Alfred University installs production microwave furnace

The Western Hemisphere’s first high-temperature (1500°C) continuous production microwave furnace is now fully functional at New York’s NanoMaterials Innovation Center (NMIC), a wholly owned subsidiary of Alfred Technology Resources Inc. (ATRI), near the campus of Alfred University. In Asia, continuous microwave furnaces are used in the chemical synthesis of phosphors for electronics, lighting materials, and more, and for sintering electronic components and other critical ceramic items. Penn State University and Japan’s National Institute for Fusion Science report that microwave furnaces typically use up to 80% less energy than conventional furnaces—producing stronger, finer-grained parts with less deformation and cracking in as little as one-tenth the time of conventional methods. Spheric Technologies’ continuous and batch microwave furnaces are also well-suited for sintering certain powder metal and ceramic materials that require high-temperature processing. www.nanomic.org; www.alfred.edu.

P & L heat treating orders pit nitriding furnace

P & L Heat Treating, Meadville, Pa., purchased a pit nitriding furnace equipped with ZeroFlow technology from Seco/Warwick, Meadville, Pa., for its Youngstown, Ohio, commercial heat treat facility. It will accommodate a fixture load of up to 5,500 lb (2,500 kg) in a 1,000 mm in diameter x 2,000 mm deep retort and a clear load area of 39 x 78 in. The furnace is equipped with an Inconel retort, internal recirculation fan, sinusous loop-heating elements, and PLC control system. The nitriding of steel using the ZeroFlow method allows precise formation of nitrided layers with respect to the required phase structure, zone thicknesses, and hardnness distribution. In controlled tests, the furnace design reduced process gas consumption using a simplified, inexpensive process adjustment and control system producing consistent, repeatable heat treatment results. www.secowarwick.com; www.plheattreatinggrinding.com.

GH IA introduces new induction heating power supplies

GH Induction Atmospheres, Rochester, N.Y., introduced a new series of 13 induction heating power supplies. The SM Type transistermic power supplies output 0.5 to 20 kH z with 100 to 800 kW output power; 100 kW output is available over the extended frequency range of 20 to 150 kHz. It features a modular design with plug-in power control cards while power supplies use IGBT transistors and include a DCP (digital control panel) with built-in diagnostics and optional kW/s monitoring. A series oscillating circuit offers high efficiency and ease-of-load matching. GH transistermic power supplies can operate at variable frequencies; the frequency is automatically coupled to the load, in every application, within a wide range. www.inductionatmospheres.com; www.gh.es.

AFC-Holcroft furnace to process wind turbine gearboxes

AFC-Holcroft, Wixom, Mich., received an order for a sealed quench furnace line used to process wind turbine gearboxes. Brevini Wind is expanding their facility in Yorktown, Ind., where the equipment will be installed. AFC-Holcroft’s European branch office spearheaded this project, but equipment for the project will be built in North America. The UBQ furnace fits Brevini’s needs for today, and gives flexibility for future expansion. Marc Ruetsch, director, European Operations, AFC-Holcroft notes that its UBQ furnaces have gained global acceptance, due not only to their adaptability to changes in capacity, part loads, and temperature requirements; but also to their modularity, which allows easier reconfiguration options within existing floorspace for future capacity. www. AFC-holcroft.com.