

Title (en)
MG-AL MAGNESIUM ALLOY, PREPARATION METHOD FOR TUBE MADE OF MG-AL MAGNESIUM ALLOY, APPLICATION OF MG-AL MAGNESIUM ALLOY

Title (de)
MG-AL-MAGNESIUMLEGIERUNG, HERSTELLUNGSVERFAHREN FÜR ROHR AUS MG-AL-MAGNESIUMLEGIERUNG, ANWENDUNG EINER MG-AL-MAGNESIUMLEGIERUNG

Title (fr)
ALLIAGE DE MAGNÉSIUM MG-AL, PROCÉDÉ DE PRÉPARATION POUR TUBE CONSTITUÉ D'ALLIAGE DE MAGNÉSIUM MG-AL, APPLICATION D'ALLIAGE DE MAGNÉSIUM MG-AL

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Abstract (en)
The present disclosure discloses a Mg-Al based magnesium alloy, and a preparation method of a tube and an application of the same, and belongs to the technical field of alloy materials. The magnesium alloy includes, by weight percentage, 7.0-8.6% Al, 0.8-2.0% RE, 0.2-0.8% Mn, and a balance of Mg, and the magnesium alloy has an elongation of 15-22%. The preparation method of a tube of the Mg-Al based magnesium alloy includes: mixing and smelting an Al source, a RE source, a Mn source, and a Mg source to give a liquid mixed metal; casting the liquid mixed metal into a bar through semi-continuous casting; performing homogenization heat treatment on the bar at 360-400 °C for 6-10h; and performing extrusion-forming on the heat-treated bar to obtain a magnesium alloy tube. The Mg-Al based magnesium alloy of the present disclosure has high elongation, and the elongation of the tube formed using the same can reach 15-22%, so that it can withstand large plastic deformation. Meanwhile, the Mg-Al based magnesium alloy has excellent welding performance and a welding loss rate of less than 6%, which greatly reduces the strength loss of magnesium alloy profiles after welding. The Mg-Al based magnesium alloy can be used in the fields of vehicle equipment and medical equipment.

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