

# TEM News

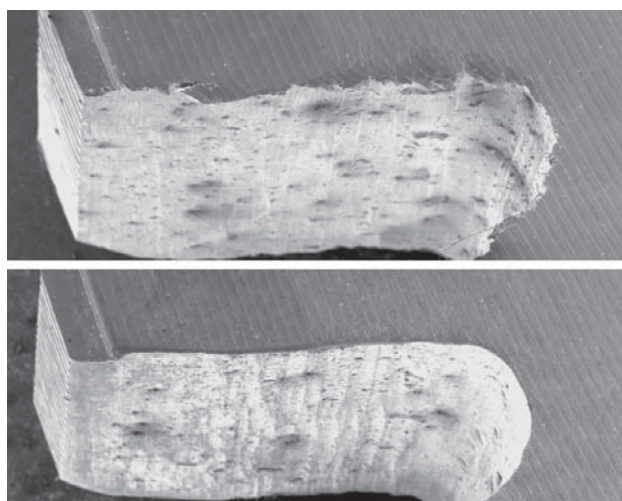
ATL Anlagentechnik Luhden GmbH - Machines for Thermal Deburring

## Zinc Diecasting - Substantial Savings through TEM

### What is TEM?

Thermal deburring (TEM) is a process of removing burrs caused by production - like separation burrs on zinc diecasting parts - from various machine parts. For this purpose, the workpieces are placed in a bell-shaped deburring chamber which is hydraulically closed by a closing plate.

An accurately defined mixture of gases is fed into the deburring chamber via a gas metering system and ignited by a spark. The temperature of the subsequent combustion ranges from 2,500 to 3,300 °C (4,532 to 5,972 °F) and rises above the ignition temperature of the burr. The excess oxygen inside the deburring chamber leads to a chemical reaction which vaporizes the burr completely within 20 ms.



Workpiece before and after TEM - shown here with a scanning electron microscope

### What are the key benefits of TEM deburring regarding zinc diecasting parts (ZAMAK)?

You will save time and money at high quality and repeatability! Flashes and cutting burrs are reliably removed as well as loose chips and inaccessible burrs. Short cycle times and low personnel and process costs are further, but not negligible advantages.



Zinc diecasting part before and after TEM

**The TEM process replaces conventional methods like shot blasting, tumbling and manual deburring!**



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## Bulk Goods - Deburring of about 12,000 kg a Day!

Bulk goods made of zinc diecasting (ZAMAK) can be deburred in a matter of seconds. Within an 8-hour-shift, approximately 6,000 kg of bulk goods can be deburred in a deburring chamber with the size of  $\varnothing$  250 x 300 mm and with a deburring chamber size of  $\varnothing$  400 x 300 mm even about 12,000 kg are possible!

Due to a high vertical integration we offer our customers a wide range of TEM machines with different deburring chamber sizes by default.



Equipping of the TEM machine iTEm400



Positioning of the cage on the closing plate



Cage with bulk goods for the deburring chamber  $\varnothing$  400 x 300 mm



Examples of use