

Tocco, Inc. offers literature describing **induction heat treating services** available through its Commercial Heat Treating Group in Madison Heights, MI. Tocco has more than 20 induction systems rated from 30 to 800 kW to process parts up to six feet



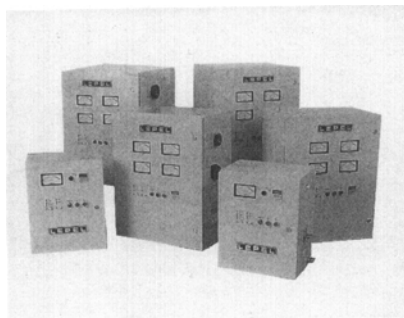
Tocco, Inc.

long weighing several hundred pounds. The facility can handle low volume prototype and preproduction runs, as well as production runs of 200,000 or more pieces. Tocco also has a brochure on induction heating technology describing products and services. For further information, contact Paul Choinard, Tocco, Inc., 30100 Stephenson Highway, Madison Heights, MI 48071; tel: 810/399-8601; fax: 810/399-8603.

**Surface Combustion, Inc.** has designed a preheat and annealing furnace for a state-of-the-art bonding facility in Russia. The new facility uses technology developed by Alcan Aluminum to form bonded plate heat exchangers for the Russian refrigeration market, which requires two aluminum sheets to be "sandwiched" together, preheated, rolled, and then annealed. The Surface Combustion design incorporates automatic loading onto a furnace conveyor

and a preheat furnace that can **handle aluminum sheet assemblies up to 1150 mm X 1000 mm X 6 mm heated to a temperature of 510 °C**. The furnace has an effective work length of slightly over 5 meters and a 300 piece/hour production throughput. For further information, contact Nicholas Orzechowski at 419/891-1787.

**Lepel Corporation** has introduced **100% solid state induction heating power supplies, which are designed to provide superior process stability**. All models range from 2.5 to 30 kW and from 50 to 200 kHz and are used for a wide range of applica-



Lepel Corporation

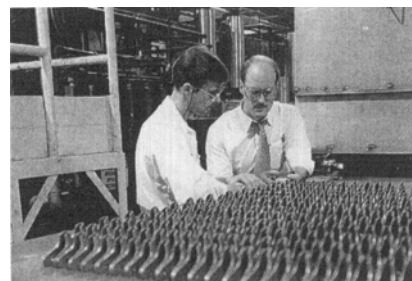
tions, including brazing, soldering, stress relieving, annealing, and hardening. For further information, contact Lepel Corporation, 50 Heartland Blvd., Edgewood, NY 11717; tel: 516/586-3300; fax: 516/586-3232.

Double-flow post-combustion oxygen lances by **Berry Metal Company** now allow the BOF operator to take full advantage of the heat energy of the carbon monoxide gas produced within the BOF vessel during the refining of a heat of steel. The benefits include **increased scrap consumption, control of skull buildup at the cone and mouth of the vessel, and faster heat times**. The main system feeds the lance tip to provide the BOF refining oxygen. The secondary system, for post-combustion, feeds oxygen to a special copper distributor high above the lance tip, for a

controlled furnace reaction. In operation, this auxiliary system is brought on at a low flow rate, usually just enough to keep the distributor ports from plugging. The oxygen flow rate is then variably increased for the most effective combustion of the carbon monoxide to carbon dioxide. For further information, contact Berry Metal Company, 2408 Evans City Road, Harmony, PA 16037; tel: 412/452-8040.

The **Heat Treating Network**, an alliance of about 30 companies that thermally treat a variety of metal parts, has formed a technical assistance agreement with **Los Alamos National Laboratory**. Los Alamos is working with the network to **identify environmentally friendly solvents and degreasers that can be used in cleaning applications for heat-treating processes**. Substitutes are being looked at that can be adopted with little or no process modification. The work is also focusing on increasing the life of cutting fluids, solvents or coolants through maintenance such as filtration. For further information, contact the Heat Treating Network, 16600 W. Sprague Rd., #445, Cleveland, OH 44130-6318; tel: 216/243-8990; fax: 216/243-8992.

**FPM Heat Treating** has received Ford Motor Company's Quality Award given to Ford's indirect suppliers. FPM earned this recognition for heat treating a variety of components for Ford suppliers. The Ford award applies a highly structured method to evaluate its primary and secondary suppliers, and requires them to not only produce quality work but also to have formal



FPM Heat Treating

quality management systems in place, both areas in which FPM has excelled. FPM Heat Treating also recently received ISO 9000 certification. For further information, contact FPM Heat Treating, 1501 South Lively Blvd., PO Box 896, Elk Grove Village, IL 60009-0896; tel: 708/228-2525; fax: 708/228-5912.

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**LaserComp** has introduced the FOX instrument *line of thermal conductivity instruments* for heat treating and other applications. The instruments are fast, precise (1%), and can measure samples up to 305 mm (12 in.) thick. Temperature range of  $-20^{\circ}\text{C}$  to  $100^{\circ}\text{C}$  is reached through state of the art electronic heating cooling plates, which eliminates the need to work with bulky, cumbersome, slow refrigeration units. Testing times are less than 10 minutes per setpoint for a 1 in. sample. For further information, contact LaserComp, 60 Edgemoor Rd., Lynnfield, MA 01940; tel: 617/334-6035; fax: 617/334-2650.

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**LOI ESSEN** Industrieofenanlagen GmbH has been awarded a contract for the supply of two automatic pusher-type furnaces for gas carburizing from Tianjin Automobile Industrial Group Corp. The furnaces are to be used for heat treating transmission parts for automobiles and trucks. Tianjin produces medium-sized cars under Japanese license, as well as light trucks designed by the corporation itself. The furnaces are 15 m long and each have a *capacity of 720 kg/h at case depths between 0.5 and 1.2 mm*. For further information, contact Dr. Iris Bertozzi, LOI Group, Moltkeplatz 1, 45138 Essen, Germany; tel: 201/1891277; fax: 201/1891211.

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**The Metals Systems Group of Cegelec Automation** has introduced a *DC arc furnace power supply that greatly reduces the impact of reactive power* on the electrical network external to the melt shop. Disturbances linked with reactive power consumption, voltage variations and flicker are greatly reduced. Cegelec Automation has combined free wheeling diodes and control shifting to eliminate SVC equipment, the need to oversize rectifiers and transformers, and the need for transformer taps. Cockerill Sambre, a Belgium steel maker, has placed an order for the new power supply system. For further information, contact Dave Mertz, Cegelec Automation, Metals Systems Group, 53 Martindale St., Pittsburgh, PA 15212; tel: 412/359-2800.

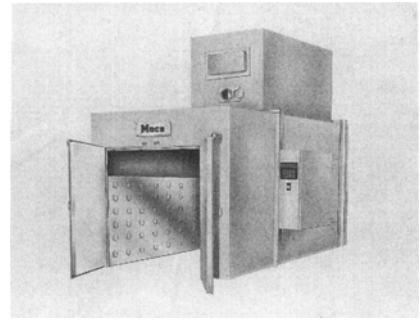
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**Davy International** has completed a *secondary ladle metallurgy brochure*, which describes Davy's overall capabilities in this area using project features to highlight and explain various ladle metallurgy projects. The brochure graphically depicts various secondary refining technologies while briefly mentioning ancillary equipment used in such facilities. For further information, contact Shelli Cosmides at 412/566-3330.

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**Moco Thermal Industries** has introduced the All-Process to their new line of heavy-duty standard walk-in/truck ovens. They are available in a *wide range of sizes and two maximum temperature designs (500 °F and 850 °F for a multitude of heat processing requirements)*. The All-Process line are constructed with insulated telescoping panel joints to prevent warping and metal fatigue during constant heating

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Moco Thermal Industries

and cooling cycles. Horizontal and combination airflow designs are offered for optimum quality processing. For reliable temperature control, a digital solid state process temperature controller is included for gas or electric systems. For further information, contact James H. Cregar, Moco Thermal Industries, One Oven Place, Romulus, MI 48174; tel: 313/728-6800; fax: 313/728-1927.

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Kiln furniture that offers lighter weight, better air flow, superior thermal shock resistance, and reduced energy consumption has been developed by **Blasch Precision Ceramics**. Available as setters, saggars, pusher tiles, honeycomb plates, and complex high-tolerance shapes, the parts are available in a wide range of materials, including ultra-high 99.6% pure alumina, and alumina/silicon carbide composites. Typical tolerances are  $+0.005$  in./linear in. For further information contact Blasch Precision Ceramics, 580 Broadway, Albany, NY 12204; tel: 518/436-1263; fax: 18/436-0098.

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