

UniCase Master and ZeroFlow methods

During this year's Heat Treatment Congress, Seco/Warwick will be presenting the ZeroFlow method, a unique technology that performs the nitriding process with the use of only a single-component atmosphere – raw ammonia (NH₃). This innovative solution was developed by Seco/Warwick in collaboration with Professor Leszek Małdziński from the Institute of Work Machines and Vehicles of the Technical University in Poznań.

What distinguishes the ZeroFlow method is reduction of ammonia and nitrogen consumption by several times in relation to the double-gas nitriding (ammonia + nitrogen or ammonia + NH₃ diss.), which significantly influences the reduction of furnace operational costs. ZeroFlow, when compared to other methods, offers a simple and automatic nitriding atmosphere adjustment by the periodical addition of raw NH₃; a simple operation and simplified gas system. There is no need to install an additional mass valve for nitrogen or dissociated ammonia, and in most cases, an ammonia dissociator is not needed. Additionally, the creation of lower amounts of nitriding atmosphere allows for using a smaller atmosphere burner, which reduces the burner price and emission of harmful gases in to the atmosphere. It is an environmentally friendly nitriding process that meets most urban requirements.

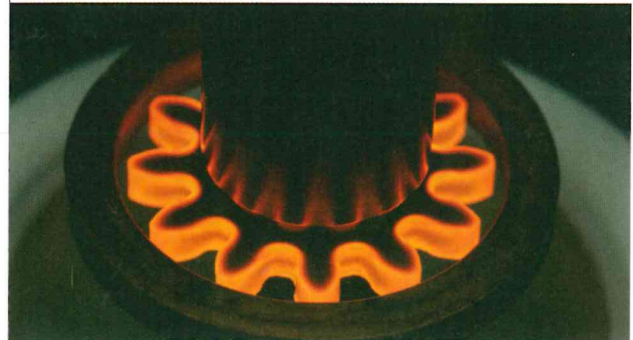
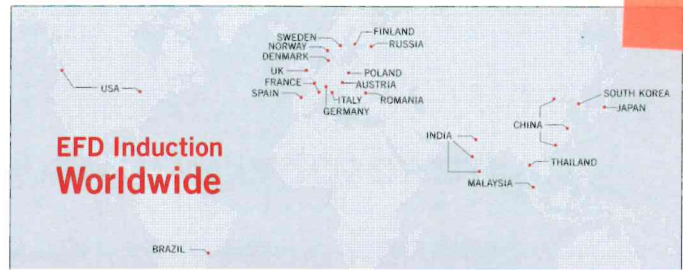
The Heat Treatment Congress 2016 will also showcase a new concept, a single-piece flow case hardening system developed by Seco/Warwick, UniCase Master (UCM), an innovation that revolutionizes both the equipment and process for the continuous heat treatment of gears.

The main advantage of the UniCase Master over technologies in current use is that it addresses the major causes of deformation during heat treatment by controlling, correcting and eliminating distortion. A UniCase Master compact system, designed for high-volume gear heat treating, ensures ideal repeatability of results, gear after gear. This system is ideal for lean manufacturing configurations and can be easily integrated into machining centres.

Seco/Warwick Europe Sp. z o.o.

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Hall 4.1 / Booth E-060



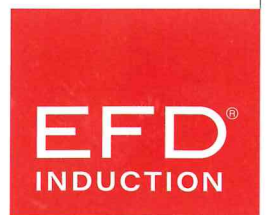
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