

Heat Treatment of MIM parts by Hot Isostatic Pressing

Wednesday, 6 December 2017 18:00 (2 hours)

MIM is an excellent process to produce smaller parts in large numbers for many industries, i.e. Automotive, Medical, Dental and Aerospace.

However, even after the final sintering residual pores exist within the material. To remove these pores, Hot Isostatic Pressing or HIP is the obvious choice. By applying a HIP step, pores will be eliminated and the density will increase to virtually 100% of theoretical density. This pore elimination will improve the strength, ductility and especially the fatigue properties of the material and residual stresses will also be eliminated.

Today, it is possible to combine HIPing and heat treatment in a specifically designed HIP equipped with Uniform Rapid Quenching (URQ®) or Uniform Rapid Cooling (URC®). This paper will describe the process and benefits of HIP of MIM parts together with the possibilities and advantages of combining the HIP process and heat treatment in a Rapid Cool HIP.

Please choose topic

HIP Process

Primary author: Dr EKLUND, ANDERS (QUINTUS TECHNOLOGIES AB)

Co-author: Mr AHLFORS, Magnus (Quintus Technologies AB)

Presenter: Dr EKLUND, ANDERS (QUINTUS TECHNOLOGIES AB)

Session Classification: Poster Session

Track Classification: HIP Process