

Title (en)

METHOD AND APPARATUS FOR CREEP FORMING OF AND RELIEVING STRESS IN AN ELONGATED METAL BAR

Title (de)

VERFAHREN UND VORRICHTUNG ZUR KRIECHFORMUNG EINES VERLÄNGERTEN METALLBALKENS UND ZUR BELASTUNGSMINDERUNG DIESES BALKENS

Title (fr)

PROCÉDÉ ET APPAREIL DE FORMATION PAR FLUAGE DE CONTRAINTE ET D'ATTÉNUATION DE CELLE-CI DANS UNE BARRE MÉTALLIQUE ALLONGÉE

Publication

EP 2018234 A2 20090128 (EN)

Application

EP 07794655 A 20070508

Priority

- US 2007011113 W 20070508
- US 43204606 A 20060511

Abstract (en)

[origin: US2007261462A1] A hot creep stretch wrap forming method includes heating a metal bar to a forming temperature within a temperature range suitable for creep deformation thereof, applying a stretching force to the metal bar at a strain rate no greater than 0.05 inch/inch/second, and wrapping the metal bar around a die, preferably having a thermally and/or electrically insulative work surface. The stretching force is typically applied to a strain ranging from 0.5% to 15.0%. The metal bar most preferably is a titanium alloy with a forming temperature ranging from 0.45 to 0.60 of its melting temperature. The wrapped metal bar is held in position and its temperature maintained within the temperature range typically for 5 to 120 minutes for stress relief. Preferably, the metal bar is held substantially at the forming temperature throughout the process. Thermal insulation around the die and metal bar reduce heat loss from the metal bar.

IPC 8 full level

B21D 11/02 (2006.01)

CPC (source: EP KR US)

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Citation (search report)

See references of WO 2007133546A2

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