

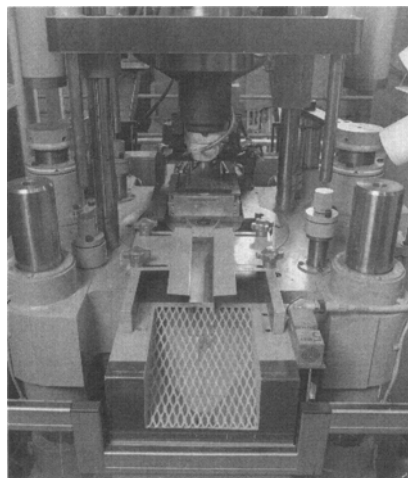
To serve the heat treating industry and members, **ASM International** is developing a Distance Learning *program on Carburizing*. The program is a satellite teleconference to correspond with the launch of the ASM Heat Treating Society. The program began in October 1994 as a four-part series. Carburizing included a brief practical overview of heat treating, comprehensive coverage of carburizing, including case hardening, a short discussion on quenching and distortion, and new technologies. The second broadcast on quenching and distortion is scheduled for February 1995, followed by SPC and quality issues within the carburizing area in April 1995. The series will conclude with a conference on environmental issues, safety and maintenance in the heat treating shop in June 1995. For further information, call 1-800-336-5152, ext. 613 or fax 216/338-4634.

A leading manufacturer of automotive trim and parts *streamlined production, reduced costs, and produced better products* by switching to electric infrared drying of seat risers, the metal frames for seat springs, cushions, and upholstery. Parts dried by this method emerge completely dry in three minutes with no further handling required before painting. Further details on this technology are available from CMF TechApplication vol. 8, No.1, published by the **Electric Power Research Institute's Center for Materials Fabrication**, 505 King Avenue, Columbus, Ohio 43201.

Michigan Induction has *installed and upgraded all personal computer systems*. The new information systems allow employees in all departments to meet customers' needs in a more timely manner. The software is utilized in the development of lot control, failure mode and effects analysis plans, production setup and the majority of corporate internal communication. Standard software is also used in accounting and statistical process control. For further information, contact Eric L. Hutton, Michigan Induction, 8468 Ronda Drive, Canton, MI 48187; tel: 313/459-8513; fax: 313/459-8795.

TOCCO/Alfing has received orders from an automobile plant in Canada to build two induction heating systems specifically designed to harden automotive crankshafts. These induction crankshaft hardening systems are walking beam, transfer-type machines *capable of fully automated production*. TOCCO/Alfing also has developed and patented special induction heating coils to support the installation. These coils are totally machined on CNC equipment to tolerances so precise that inductors are interchangeable with no negative impact on heat pattern consistency. Machining also eliminates brazed joints in the current path and allows 50% deeper heat patterns using 40% less power. For further information, contact Denis Liederbach, PO Box 447, Boaz, AL 35957; tel: 205/593-7770.

The new EL-TEMP single-press/single-sinter P/M system from **Cincinnati Incorporated** produces *powdered metal parts with higher densities, greater green strength, and lower cost than other systems*. The system integrates precisely controlled powder heating and delivery functions with a compacting press modified to use heated tooling. Part densities between 7.2 and 7.45 g/cm³ can be achieved at less cost than double-press-sinter or copper infiltration processes. The capability to compact parts at lower tonnages and use less ejection force extends tool life. For further information,



Cincinnati Incorporated

contact Reuben Nystrom, Cincinnati Incorporated, PO Box 11111, Cincinnati, OH 45211-9988; tel: 513/367-7531; fax: 513/367-7552.

The all solid state 3 kW, 50-450 kHz induction heating power supply from **Ameritherm** meets the needs of the metals industry for brazing, soldering, or shrink fitting of small conductive material parts. The power supply's small physical size, remote heat station, digital control, and wide frequency range make it a *reliable, repeatable heat source* for brazing, soldering, and shrink fitting applications. The easy to use front panel has push buttons for heat on, heat off, and system ready controls. A large digital display shows all critical operating parameters. For further information, contact Jonathan Gorbald, Ameritherm, 39 Main Street, Scottsville, NY 14546; tel: 800/456-HEAT.

Drever Company has received an order for a steel powder reduction furnace from Kobelco Metal Powder of America, Inc. The average capacity of the new furnace will be 2000 tons/month, which will *nearly double Kobelco's annealing and reduction capacity of steel powder*. This is the second Drever strip belt powder reduction furnace supplied to Kobelco. The first furnace was built in 1988. Both furnaces have been specially designed for exacting thermal cycles and feature a special convection cooling section. The new furnace line will be shipped in the 1st quarter of 1995 and is planned to be in full operation in the second half of 1995.

By installing an induction hardener, a leading manufacturer of heavy-duty camshafts for automotive, truck and construction vehicles *halved production time and increased manufacturing flexibility while saving energy, space, and materials*. Production time was reduced from three weeks to one day. Distortion of part was also minimized. More details on this application have been published in the CMF TechApplication, Vol. 8, No. 2, which is available from the **Electric Power Research Institute's Center for Materials Fabrication**, 505 King Avenue, Colum-

bus, Ohio 43201; tel: 614/424-7742; fax: 614/424-4320.

Electric arc furnace steelmaking has become increasingly more efficient and productive through the use of new technologies and innovative practices. One method available for improving EAF performance involves injection of solids or gases directly into the furnace bath. The **EPRI Center for Materials Production** has initiated a collaborative project to *develop appropriate and cost-effective injection technologies*. The first phase of this project, cofunded with Ontario Hydro, is underway. It involves pilot-scale trials to determine qualitative and quantitative effects of oxygen and coal injection on yield, melt chemistries, off-gas volumes,

steel quality, and productivity. For further information on the second phase, contact Bob Schmitt, CMP, 4400 Fifth Avenue, Pittsburgh, PA 15213-2683; tel: 412/268-3243; fax: 412/268-6852.

Operating features and technical information on a new automatic control system for exothermic generators are presented in literature available from **Lindberg**. The new system *provides on-line continuous monitoring and control of gas dewpoint* and is ideal for processes where automatic control of exothermic gas dewpoint is needed. The system offers continuous operating characteristics that can compensate for upsets in ambient air humidity, cooling water temperature or other process fluctuations that could cause scrap and

rework, even if precise control is not required. For a copy of Bulletin 16300, contact Lindberg, a General Signal Company, 304 Hart Street, Watertown, WI 54094; tel: 800/873-4468; fax: 414/261-4962.

REVCO/Lindberg, a unit of General Signal, has named **Tom Norris** Director of Manufacturing for its Watertown, Wisconsin operations. Lindberg manufactures a *broad line of industrial heat processing equipment* in Watertown, as well as Blue M and industrial ovens and environmental chambers. Norris has been Director of Manufacturing for the organization's Blue M Electric operation over the past ten years.



Environment

In the effort to preserve and maintain the fragile ecology of our planet, these recently selected abstracts are presented to help readers of *Journals of Materials Engineering and Performance* stay current on legislation and compliance with global environmental issues and regulations. They are reprinted from *Metals Abstracts* and *Materials Business File* with permission from *Materials Information*, a joint service of *ASM International*[®], *Materials Park, Ohio*, and the *Institute of Materials, London, England*.

Growth in Double-Hull Ships Seen With Rules. International and national regulations calling for an evolution in oil tanker construction from one of single-hull design to double-hull configuration—intended to lessen the probability of large crude losses and environmental disaster in case of an accident—could lead to a 15 to 20% increase in steel consumption by shipbuilders. Increased steel demand likely will come from Japanese and South Korean shipyards, the largest builders of commercial oil tankers since the 1980s. However, the U.S. shipbuilding industry, which has been primarily a military shipbuilder since the 1970s, has taken its first step toward the production of commercial tankers.

M. Knights and T. Furukawa. Cited: *Am. Met. Mark.*, Vol 102 (No. 121), 24 June 1994, p 4 [in English]. ISSN: 0002-9998. PHOTOCOPY ORDER NUMBER: 199406-S6-0076.

LTV Fined for Coke-Oven Violations. LTV Steel Corp. has agreed to pay \$900 000 for violating coke-oven regulations at its Pittsburgh Coke Works, the Environmental Protection Agency says. LTV will make changes at the physical plant and in operations at the works. The steelmaker also must provide the results of current coke-oven research to regulatory agencies. The U.S. filed the first complaint against LTV in 1991. It alleged that the steelmaker violated emissions standards for coke-oven door lids, charging and pushing portals, offtake piping and fixtures, and combustion stacks. Gas from the coke oven also had too much sulfur in it, the complaint said. Cited: *New Steel*, Vol 10 (No. 6), June 1994, p 11 [in English]. PHOTOCOPY ORDER NUMBER: 199406-S4-0041.

SPI [Society of the Plastics Industry] Criticizes [U.S.] Chlorine Proposal. SPI has launched an extensive communications effort critical of the Clinton administration's proposal to develop a strategy to phase out chlorine and chlorinated compounds. SPI contends that there is no scientific basis for the proposal, which is part of the administration's Clean Water

Initiative. SPI has pressed its arguments in recent meetings with key officials in the EPA, Office of Management and Budget, and White House Office of Science and Technology Policy, and with several members of Congress. In a meeting with the staff of Senator Howard Metzenbaum (D-Ohio), SPI vinyl window producers stressed the devastating impact that a CI phaseout would have on their business. Producers said that a CI phaseout would essentially shut down their businesses. An SPI task force has been created to draft SPI policy and develop an association-wide strategy for addressing CI issues. Involved in the effort will be SPI staff from the Vinyl Institute, Polyurethane Division, Vinyl Window and Door Institute, Vinyl Siding Institute, Fluoropolymers Division, Epoxy Resin Formulators Division, and Vinyl Formulators Division.

Cited: *Plast. Eng.*, Vol 50 (No. 6), June 1994, p 3 [in English]. ISSN: 0091-9578 PHOTOCOPY ORDER NUMBER: 199406-P4-0032.

[U.S.] Supreme Court Rulings Could Affect Plastics. Two recent U.S. Supreme Court decisions governing garbage disposal could affect the debate on plastics' role in solid waste, although experts are split on what that effect may be. The separate decisions, just two weeks apart in May 1994, require incinerators to test ash for hazardous content and ban local laws known as flow-control ordinances that require waste in a community to be taken to designated garbage-handling facilities. The flow-control decision could affect all waste facilities—landfills, incinerators or recycling recovery plants—that rely on a steady, guaranteed supply of garbage and accompanying fees for financing. The ash decision puts an added cost on incinerators that do not conduct such tests already.

J. Gardner. Cited: *Plast. News (Detroit)*, Vol 6 (No. 17), 27 June 1994, p 5 [in English]. ISSN: 1042-802X. PHOTOCOPY ORDER NUMBER: 199406-P1-0063.