

Greater flexibility

Commercial heat treater Wegener invests in state-of-the-art salt bath technology

From the very start, which goes back to 1984, the specialists at Wegener Härtetechnik GmbH have been using the Durferrit salt bath technology. In the continued expansion of the company since that time this technology has successfully maintained its place alongside the many other heat treating processes. The latest investment in a highly modern Durferrit salt bath plant, will enable Wegener Härtetechnik GmbH to continue to offer their customers the manifold benefits of that technology.

Salt bath heat treating, which has a well established reputation of producing reliable and excellent results, is re-gaining in popularity in many industries. For example in those industries supporting the automotive branch, in the manufacture of gear units, in the ball bearing industries and with the tool makers. Not only are the excellent results with regard to hardness, shape stability and uniformity responsible for the increase in popularity, but the high degree of flexibility in use also has played a major role in the turnaround of the downward trend prevalent in the 1990s. A further contributing factor responsible for the latest interest in salt bath technology is undoubtedly the increased demand for "bainitic hardening".

Wegener Härtetechnik GmbH uses the Durferrit plant, which was installed in May 2006, mainly for treating gear parts and roller bearing components.

The Works Manager, Dr. Manfred Velten, will shortly be using a further advantage possible with salt baths: "...for treating important test pieces. Within just 30 minutes I have the results for our quality control".

Distortion-prone parts benefit greatly from salt bath heat treatment because oil hardening often causes considerable distortion.

Protective salt film prevents decarburization

Open systems with open pots enable charging to be done when required. Enclosed controlled atmosphere or vacuum plants, however, are not immediately accessible because certain time cycles have to be adhered to.

After being preheated in a circulated air furnace the parts are put into a pot containing molten salt and brought up to the required



Dr. Manfred Velten (left) of Wegener Härtetechnik GmbH says: "...with the Durferrit salt bath plant, in combination with other heat treating processes, we can meet all market requirements for high quality heat treating technology".

end temperature. The heating through is particularly uniform throughout the component, and is of the exact temperature due to the absolute contact of the salt melt with the complete surface of the part. There is no decarburization, not even during quenching, because a protective salt film always remains on the component.

The decision to invest in salt bath hardening was also influenced by the customers. Repeated requests on their part, and the fact that it was being specified more and more by them for the hardening, made the choice inevitable. Wegener's customers have experienced immediate benefit from the good reproducibility of the processes and

the constantly high quality of the treated parts – they now have a clear quality advantage in the market.

For Dr. Velten, a strong argument in favour of the new plant was not only the investment itself but also the environment-friendly aspects of the equipment. "We have decided in favour of a unit which is provided with a special cleaning cascade and an evaporator. This simplifies handling when removing the salt from the work pieces. In this way the amounts of effluents usually involved are reduced, and also the disposal costs. This refutes the old prejudice that salt bath processes are not clean and are harmful to the environment."

Plant construction and salt producer: Durferriit offers complete process know-how

A major benefit for customers is that Durrferri GmbH not only builds the plants but also produces the salts. In this way, systems can be specially designed to meet customers' exact requirements. From the planning to the correct choice of salt, to the training of operators through to the excellent service, customers can be sure of the complete support and extensive know-how of the world leader for salt bath heat treating facilities. Particularly the correct choice of heat treating process according to metallographic standards, and the selection of the most suitable furnace of the correct size, requires years of experience. This also applies to the maintenance of the plant and the desludging equipment in the salt quenching baths.

Salt bath plant completes the range

With the new plant, in combination with the other heat treating processes, Wegener Härtetechnik GmbH can meet all market demands for high quality heat treating technology. The wide range of products, plus high quality, makes a continued rise in market position – as in the past two decades – a realistic hope.

Your contact:

Durferrit GmbH
Industriestaße 3
68169 Mannheim

Phone +49 (0) 6 21 / 3 22 24-0

www.durferrit.com

Wegener Härtetechnik GmbH
Michelinstraße 4
66424 Homburg
Phone +49 (0) 68 41/9 72 80 10

www.wegener-haertetechnik.de

