

Title (en)

PROCESS FOR MANUFACTURING HOT-FORGED PARTS MADE OF A MAGNESIUM ALLOY

Title (de)

VERFAHREN ZUR HERSTELLUNG VON HEISS GESCHMIEDETEN TEILEN AUS EINER MAGNESIUMLEGIERUNG

Title (fr)

PROCEDE DE FABRICATION DE PIECES FORGEES A CHAUD EN ALLIAGE DE MAGNESIUM

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Application

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Abstract (en)

[origin: WO2008009825A2] The present invention relates to a process for manufacturing a part made of a magnesium alloy, comprising a step of forging a block of said alloy followed by a heat treatment, characterized in that the alloy is a foundry alloy based on 85% magnesium and containing, by weight: 0.2 to 1.3% zinc, 2 to 4.5% neodymium, 0.2 to 7.0% rare-earth metal with an atomic weight from 62 to 71 and 0.2 to 1.0% zirconium and in that the open-die/closed-die forging is carried out at a temperature above 400°C. In particular, the temperature is between 420 and 430°C and the forging step comprises plastic deformation carried out at a slow rate. The process allows parts to be obtained such as casing elements for aeronautical machines, operating at temperatures of around 200°C and having good ageing resistance.

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