

Title (en)
DYNAMIC BONDING OF POWDER METALLURGY MATERIALS

Title (de)
DYNAMISCHE VERBINDUNG VON PULVERMETALLURGIEMATERIALIEN

Title (fr)
LIAISON DYNAMIQUE DE MATÉRIAUX DE LA MÉTALLURGIE DES POUDRES

Publication
EP 3187283 B1 20200311 (EN)

Application
EP 16206377 A 20161222

Priority
US 201514982627 A 20151229

Abstract (en)
[origin: EP3187283A1] A dynamic compaction process comprising providing a preform (20; 112) including forming a first container (28) having an interior and an exterior. Filling the interior of the first container (28) with a first powder material (22); sealing the first container (28); subjecting the exterior of the first container (28) to an instantaneous dynamic compaction, forming a solid powder metallurgy billet (210) encased by the first container (28). The process includes attaching a second container (116) to a portion of the preform (20; 112), filling the second container (116) with a second powder material (110, 118); subjecting the exterior of the second container (116) to an instantaneous dynamic compaction. The process includes forming a second solid powder metallurgy material (24; 110, 118) from the second powder material (24; 110, 118) encased by the second container (116). The process includes bonding the second solid powder metallurgy material (24; 110, 118) to the portion of the preform (20; 112); and removing the second container (116) from the component precursor (10; 100).

IPC 8 full level
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Citation (examination)
• US 5161950 A 19921110 - KRUEGER DANIEL D [US], et al
• G. SETHI ET AL: "An overview of dynamic compaction in powder metallurgy", INTERNATIONAL MATERIALS REVIEWS, vol. 53, no. 4, 1 July 2008 (2008-07-01), US, pages 219 - 234, XP055514575, ISSN: 0950-6608, DOI: 10.1179/174328008X309690

Cited by
CN114829062A; CN115070039A; CN115070040A; CN115070043A; CN115070044A; CN115070041A

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