfaces.
 - Plasma spray is used to repair worn surfaces.
- Superfinishing**
 - Our superfinishing process provides a superior surface finish.
 - Superfinishing is used to improve surface finish.
 - Superfinishing is used to improve surface finish.

Get additional information on Magnaplate's spot coating quickly and conveniently. Just flip this sheet over and fax to your request, or call for more information.

General Magnaplate
 Magnaplate Texas — Office and Plant 801 Avenue G, Dallas, TX 75211
 800-343-6666, 972-441-7100, Fax 972-441-7100
 Magnaplate Washington 1331 Route 1, Linden, NJ 07036, 908-862-6110

General Magnaplate Corporation

film dry lubrication. Bulletin #49 can be obtained from General Magnaplate Corporation, 1331 Route 1, Linden, NJ 07036; tel: 908/862-6200; fax: 908/862-6110.

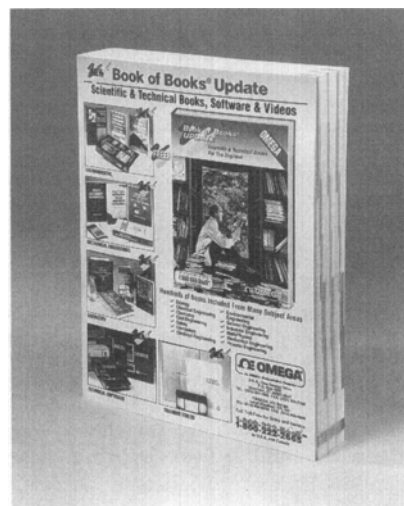
Corrosion Third Edition is a two-volume reference work published by **Butterworth-Heinemann** covering high-temperature and aqueous corrosion and their control that has been completely updated. Other topics included are coatings and their application, corrosion testing, monitoring,

and inspection, and electrochemistry. For further information, contact Butterworth-Heinemann, 313 Washington St., Newton, MA 02158; tel: 617-928-2500; fax: 617-928-2620.

The **performance and viscosity enhancement properties of AEROSIL fumed metal oxides** in water based adhesives are featured in two 10-page technical papers from **Degussa Corporation**. The papers discuss advantages of the oxides in improving performance and properties. For further information, contact Degussa Corporation, Silica Division, 65 Challenger Rd., Ridgefield Park, NJ 07660; tel/800/AEROSIL.

Technical literature available from the Performance Additives business unit of **Allied-Signal** feature Polyace 573. The four-page brochure describes numerous applications where Polyace 573 provides utility for **product formulators for a broad range of substrates** including glass, metal, and wood products. Also discussed are physical properties, product reactivity, and toxicity information. For a copy contact John Magliocco at 201/455-2145 or 800/222-0094.

OMEGA Engineering has released an expanded and updated version of the **Book of Books Handbook**. The 136-page publication **describes technical, engineering, and electronics books and videos** from such professional societies as IEEE, ASME, ACS, and ASM International. Also featured are a wide range of industry



OMEGA Engineering

standards. For a copy request Document #9995 by calling 800/848-4271.

SwetScan, an **electronic table of contents service with over 14,000 journals** worldwide, is available from **CISTI**, in co-operation with Swets and Zeitlinger Inc. More than half the journals are in science, technology and medicine with the balance in economics, business, education, humanities and social sciences. Articles can be searched by subject, author, or title and then ordered after scanning the tables of contents. Access is available via the Internet. For further information, contact Richard Flynn, CISTI; tel: 613/998-5437; fax: 613/952-9112.

A selection guide from **Hoechst Celanese Corporation** covers **seven engineering and high-performance thermoplastics for use in automotive electrical/electronic components**. The guide compares typical applications, benefits and properties for Celcon acetal, Celanese nylon 6 and 6/6, Celanex thermoplastics polyester, Vandar thermoplastics polyester alloys, Impet recycled polyethylene terephthalate, Fortron polyphenylene sulfide, and Vectra liquid crystal polymer. For a copy contact Jim Haran, Automotive Development Center, Hoechst Celanese Corporation, 1195 Center Rd., PO Box 217007, Auburn Hills, MI 48321-7007; tel: 810/377-2700.

AIN Plastics, Inc. has introduced its **AIN Plastics Catalog 95**, which offers complete lines of mechanical plastics, sheet,

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AIN Plastics, Inc.

rod, film, tube and accessory items. Available sizes, thicknesses, specifications, and tolerances are described. For a copy call 800/431-2451.

The **Materials Research Society** has published a number of books on a wide range of materials based on several proceedings. Topics include *nonoxide covalent ceramics, biomaterials for drug and cell delivery, surface chemistry in electronic materials processing, and diagnostic techniques for semiconductor materials processing*. Several other proceedings cover silicides, germanides, and their in-

KUDOS

International Specialty Products has promoted *Dr. Phil Wolf* to the position of Director of Process Chemistry and Industrial Applications. *Dr. Jeff Cohen* has been appointed Director of Process Development and *Barry Saltzman* has been appointed Account Manager of Midwest sales.



Douglas W. Trombley

Michael Mraz has been named branch manager of **Cadillac Plastic and Chemical Company's** branch office in Toledo, Ohio. He will be responsible for sales and profits, as well as for achieving ISO 9002 certification. *Douglas W.*

Trombley was also appointed manager of human resources and payroll at Troy headquarters.

Davy International has appointed *Douglas R. Fraser* to Senior Sales Manager for the Quality Assurance/Quality Control Services group for the Pittsburgh, PA office.



Douglas R. Fraser

Robert C. Jewell has been named Product Manager, Welding Products, **Rolled Alloys**, Temperance, MI. Jewell will be located at the new Cincinnati facility.

terfaces, interface control of electrical, chemical, and mechanical properties, mechanisms of thin film evolution, and infrared detectors. For further information, contact the **Materials Research Society**, Publications Department, 9800 McKnight Road, Pittsburgh, PA 15237; tel: 412/367-3004; fax: 412/367-4373.

Nanoceramics, published by the **Institute of Materials**, covers the properties and processing of nanomaterials, including both oxides and nonoxides based on papers presented at a 1992 meeting. The sol gel method is described for making fiber

Brad B. Gruss, vice president of **Fremont Industries**, Shakopee, MN, has been selected as chairman-elect of the **Association for Finishing Processes of the Society of Manufacturing Engineers**.

Air Liquide America Corporation has appointed *John Barney* to Marketing Manager, Primary Metals and Combustion, and *Scott Gregory* to Program Manager, Steel Making Applications. They will be based in the company's Applied Technology Center in Countryside, IL.

Donald G. Costa has been named Director of National Branch Operations of **Bearings, Inc.**, an independent distributor of bearings, mechanical and electrical drive systems, industrial rubber products, and fluid power components. *Justin M. Jacobi* has also been named Marketing Director of Bearing Products and *Mark Strang* has been named Director of Specialty Products.

Hydro Magnesium has named *Lisabeth A. Riopelle* as Manager of Applications Engineering at their Magnesium Market Development Center in Southfield, Michigan. Riopelle will work with customers to identify and successfully implement new applications of structural magnesium alloys.

Cold Metal Products, Inc. has elected *Edwin H. Gott Jr.*, president and chief operating officer of Metaltech, and *Peter B. Sullivan*, president and founder of P. B. Sullivan & Company, to the company's board of directors. The company has also

coatings and mullite ceramics, among others. For further information, contact the **Institute of Materials**.

Howmet Corporation has published a 20-page brochure that illustrates the company's resources as an integrated and international producer of precision-cast components, serving the industrial gas turbine market. Both *products and processing capabilities are described*. For a copy contact Howmet Corporation, 475 Steamboat Road, Greenwich, CT 06836-1960; tel: 203/661-4600; fax: 203/661-0422.

added two new sales representatives, *Leslie J. Merek* and *Walter Coker*.



Michael J. Bedzyk

Michael J. Bedzyk, Argonne National Laboratory, won the 1994 Warren Diffraction Physics Award from the **American Crystallographic Association** for developing a technique for using standing waves of X-rays to examine how ions (electrically charged atoms) arrange themselves in solution above an electrically charged surface or within a thin-film coating.

Sunil K. Agrawal, an Ohio University professor in mechanical engineering, has won a prestigious Presidential Faculty Fellow Award, which includes a **National Science Foundation** grant of \$100,000 a year for five years.

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Sunil K. Agrawal

Reading Alloys, Inc. has appointed *Joseph J. Patrick* as sales manager. He will be responsible for managing the company's sales and customer service.

PPG Industries has appointed **L. Blaine Boswell** as vice president of public affairs, a new post with responsibility for government relations, corporate communications, and PPG Industries Foundation activities. **James W. Craig**, president of PPG Canada Inc. succeeds Boswell as president, PPG Europe, PG Industries International, and Arend W.D. Vos as vice president, coatings and resins, Europe. Vos will relocate to Tokyo.



Robert Mack

Engineered Ceramics, a General Signal Company, has named **Robert Mack** Manufacturing Manager for its Gilbert, Illinois operations.

Cosmos Mineral Corporation has promoted **Joseph P. Muscarella** to Chairman of the Board, **Bruce Beckwith** to President, and **Thomas F. Ukolowicz** to Sales Manager.

DuPont Automotive has appointed **Jill Lucius** as senior public affairs/communications representative.

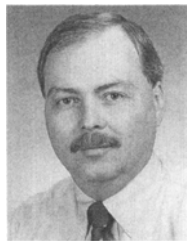
CTL Steel (Columbus, OH) CEO **David A. Beck** has won the 1994 Entrepreneur of the Year award in the manufacturing/high tech category, which is sponsored by Inc. magazine, Ernst & Young, Inc., Merrill



David A. Beck and family

Lynch, and the Ohio Department of Development.

Monitoring Technology Corporation has appointed **Timothy A. Woodward** of Liberty Environmental Partners to its Board of Directors and **Harry George** of Solstice Capital as Chairman.



John Van Vleet

LFE Industrial Systems Corporation has appointed **John Van Vleet** as Regional Manager for the South Central Region.

MQS Inspection Inc., a supplier of quality services for U.S. industry, has pro-

used in bar-code scanners, fiber optic systems, and optical data storage systems.

AGA Gas, Inc. has acquired **Advanced Welding Supply, Inc.** AGA Gas, Inc. is a U.S. subsidiary of the Swedish AGA AB.

The **Harman Automotive Corporation** has been awarded a contract by **General Motors** to supply exterior mirrors and appliqué for the 1995 Chevrolet Camaro and Pontiac Firebird models.

moted **Jeffery Long** to Manager of its Los Angeles facility.

Herron Testing Laboratories, which provides properties testing of metals and metal alloys, has appointed **Wesley R. Richardson** to the position of Quality Assurance Manager. He will be responsible for both the Cleveland, OH and Charlotte, NC operations.



Wesley R. Richardson

Hi Tecmetal Group has promoted **Rick Miller** to the position of Operations Manager for the Thermal Treatment Center in Wickliffe, OH.

North American Advanced Materials Corporation has appointed **Eric M. Slater** as Project Manager for metal matrix composite development for the Third Millennium Products division.

George Grace has joined **Lincoln Electric Company** as Southern Regional Manager, Hardfacing Sales. In-house and on-site technical support will be provided by **Tom Black**, Manager of Hardfacing and High Alloy Products, Weld Tech Center, and **Dr. Damian Kotecki**, Technical Director of Stainless and High Alloy Product Development.

Nalco Chemical Company has been issued four more patents for its TRASAR Technology, which is used to identify leaks in heat transfer systems and to monitor corrosion inhibitor feed and control.

Defiance Tooling Systems has received a contract from **General Motors** to design and build prototype and production tools for its Lansing Automotive Division.

IRD Mechanalysis has formed the Balancing Systems Division, which will be responsible for marketing, selling, and servicing IRD's balancing products

IN BUSINESS

The following companies have received **ISO 9000 certification**: **Aavid Engineering, Inc.**, Hertfordshire, England; **Georgia-Pacific Corp.**'s Waxahatchie, TX and Canton, OH plants; the Mechanical Products Division of **Lord Corporation**; **Air Liquide America Corporation**'s Oklahoma City, OK Air Separation plant, **Howmet Cercast**'s Montreal, Quebec plant, and **Kyocera Industrial Ceramics Corp.**'s Mountain Home, NC plant.

Geltech, Inc. has acquired the Precision Molded Optics business of **Corning Inc.**, which manufactures small glass lenses

throughout North America and the US Export Territories.

Alanx Products Inc. has received the President's "E" Award for Excellence in



Alanx Products Inc.

Exporting by the U.S. Commerce Department, one of only six awards presented in 1994.

DTM Corporation has received the 1994 R&D 100 Award for its Sinterstation 2000 System, which uses selective laser sintering to quickly produce solid, three-dimensional models, prototypes, molds, and patterns from computer-generated designs.

Alcatel Network Systems has been named a recipient of the 1994 Shingo Prize for Excellence in Manufacturing.

DuPont has initiated a "Viton" fluoroelastomer trademark protection program designed to inform rubber parts distributors, original equipment manufacturers, end-users, and trade publications of correct usage of this trademark.

Cegelec Automation Inc. has formed Silvertech Group, a marketing and manufacturing alliance with **Silvertech Ltd.** of the UK. The new organization will target a wide range of U.S. industrial markets for the design, integration, and customization of critical control applications.

United States Filter Corporation has acquired **Liquipure Technologies, Inc.** and its subsidiaries.

The headquarters of **LOI Essen, Nassheuer Loi, and LVE Verfahrenselektronik GmbH** have been relocated to Ratingen, Germany.

Cambridge Industries Holdings, Inc. has purchased the automotive plastics business of **Rockwell International Corp.**

The **American Powder Metallurgy Institute** has changed its name to **APMI International**, the professional society for powder metallurgy.

Leica Inc. has opened a Southwest Area office in Irvine, CA, which will serve Southern California, New Mexico, Arizona, Nevada, Colorado, and Utah.

Cabot Corporation's North American Industrial Rubber Blacks business is constructing a production facility in Sarnia, Ontario for manufacture of the company's Sterling line of custom carbon blacks.

Metal Working Supply Company has been selected by the **Arvin TD Center** to be its sales agent for its thermal diffusion process used to harden tooling surfaces in Kentucky, Tennessee, and northern Alabama.

Nisshin Steel Company, Ltd. has become the 31st licensee to produce 55% Al-Zn coated sheet steel from **BIEC International**, who licenses the technology.

Superconductivity, Inc. has installed its superconducting magnetic storage system at **ITW Angleboard**, a packing materials manufacturing plant in Hartsville, SC.

Acme Metals Incorporated is building a \$372 million continuous thin slab caster/hot strip mill complex at its plant in Riverdale, Chicago.

Republic Engineered Steels, Inc. and **Armco Co.** have entered into a letter of

intent whereby Republic would purchase certain assets of the Armco operation formerly known as Baltimore Specialty Steels Corporation.

DuPont is expanding its fluoropolymer capacity for copolymer resins by 75%, which will be completed by 1997 at a cost of \$150 million.

Globe Metallurgical Inc. has received a Supplier Excellence Award from **Southwire Company**.

Foseco Inc. has installed a new state-of-the-art production line for riser sleeve production, which will increase product consistency and improve response time to fill orders.

Edison Welding Institute has signed a cooperation agreement with China's leading welding technology organization, the **Harbin Research Institute of Welding**. The agreement provides a formal framework for technology cooperation to support trade and development between China and the United States.

Vacmetal Gesellschaft fuer Vakuum-Metallurgies has been awarded a contract for another recirculation degasser of 110 t capacity for the No.1 Works of **Pohang Iron & Steel Corporation** in South Korea.

Pierce & Stevens Corp. has named **Owens-Corning** as its Canadian distributor, **H.M. Royal** as its US West Coast distributor, **Lawrence Industries** as its UK distributor, the **Bo Kwang Corporation** as its Korean distributor, and **UCB** as its continental Europe distributor for the company's Dualite microspheres.

BHP Coated Steel has added bare Al-Zn alloy coated steel to its line of products. Under the arrangement, customers of the Southern California coil coater can now purchase Zinalume sheet manufactured by other BHP Steel units, as well as other producers' versions of 55% Al-Zn product.

Berry Metal Company has been awarded the contract for supply of water-cooled oxygen/carbon injection lances for the new DC electric furnace at **Tokyo Steel's**

Greenfield Utsunomiya plant scheduled for startup in October 1995.

United States Filter Corporation has acquired **Smogless S.p.A.** of Milan, Italy from Laidlaw, Inc. Smogless provides a broad range of wastewater treatment services.

Rover Group has purchased a Microsize and Microhone bore finishing transfer machine for final finishing of cylinder bores in various engine blocks from **Micromatic Textron**.

Nalco Chemical Company has formed a joint venture with **Exxon Chemical Company**, Nalco/Exxon Energy Chemicals

L.P. The joint venture will provide specialty chemical products and services to the petroleum industry.

Cegelec Automation Inc. has been selected by **Gulf States Steel** to modernize its hot strip mill at a cost of \$2 million located in Gadsden, AL.
