

## COATING SYSTEM FOR CYLINDER HEAD CASTING

### FOR RELIABLE MOULD FILLING AND EXTENDED SERVICE TIME

Cylinder head casting is driven by high demands in quality, soundness of the calotte surface and the area around. The calotte area is actively cooled. No surface irritation is allowed. In other areas, many thin walled ribs grant stiffness of the component. These areas are often affected by misruns. The mass volume production should not be interrupted by coat maintenance interventions. These are coat-related challenges in cylinder head LPDC/GDC.

**The base coating Nanocomp V7HI adheres well on the mould. It provides excellent mould filling properties by its good insulation, adjustable by coat thickness control.**

**The nanoceramic Top Coat Nanocomp MM12 protects the base coat and avoids irritation at the casting surface. This grants a highly improved service time.**



**Nanocomp V7HI** may be applied above 140°C. This avoids moisture defects on actively cooled mould sections after touch-ups.

Insulating ingredients provide good insulation, when the coating is applied > 70µm. So, reliable mould filling is granted. Thinly applied, it can be used on the calotte side. This is the most successful setting. Roughness and insulation effect can be adjusted by dilution and coat thickness.

If a very conductive setting is (locally) required, a fine layer of **Nanocomp VL** is the ideal, smooth alternative.

With these base coatings, reliable mould filling and good DAS-values can be expected.

**Nanocomp MM12** is applied thinly on the base coating. It provides perfect finishing and an extremely extended service time. Coating related process interventions are avoided for 1000 castings and more.

*Let your process flow!*

#### Benefit

- Reliable mould filling
- Reduced quality cost
- Improved productivity
- Less coat maintenance interventions
- Improved OEE

#### Coatings for efficient processing

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