Aluminium VCT Sprocket and Rotor

Company: SHW Automotive GmbH

Application Sector: Automotive

Requirements: The rotor and sprocket are used in an automotive cam-phaser application where fuel saving through weight reduction is required. These are the first known such components being manufactured from aluminium powder metal in large scale production.

Benefits: Using aluminium metal powder combines the benefits from standard sintered iron components (like near net shape capability) with the advantages of lightweight materials. Compared to a standard PM iron cam-phaser design, weight is reduced from 900 grams to 450 grams. Rotating inertia is reduced as well, improving dynamic response behaviour of the cam-phaser, thus giving another benefit to engine performance and efficiency.

Product Density: (g/cm³) 2.65
Product Tensile Strength: 300MPa
Product Hardness: 700 + 200
Finishing: Sizing, Tempering, Machining

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