

Title (en)
METALLIC MATERIAL WHICH IS SOLID SOLUTION OF BODY-CENTERED CUBIC (BCC) STRUCTURE HAVING CONTROLLED CRYSTAL AXIS<001>ORIENTATION, AND PROCESS FOR PRODUCING SAME

Title (de)
METALLISCHES MATERIAL ALS FESTE LÖSUNG FÜR EIN KUBISCH-INNENZENTRIERTES GITTER MIT GESTEUERTER KRISTALLACHSEN-AUSRICHTUNG UND HERSTELLUNGSVERFAHREN DAFÜR

Title (fr)
MATÉRIAU MÉTALLIQUE QUI EST UNE SOLUTION SOLIDE D'UNE STRUCTURE CUBIQUE À CORPS CENTRÉ (BCC) AYANT UNE ORIENTATION CONTRÔLÉE DES AXES CRISTALLINS<001>, ET SON PROCÉDÉ DE FABRICATION

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Abstract (en)
An orientation of crystal axis <001> of the metallic material as a solid solution having a structure of body-centered cubic (BCC) is arranged along a work surface of the metallic material by hot rolling process in a temperature range of structuring the metallic material to be BCC single phase solid solution. For example, Fe-Si alloy as the metallic material is heated in the temperature range for BCC single phase solid solution, and processed so as to arrange the orientation of crystal axis <001> along the work surface by pressing the BCC single phase solid solution in a strain rate to maintain work condition for controlling motion of dislocation by atmosphere of solute atom generated in BCC single solid solution and migrating grain boundary by strain energy stored in a crystal grain as driving force.

IPC 8 full level
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