

Title (en)

A way to manufacture inserts for steam cooled hot gas path components

Title (de)

Verfahren zur Herstellung von Einsätzen für dampfgekühlte und heissem Gasfluss ausgesetzte Komponenten

Title (fr)

Procédé de fabrication d'inserts pour des composants placés dans un courant de gas chauds et refroidis par vapeur

Publication

EP 1358958 A1 20031105 (EN)

Application

EP 03252630 A 20030425

Priority

US 13113702 A 20020425

Abstract (en)

A method for forming inserts for steam cooled hot gas path components involves casting the inserts (10) and laser drilling (14) the cast inserts (10) with the ceramic casting core (12) still in place. Thereafter, the ceramic core (12) is removed through the use of a leachant. By laser drilling (14) the holes (16) with the ceramic core (12) still in place, the ceramic core (12) acts as a backer during the laser drilling (14) which results in more precise drilling of the inserts (10) and reduced processing time. <IMAGE>

IPC 1-7

B22D 29/00; **F01D 5/18**; **B22C 9/04**

IPC 8 full level

B22C 9/04 (2006.01); **B22C 9/24** (2006.01); **B22D 13/06** (2006.01); **B22D 18/02** (2006.01); **B22D 21/00** (2006.01); **B22D 29/00** (2006.01); **F01D 5/18** (2006.01); **F01D 5/28** (2006.01); **F01D 9/02** (2006.01); **F02C 7/00** (2006.01)

CPC (source: EP KR US)

B22C 9/04 (2013.01 - EP US); **B22D 19/00** (2013.01 - KR); **B22D 29/002** (2013.01 - EP US)

Citation (search report)

- [A] EP 0974735 A2 20000126 - GEN ELECTRIC [US]
- [A] US 3858290 A 19750107 - ALBANI PETER E
- [A] GB 2105624 A 19830330 - ROLLS ROYCE [GB]
- [A] US 5465780 A 19951114 - MUNTNER MICHAEL S [US], et al
- [A] US 3694264 A 19720926 - WEINLAND STUART L, et al

Cited by

CN106825503A; EP2471615A1; US10099283B2; US8828214B2; US9987677B2; US9968991B2; US10150158B2; US10137499B2; US10099276B2; US10099284B2; US10335853B2; US10046389B2; US10118217B2; US10286450B2; US10981221B2; US9975176B2

Designated contracting state (EPC)

CH DE FR GB IT LI

DOCDB simple family (publication)

EP 1358958 A1 20031105; **EP 1358958 B1 20050330**; DE 60300436 D1 20050504; DE 60300436 T2 20060209; JP 2004003470 A 20040108; KR 20030084716 A 20031101; US 2003201087 A1 20031030

DOCDB simple family (application)

EP 03252630 A 20030425; DE 60300436 T 20030425; JP 2003119168 A 20030424; KR 20030025889 A 20030424; US 13113702 A 20020425