

Title (en)

WEAR-RESISTANT CAMSHAFT AND METHOD OF PRODUCING THE SAME

Title (de)

VERSCHLEISSBESTÄNDIGE NOCKENWELLE UND VERFAHREN ZU IHRER HERSTELLUNG

Title (fr)

ARBRE A CAMES RESISTANT A L'USURE ET PROCEDE PERMETTANT DE LE PRODUIRE

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Application

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Abstract (en)

[origin: DE19637464C1] The invention concerns a wear-resistant camshaft and a method of producing the same. Objects to which the invention is advantageously applicable include all cast-iron parts which are subject to wear as a result of lubricated friction. The wear-resistant camshaft consists of cast-iron and comprises a surface layer consisting of a ledeburitic recast layer with a high cementite portion and, lying therebelow, a martensitic hardening zone. According to the invention, the recast layer consists of finely dispersed ledeburitic cementite with thicknesses of $\leq 0.1 \mu\text{m}$ and a metallic matrix comprising a phase mixture of martensite and/or bainite, residual austenite and less than 20 % finely laminated perlite with a distance of $\leq 0.1 \mu\text{m}$ between the laminations. The hardening layer is formed from a phase mixture of martensite and/or bainite, partially dissolved perlite and residual austenite. This wear-resistant camshaft according to the invention is produced by means of a high-energy surface recasting method.

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