

Title (en)

Cast compressor articles and methods of forming same

Title (de)

Gussformkompressorartikel und Formverfahren dafür

Title (fr)

Articles de compresseur moulé et leurs procédés de formation

Publication

EP 2302088 A1 20110330 (EN)

Application

EP 10175726 A 20100908

Priority

US 56795709 A 20090928

Abstract (en)

Methods of forming a compressor article such as a cast airfoil, a stator, a blade, a gas turbine, and a gas turbine shell via casting are presented. The methods include: preparing an iron-manganese-aluminum-silicon-carbon (Fe-Mn-Al-Si-C) based alloy; casting the Fe-Mn-Al-Si-C based alloy, wherein a cast has a shape of the compressor article; and performing post-casting finishing thereby forming the compressor article.

IPC 8 full level

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CPC (source: EP US)

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C21D 6/005 (2013.01 - EP US); **C21D 6/02** (2013.01 - EP US); **C21D 2211/001** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US)

Citation (search report)

- [XA] GB 841366 A 19600713 - Langley Alloys Ltd [GB] & DE 1262613 B 19680307 - Langley Alloys Ltd [GB]
- [X] GB 2220674 A 19900117 - Nat Science Council [TW]
- [XP] WO 2010052052 A1 20100514 - Siemens AG [DE], et al
- [A] US 4944814 A 19900731 - Zimmer James M [US], et al
- [A] US 1892316 A 19321227 - Alton Mitchell H, et al
- [A] DE 102005057599 A1 20070606 - Volkswagen AG [DE]
- [A] ALTSTETTER C J ET AL: "PROCESSING AND PROPERTIES OF Fe-Mn-Al ALLOYS", MATERIALS SCIENCE ENGINEERING, ELSEVIER SEQUOIA, LAUSANNE, CH, vol. 82, 1 September 1986 (1986-09-01), pages 13 - 25, XP002407487, ISSN: 0025-5416, DOI: 10.1016/0025-5416(86)90091-1

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