AHT Furnaces Superior For Tool and Die Heat Treatment

It is essential that tools and dies are correctly heat treated to optimise performance in service.

The cost of heat treatment is often less than 5% of the finished cost of a tool but the life of the tool can be significantly increased with correct heat and surface treatment.

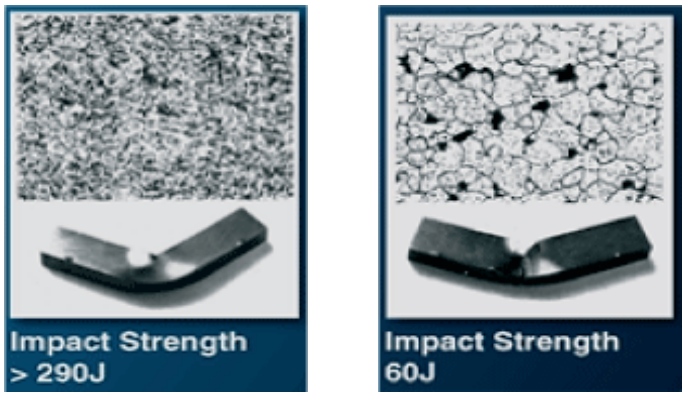
Why AHT Fluidised Bed Furnaces?
There is a wide choice of equipment from vacuum to box furnaces used to heat treat tools but expert heat treaters will tell you they wish they had an equivalent to a salt bath so that tools could be treated individually rather than being placed with a batch of tools into a batch vacuum furnace.

However environmental problems have reduced the use of salt and therefore AHT fluidised bed furnaces offer the best alternative for the following reasons :
- Quality of treatment
- Rapid and uniform heating
- Flexibility
- Controlled cooling rates
- Atmosphere control

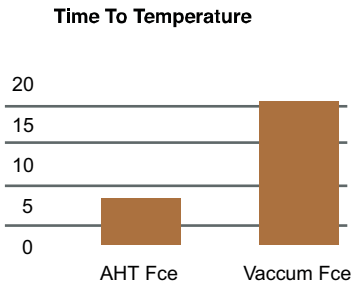
In house and contract heat treaters specialising in tool steels have recognised these advantages with fluidised bed furnaces installed and operating throughout the world.

Advantages
Quality of Treatment
The combination of hardening cycle and the quenching rate of a fluidised bed produces the optimum heat treatment properties as shown by the comparative impact strength of two heat treated H13 samples at 46Rc. one treated in a AHT fluidised bed furnace and the other in a vacuum furnace.

Heat Treated in AHT Furnace



Rapid and Uniform Heating
AHT furnaces heat rapidly as well as exhibiting temperature uniformity of plus minus five (5) degrees F. Typical heating rates of a 25 mm (1 inch) t sample to 1850 F are shown.



Flexibility
In addition to performing the hardening and tempering of tools, the same equipment can be used for nitriding and nitrocarburising. In emergencies, cycles can be easily altered to allow for an urgent tool to be processed

Controlled Cooling Rates
The use of quenching fluidised beds allows a range of cooling rates equivalent to general purpose quenching oil and better than 20 bar cooling in vacuum. Because the quenching bed behaves like a liquid then a uniform cooling rate is achieved across the whole load being processed.

For further information contact:

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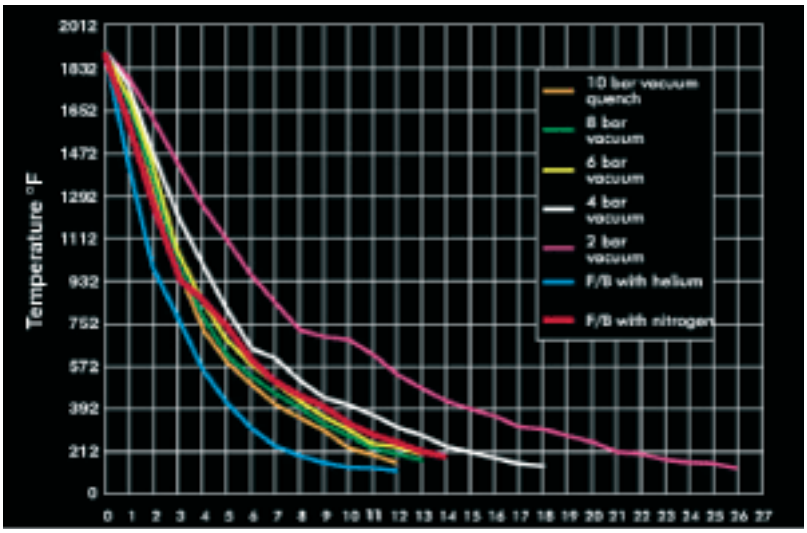
Cooling rates versus vacuum



Atmosphere Control
The use of high purity inert gases in the AHT furnace provides surface integrity In addition reactive gases can be added for surface treatments such as carburising and and nitriding treatments.

ASK ABOUT OUR XPRESS LINE.

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