

Title (en)

ALLOYS AND METHODS TO DEVELOP YIELD STRENGTH DISTRIBUTIONS DURING FORMATION OF METAL PARTS

Title (de)

LEGIERUNGEN UND VERFAHREN ZUR ENTWICKLUNG VON STRECKGRENZENVERTEILUNGEN WÄHREND DER HERSTELLUNG VON METALLTEILEN

Title (fr)

ALLIAGES ET PROCÉDÉS DE DÉVELOPPEMENT DE DISTRIBUTIONS DE LIMITE D'ÉLASTICITÉ AU COURS DE LA FORMATION DE PIÈCES MÉTALLIQUES

Publication

EP 3740596 A1 20201125 (EN)

Application

EP 18900995 A 20181221

Priority

- US 201862618356 P 20180117
- US 2018067119 W 20181221

Abstract (en)

[origin: US2019217363A1] This invention is related to a method to increase the strength of a metal stamping by supplying a metal blank which has the ability to strengthen in-situ during stamping to achieve sets of properties not expected and much higher based on the starting properties of the blank.

IPC 8 full level

C21D 7/13 (2006.01); **C21D 8/00** (2006.01); **C21D 8/12** (2006.01); **C22C 38/00** (2006.01)

CPC (source: EP US)

B21D 22/02 (2013.01 - US); **C21D 8/0436** (2013.01 - EP US); **C22C 38/02** (2013.01 - EP US); **C22C 38/04** (2013.01 - EP US); **C22C 38/06** (2013.01 - EP US); **C22C 38/34** (2013.01 - EP US); **C22C 38/42** (2013.01 - EP US); **C22C 38/58** (2013.01 - EP US); **B21D 22/00** (2013.01 - EP US); **C21D 9/48** (2013.01 - EP US); **C21D 2211/004** (2013.01 - EP US); **C21D 2211/005** (2013.01 - EP US)

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 2019217363 A1 20190718; CA 3087867 A1 20190725; CN 111615563 A 20200901; EP 3740596 A1 20201125; EP 3740596 A4 20210721; JP 2021511437 A 20210506; JP 7262470 B2 20230421; WO 2019143443 A1 20190725

DOCDB simple family (application)

US 201816229584 A 20181221; CA 3087867 A 20181221; CN 201880087004 A 20181221; EP 18900995 A 20181221; JP 2020539190 A 20181221; US 2018067119 W 20181221