

Title (en)

Precipitation hardening steel with improved toughness and method

Title (de)

Ausscheidungshärtender Stahl mit verbesserter Festigkeit und Verfahren

Title (fr)

Acier à durcissement par précipitation avec ténacité améliorée et procédé

Publication

EP 2853608 B1 20170927 (EN)

Application

EP 14175600 A 20140703

Priority

US 201314038229 A 20130926

Abstract (en)

[origin: EP2853608A1] In some aspects, a heat treatment process (200) is described for precipitation hardening steel. The heat treatment process (200) can include a solution treatment (202) for a precipitation hardening steel part. The solution treatment (202) includes heating the precipitation hardening steel part to an austenitizing temperature. The heat treatment process (200) can also include a quenching or cooling treatment (204, 206), in which the precipitation hardening steel part is cooled to a martensitizing temperature. The heat treatment process (200) can also include an aging treatment (210), in which the precipitation hardening steel part is heated to a temperature of 1000 °F and held at that temperature for five or more hours until a fracture toughness of the precipitation hardening steel part is greater than 120 ksi##in.

IPC 8 full level

C21D 1/74 (2006.01); **C21D 6/00** (2006.01); **C21D 6/02** (2006.01); **C21D 6/04** (2006.01)

CPC (source: EP US)

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C21D 6/04 (2013.01 - EP US); **C21D 9/0068** (2013.01 - EP US); **C22C 38/40** (2013.01 - US); **C21D 2211/008** (2013.01 - EP US)

Cited by

CN105331786A; CN110724794A

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