

Title (en)

An apparatus and a method of manufacturing an article by consolidating powder material

Title (de)

Verfahren und Vorrichtung zur Herstellung eines Formkörpers durch Verdichtung von Pulvermaterial

Title (fr)

Procédé et installation pour la préparation d'une ébauche par mise en forme de poudre

Publication

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Application

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Priority

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Abstract (en)

A method of manufacturing an article by consolidating powder material comprises forming a non-deformable tool (12) and a deformable tool (14). The non-deformable tool (12) comprises a plurality of tool parts (16,18). The non-deformable tool (12) defines a first cavity (20) having an open end (22) and the first cavity (20) corresponds in shape to that of the article. The non-deformable tool (12) is encapsulated in the deformable tool (14) and the non-deformable tool (12) and the deformable tool (14) define a second cavity (24) interconnected with the first cavity (20). The first and second cavities are filled with powder material (26). The deformable tool (14) is evacuated and sealed. Heat and pressure are applied to the deformable tool (14) and non-deformable tool (12) to consolidate the powder material (26) to form an article (30) in the first cavity (20) of the non-deformable tool (12). The method is used to make compressor blades, compressor vanes or compressor blisks for gas turbine engines.

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