

Title (en)  
UBER-COOLED MULTI-ALLOY INTEGRALLY BLADED ROTOR

Title (de)  
ÜBERKÜHLTER GANZHEITLICH BESCHAUFELTER ROTOR AUS MEHREREN LEGIERUNGEN

Title (fr)  
ROTOR À PALES INTÉGRÉES À MULTI-ALLIAGE SURREFROIDI

Publication  
**EP 2900930 A4 20160518 (EN)**

Application  
**EP 13841587 A 20130924**

Priority  
• US 201213630120 A 20120928  
• US 2013061427 W 20130924

Abstract (en)  
[origin: WO2014052320A1] Uber-cooled multi-alloy integrally bladed rotors (IBR) are made having blades with internal cooling passages with a cavity in the root portion attached to a disk having a protrusion on the periphery of the disk. The blades are put on the protrusion and the blade and disk are forced together, followed by locally heating the blade cavity/disk protrusion to a temperature between the blade and disk material softening temperatures, causing the protrusion to deform against the blade cavity, and holding them in place until bonding occurs. Subsequent to bonding the portion of the blade that defines the cavity is removed.

IPC 8 full level  
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CPC (source: EP US)  
**F01D 5/18** (2013.01 - US); **F01D 5/28** (2013.01 - EP US); **F01D 5/30** (2013.01 - EP US); **F01D 5/34** (2013.01 - EP US); **F02C 7/00** (2013.01 - EP US); **F05D 2230/40** (2013.01 - EP US); **Y10T 29/49339** (2015.01 - EP US)

Citation (search report)  
• [Y] US 4864706 A 19890912 - JENKEL STEVEN D [US]  
• [Y] US 5113583 A 19920519 - JENKEL STEVEN D [US], et al  
• [A] US 6283714 B1 20010904 - RIGNEY JOSEPH D [US], et al  
• [A] US 4784573 A 19881115 - RESS JR ROBERT [US]  
• See references of WO 2014052320A1

Designated contracting state (EPC)  
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