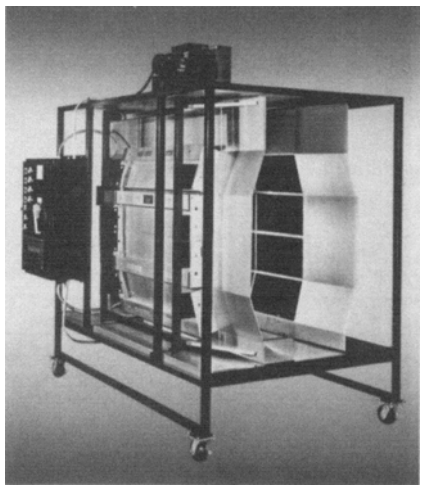
Heat Treat Hotspot

Premier Refractories and Chemicals, King of Prussia, Pennsylvania, has developed a color-coordinated, four-page brochure that clearly illustrates the ***wide range of quality and cost-effective monolithic refractory products*** it offers. Areas highlighted for Coreless furnaces include: hot face linings, top cap/spout/patching products, cover lining/back-up materials, and coil grouting products. The channel induction furnace section outlines upper case, throat floor/inductor recommendations, spout/patching products, cover lining/back-up provisions, and maintenance materials.

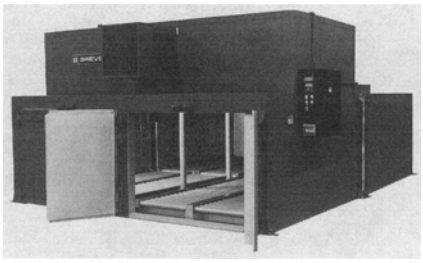
Circle No. (70) on reader service card.

Black Body™ Infrared Processing and Curing Systems by **BBC Industries, Inc.,** Fenton, Missouri, offer a significant savings in energy and production costs over conventional heating methods. ***Infrared is the most efficient and economical way to heat, converting 90% of energy to heat.*** The patented modular infrared emitter panels radiate pure, uniform heat across the oven surface. Hot spots are eliminated. The system's grid absorbs, focuses, and re-emits energy in a perpetual, reciprocating pattern, conserving energy and providing greater heating uniformity. The grid also insulates the emitter against natural convective losses which are significant in other heat processing systems. Since products are heated directly, process times are shortened, productivity increased, and labor and electric costs are reduced. Air circulation is significantly reduced, minimizing the danger of dirt or foreign particles damaging products. Ovens are adaptable to a wide range of industries. Unique adjustable heating banks accommodate any size or shape product.



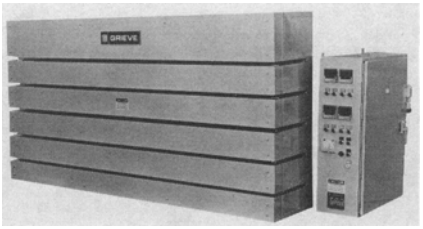
BBC Industries, Inc.

Circle No. (71) on reader service card.



Grieve Corp. - No. 702

The No. 702 from **Grieve Corp.,** Round Lake, Illinois, is ***a special electrically heated walk-in oven which is currently being used for preheating large drums of resin.*** Two sets of double doors (total of eight) are constructed on each end of the oven and four lanes of 11 rollers are mounted on the oven floor. Both of these features maximize the flow-through processing of the oven work loads. Constructed with adjustable louvers to keep the temperature uniform, the oven also features positive resilient heat seals and explosion venting latches on all the doors to improve operating efficiency and safety.



Grieve Corp. - No. 671

Also from **Grieve,** the No. 671 ***infra-red tunnel oven, currently used for stress relieving continuous plastic web made of polypropylene,*** is adjusted by a digital indicating, time proportioning temperature controller. It contains two zones of infrared ceramic heating elements, each having 8.8 KW of heat input, which provide a maximum temperature of 700 °F.

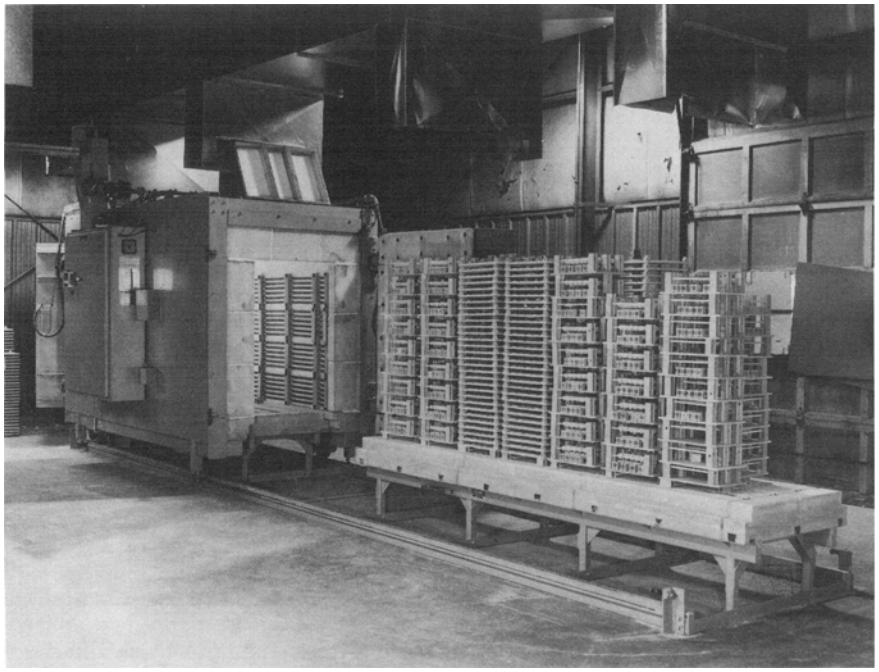
Circle No. (72) on reader service card.

L & L Special Furnace Co., Inc., Aston, Pennsylvania, has built ***a new 2200 °F shuttle kiln specifically designed for ceramic manufacturing such as glazing and bisque firing.*** The kiln moves back and forth between two fixed bases, so one base may be loaded while the other is being fired. The open bases allow easy access all around and as stationary, they protect the load. Power is carefully graded and the element circuits are separated into four separate zones with separate PID control all integrated with a single program control to give the kiln excellent temperature uniformity during the entire heating and cooling cycle.

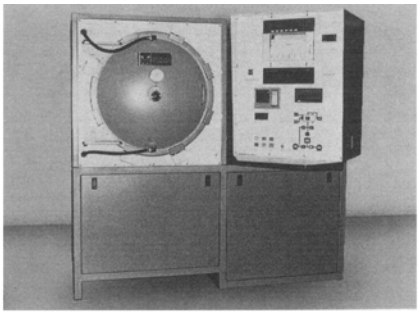
Circle No. (73) on reader service card.

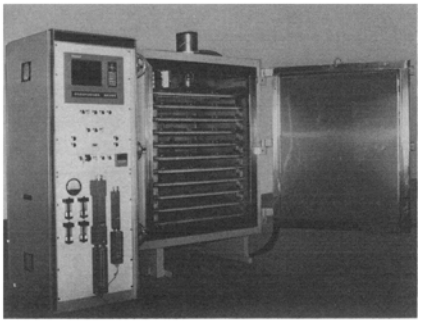
Thermotron Industries, Holland, Missouri, has introduced ***a line of laboratory and production ovens with features and instrumentation designed to simplify set-up and operations.*** Ideally suited for annealing, curing, sterilization, tempering,

Thermotron Industries



L&L Special Furnace Co., Inc.





T-M Vacuum Products, Inc.

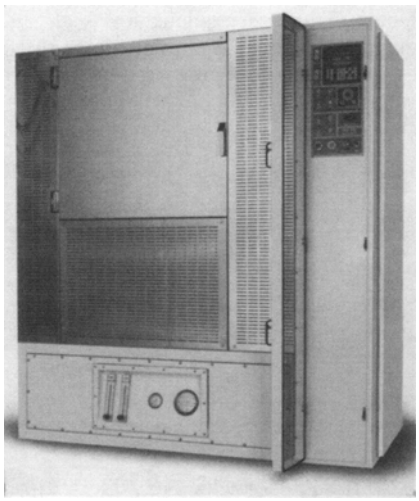
and other applications requiring uniform air flow and consistent temperatures, the OV series ovens are available in two models and five sizes ranging from 4 to 26 cubic feet. Standard instrumentation allows for manual, programmed, or timed oven operations. The ovens feature a baffled sidewall designed to equalize airflow and maximize temperature uniformity and control. Easy and precise air flow adjustments may be made with either a manual or automated vent damper control. Host software is available to integrate multiple ovens with production systems.

Circle No. (74) on reader service card.

Comprehensive information on its ***new class 10 Ultra-Temp® high-temperature, clean room oven*** is available from **Blue M Electric,** Blue Island, Illinois. The Model DCC8-500G is ideal for polyimide processing and other applications requiring high temperature combined with extreme cleanliness. A microprocessor program/temperature controller permits complex temperature profiles to be entered and run unattended; it is capable of storing a maximum of 99 programs.

Circle No. (75) on reader service card.

T-M Vacuum Products, Inc., Cinnaminson, New Jersey, has redesigned its ***vacuum furnace lines of standard and fully automatic high tech systems,*** making them easily adaptable for clean room uses. All of the furnaces are regulated by the most sophisticated digital control systems currently available. Vacuum/temperature/furnace functions are totally integrated, providing repeatable and consistent furnace programs, with a minimum of operator attention. The furnaces are engineered with a current proportioning power supply for more precise heating cycle profiles, a proportioned heater system that assures temperature uniformity throughout the defined heat zone, a removable furnace hot zone for efficient loading, unloading, and cleaning, and an inert gas backfill and quickcool system for maximum production efficiency.



Blue M Electric

In addition, T-M has recently offered a line of ***shelf-heated/cooled vacuum ovens that are particularly useful in applications requiring precise part heat and shelf temperature uniformity*** up to 750 °F. The systems are primarily electrically heated, however, oil or steam heating is also available.

Circle No. (76) on reader service card.

The world's leading producer of large-scale vacuum induction melting furnaces, **Consarc,** Rancocas, New Jersey, has introduced ***a new line of VIM precision investment casting furnaces.*** The new product line will include batch, semi-continuous, single crystal, directional solidification and equiax casting furnaces. The units are designed for R & D, small-scale production and high production work for both ferrous and non-ferrous applications.

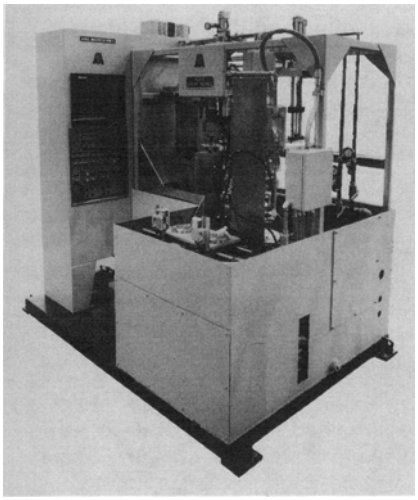
Circle No. (77) on reader service card.

A ***new family of solid-state, induction heating power supplies*** incorporating a full function microprocessor control, has been introduced by **Tocco, Inc.,** Madison Heights, Missouri. The user-friendly system improves process control and features built-in diagnostic capabilities to minimize maintenance. The Inductron II MRC power supply is available in 23 power/frequency combinations and allows all oper-

ating parameters to be pre-set simply by entering data, via keyboard, in response to prompts displayed on an LED screen.

Circle No. (78) on reader service card.

Ajax Magnethermic Corp., Warren Ohio, has developed ***a compact versatile system for induction hardening and tempering C.V. joint components for front-wheel drive vehicles.*** Ball tracks and stems of the tulip and bell are hardened with the same basic system which features a two-position shuttle for robotic interface loading. A one-arm pick and place load and unload device, plus a six-position turntable features a part orientation system to ensure that each part is precisely loaded to avoid misalignment. The entire system is skid mounted and includes the power supply ready for connecting to utilities.



Ajax Magnethermic Corp.

Circle No. (79) on reader service card.

A continuous oven designed to minimize both fuel costs and processing time has been introduced by **Blu-Surf,** Parma, Missouri. The oven systems, which are available in seven standard sizes, feature a patented 4-in. square burner and high-velocity refractory nozzle assembly. Combustion is complete at the burner's surface; no secondary air is needed. This allows for elimination of combustion chambers and induced drafts. The burner remains cool during operations.

Circle No. (80) on reader service card.

Furnaces Asia 1992, recently launched by **FMJ International Publications, Ltd.,** Redhill, Surrey, England, has generated tremendous interest with 95% of total stand exhibit space reserved seven months in advance of the Show's opening. Scheduled for 11-13 November 1992 at the Hilton Hotel, Seoul, South Korea, the exposition will ***offer the full range of the latest thermal processing plant, equipment, technologies, materials, consumables, ancillary products and services*** associated with the thermal processing and metal melting industries. It is designed to attract visitors from the key industrial areas of the Asia-Pacific region and beyond.

Circle No. (81) on reader service card.

The ***new patented flameless hot gas torch*** (HGT) from **Automated Dynamics Corp.,** Schenectady, New York, has turned up the heat with its newest industrial hardened Model 1004. Using nitrogen as the heating medium, which serves the dual purpose of blanketing the process area with an inert atmosphere, the HGT 1004 uses extremely low power, and is capable of heating 200 SCRH of N_2 to 1000 °C. Its compact design allows easy integration into heating systems which require high thermal density heating devices. The key to its outstanding performance is the multi-chamber design, which also accounts for a low surface temperature (<150 °C) at full output. Applications include: advanced thermoplastic composite processing, electronic component soldering, metal processing, plastic welding and thermoplastic repair.

Circle No. (82) on reader service card.

Inductoheat, Inc., Madison Hts., Illinois, has added ***three new walking beam billet heaters*** to its standard line of induction heating equipment for the forging market. It includes billet sizes from 1.5" to 7" at production rates from 2,500 to 8,500 lbs. per hour. The walking beam provides improved production operation, especially over conventional pusher type systems. Short production runs can be processed efficiently. Since billets are not pushed end to end it is not necessary to fill the entire coil line. Poorly cropped or deformed billets can be fed through the coil without difficulty and even the last billet in the line is forgeable. Precise movement of the beam is achieved by a variable speed electric drive and cam mechanism.

Circle No. (83) on reader service card.

Berea, Ohio-based **Plant Systems, Inc.** now offers a ***new advanced pulsed plasma nitriding for heat treating and metals processing.*** The technology permits repeatable and predictable case hardening via nitriding at unusually low furnace temperatures by separating and controlling the nitriding and the thermal functions of the process. Among applications for the pulsed plasma nitriding process are the controlled surface hardening of aerospace components, industrial dies, and surgical prosthetic implants.

Circle No. (84) on reader service card.
