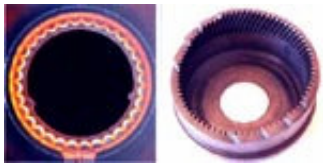
Laboratory Process Development

Electroheat Technologies, LLC has an extensive induction heating process development capability. New processes are conceptualized and the developed in our fully equipped facility. Full metallurgical capability is provided on each heat treating project.



Accelerated Austenitizing™ with Variable Frequency Induction Heating Equipment

Equipment high-flux-intensity heating to achieve accelerated austenitizing has long been known to produce a very fine grain microstructure. The process is credited with imparting the metallurgical characteristics needed to produce higher surface hardness with less distortion than conventional induction heating processes.

Recent developments at Electroheat Technologies have found other benefits of the accelerated austenitizing process. One is the phenomenon of mass (self) quenching. Mass quenching of complex surfaces was only possible in the past with laser heating, where surface temperature is raised very rapidly with intense heat in a very short period of time. This rapid high-intensity heating allows the cold part mass, adjacent to the heated surface, to remove the heat rapidly through natural conduction heat flow.

With improved part quality, reduced part distortion and higher production rates as key benefits, the future looks excellent for accelerated austenitizing using variable frequency heating for induction hardening applications.

Vertical Scanner with PLC and integral quench system.

Bench top high frequency power supply.

Dial table for processing production or pre-production parts.

Cam lobe section of camshaft using our Accelerated Austenitizing™ process

Internal gear hardened using our Accelerated Austenitizing™ Process

Electroheat® Technologies, LLC

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