

Title (en)

METHOD FOR THE NEAR NET SHAPE MANUFACTURE OF HIGH TEMPERATURE RESISTANT JET ENGINE COMPONENTS

Title (de)

VERFAHREN ZUR ENDKONTURNAHEN FERTIGUNG VON HOCHTEMPERATURBESTÄNDIGEN TRIEBWERKSBAUTEILEN

Title (fr)

PROCÉDÉ POUR PRODUIRE, AVEC DES FORMES TRÈS PRÉCISES, DES ÉLÉMENTS STRUCTURAUX DE SYSTÈME D'ENTRAÎNEMENT À HAUTE RÉSISTANCE THERMIQUE

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Application

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Abstract (en)

[origin: WO2012069374A1] For the near net shape manufacture of a high temperature resistant and complex structural component a high-melt portion of an intermetallic phase which is present as a metal powder is mixed with a binder and the feedstock so produced is used to manufacture a substantially near net shape green compact by powdered metal injection molding, the low melting portion of the intermetallic phase infiltrating the pores that remain after removal of the binder from the green compact. The brown compact so produced is - optionally once a previous mechanical treatment is finished - subjected to a heat treatment for producing the intermetallic phase, said heat treatment being specific depending on the metallic phases used. The invention allows the cost-effective manufacture of jet engine components having a geometrically complex structure from intermetallic phases.

IPC 8 full level

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