

Title (en)

METHOD FOR PRODUCING R-T-B BASED RARE EARTH ELEMENT PERMANENT MAGNET

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES SELTENERDELEMENT-PERMANENTMAGNETEN AUF R-T-B-BASIS

Title (fr)

METHODE DE PRODUCTION D'UN AIMANT PERMANENT A ELEMENTS DES TERRES RARES EN ALLIAGE DE R-T-B

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Application

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Abstract (en)

A method for manufacturing an R-T-B system rare earth permanent magnet that is a sintered body comprising a main phase consisting of an R2T14B phase (wherein R represents one or more rare earth elements (providing that the rare earth elements include Y), and T represents one or more transition metal elements essentially containing Fe, or Fe and Co), and a grain boundary phase containing a higher amount of R than the above main phase, wherein a product that is rich in Zr exists in the above R2T14B phase, the above manufacturing method comprising the steps of: preparing an R-T-B alloy containing as a main component the R2T14B phase and also containing Zr, and an R-T alloy containing R and T as main components, wherein the amount of R is higher than that of the above R-T-B alloy; obtaining a mixture of the R-T-B alloy powder and the R-T alloy powder; preparing a compacted body with a certain form from the above mixture; and sintering the above compacted body, wherein, in the above sintering step, the above product is generated in the above R2T14B phase. <IMAGE>

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