

Title (en)

IMPROVEMENTS RELATING TO THE METAL ALLOY COMPONENTS AND THEIR MANUFACTURE

Title (de)

VERBESSERUNGEN IM ZUSAMMENHANG MIT METALLLEGIERUNGSKOMPONENTEN UND DEREN HERSTELLUNG

Title (fr)

AMÉLIORATIONS RELATIVES À DES COMPOSANTS D'ALLIAGE MÉTALLIQUE ET LEUR FABRICATION

Publication

EP 3533897 A1 20190904 (EN)

Application

EP 18159319 A 20180228

Priority

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Abstract (en)

A component comprising at least two different iron-based compositions in different regions of the component, including a first iron-based composition comprising 11.0-15.0 wt% chromium; 1.0-4.0 wt% nickel; 5.0-8.0 wt% cobalt; and iron. The first iron-based composition may also comprise 2.0-6.0 wt% copper, 4.0-7.0 wt% molybdenum and one or more of niobium, manganese, silicon, and phosphorous. The component may be a compressor aerofoil for a gas turbine. A metal injection moulding method for forming a component and an apparatus for carrying out said method are also provided. The composition of the component and/or the method and apparatus may provide a reduction in delta ferrite formation in the component and an improvement in mechanical properties of the component, particularly in relation to compressor aerofoils.

IPC 8 full level

C22C 38/02 (2006.01); **B22F 3/22** (2006.01); **B22F 5/04** (2006.01); **B23P 15/04** (2006.01); **C22C 38/04** (2006.01); **C22C 38/42** (2006.01); **C22C 38/44** (2006.01); **C22C 38/48** (2006.01); **C22C 38/52** (2006.01); **F01D 5/00** (2006.01); **F01D 5/28** (2006.01)

CPC (source: EP US)

B22F 3/225 (2013.01 - EP); **B22F 5/04** (2013.01 - EP); **B22F 7/06** (2013.01 - EP); **C22C 38/02** (2013.01 - EP); **C22C 38/04** (2013.01 - EP); **C22C 38/40** (2013.01 - EP); **C22C 38/42** (2013.01 - EP); **C22C 38/44** (2013.01 - EP); **C22C 38/48** (2013.01 - EP); **C22C 38/52** (2013.01 - EP US); **F01D 5/28** (2013.01 - EP); **B22F 2998/10** (2013.01 - EP); **F05D 2230/21** (2013.01 - EP); **F05D 2230/22** (2013.01 - EP); **F05D 2300/11** (2013.01 - EP); **F05D 2300/132** (2013.01 - EP)

Citation (search report)

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Designated contracting state (EPC)

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