

Title (en)
MAGNESIUM-ALLOY MEMBER, COMPRESSOR FOR USE IN AIR CONDITIONER, AND METHOD FOR MANUFACTURING MAGNESIUM-ALLOY MEMBER

Title (de)
MAGNESIUMLEGIERUNGSELEMENT, VERDICHTER FÜR EINE KLIMAAANLAGE UND VERFAHREN ZUR HERSTELLUNG EINES MAGNESIUMLEGIERUNGSELEMENTS

Title (fr)
ÉLÉMENT EN ALLIAGE DE MAGNÉSIUM, COMPRESSEUR DESTINÉ À ÊTRE UTILISÉ DANS UN CONDITIONNEUR D'AIR ET PROCÉDÉ DE FABRICATION D'UN ÉLÉMENT EN ALLIAGE DE MAGNÉSIUM

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Application
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Abstract (en)
The present invention provides a magnesium alloy member and a method for manufacturing a magnesium alloy member capable of achieving a mechanical strength and a high-temperature fatigue strength sufficient to apply them to mechanical parts of a compressor for automotive air conditioners. The invention also provides a compressor for air conditioners using, as a mechanical part thereof, a magnesium alloy equipped with a necessary mechanical strength and high-temperature fatigue strength. More specifically, a magnesium alloy member is formed by subjecting a cast material of a magnesium alloy containing, on the basis of mass%, from 0.3% to 10% calcium (Ca), from 0.2% to 15% aluminum (Al), and from 0.05% to 1.5% manganese (Mn), and containing calcium (Ca) and aluminum (Al) at a calcium/aluminum mass ratio of from 0.6 to 1.7, with the balance being magnesium (Mg) and inevitable impurities to plastic working (extrusion processing) at from 250°C to 500°C. This makes it possible to obtain a magnesium alloy member having a room-temperature 0.2% proof stress of 300 MPa or more and a 150°C fatigue strength of 100 MPa or greater. The magnesium alloy member used for the formation of mechanical parts of a compressor for automotive air conditioners contributes to a reduction in the weight of the compressor.

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