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National Heat Treat

Full-Service Thermal Processing

August 8, 2013



National Heat Treat (NHT) may be a relatively new addition to the heat-treating community, but the company has already established a solid reputation and has big aspirations for the future.

NHT was founded in 2012 and officially opened earlier this year. The company's 50,000-square-foot plant in Houston, Texas, includes one of the largest commercial vacuum furnaces in the southwest U.S. The drop-bottom furnace was built by Ipsen and installed by Alphatek of Texas, Inc. The furnace will provide the high quality that the vacuum market has grown to expect.

This new facility also houses the highest-operating-temperature commercial open-fire furnace in Texas as well as the largest commercial batch furnace. The open-fire furnace was developed and built in-house to meet the higher temperatures and tighter temperature tolerances that most commercial heat treaters cannot provide. NHT is still in the process of adding new equipment and technology at the new facility.

NHT chose Houston because the area showed a need for a heat-treatment plant that could lend knowledge

to customers and help develop new processes in an ever-changing market. In addition, experienced staff members saw recent changes in the industry and felt that now was the right time to develop a heat-treating plant in the area with the idea of “build it and they will come.” As global industry adjusts to tighter quality control and material specifications, heat treaters find themselves needing to keep up with these changes and demands. NHT’s facility was built with these factors in mind.

NHT, which currently has 30 full-time employees, serves a wide variety of industries, including: oil and gas, aerospace, defense, energy, electronics, transportation, heavy machinery, tool & die, and research and development.

As for services provided, the company currently has three atmosphere-processing units with size capabilities of 32 inches wide x 32 inches high x 52 inches long and 2,800 pounds. These units can perform the following atmosphere processes up to 1850°F: hardening, carbonitriding, normalizing, annealing, carburizing, boronizing and tempering. NHT can also perform normalizing, aging, annealing and tempering processes in its two open-fire furnaces, which have a 50,000-pound capacity and work zones of 96 inches wide x 84 inches high x 144 inches long.

Without doubt, however, vacuum heat treatment is most vital to NHT. The company recognized that most industries today require vacuum heat treatment. In response, NHT chose to install one of the largest vacuum furnaces in the southwest in order to produce the highest-quality product possible. The furnace is capable of running parts 65 inches in diameter x 85 inches in length, up to 5,000 pounds, at temperatures as high as 2400°F. It can perform a wide variety of vacuum treatments.

NHT also boasts three box furnaces/ovens, three gas nitriding units and sandblasting capabilities (aluminum oxide up to 36 inches wide x 48 inches long). Not limiting itself to only heat treating, NHT can perform standard Rockwell and Brinell hardness testing on-site as well as ultrasonic particle inspection.

NHT specializes in researching and developing specific applications directly with its clients. Realizing that most manufacturers and designers require heat-treat consultation, the company works diligently to provide those services.

Although it hasn’t even been a year since NHT opened its doors, the company is already making plans for future expansion. First, it wants to add to its current capabilities in Houston. NHT also intends on establishing several processing facilities throughout the country, truly making it a “national” heat treater.