

Title (en)
FLASH TEMPERING PROCESS AND APPARATUS

Title (de)
FLASH-VORSPANNUNGS-VERFAHREN UND -VORRICHTUNG

Title (fr)
PROCÉDÉ ET APPAREIL DE REVENU ÉCLAIR

Publication
EP 1960558 A2 20080827 (EN)

Application
EP 06851783 A 20061208

Priority
• US 2006046774 W 20061208
• US 74847305 P 20051208
• US 56795606 A 20061207

Abstract (en)
[origin: US2007131319A1] A method for tempering a workpiece is provided. The method includes providing a ferrous alloy workpiece having a martensite and/or bainite phase therein, heating at least a portion of the workpiece to a preselected temperature and then cooling the workpiece to a lower temperature. The preselected temperature is below the austensizing temperature of the alloy and the heating is accomplished in no more than 60 seconds. One embodiment of the present invention heats the workpiece using resistance heating.

IPC 8 full level
C21D 1/04 (2006.01); **C21D 1/10** (2006.01); **C21D 1/26** (2006.01); **C21D 1/34** (2006.01)

CPC (source: EP KR US)
C21D 1/09 (2013.01 - EP US); **C21D 1/10** (2013.01 - EP KR US); **C21D 1/18** (2013.01 - KR); **C21D 1/26** (2013.01 - EP US);
C21D 1/34 (2013.01 - EP US); **C21D 2211/002** (2013.01 - EP US); **C21D 2211/008** (2013.01 - EP US); **Y02P 10/25** (2015.11 - EP US)

Designated contracting state (EPC)
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC NL PL PT RO SE SI SK TR

Designated extension state (EPC)
AL BA HR MK RS

DOCDB simple family (publication)
US 2007131319 A1 20070614; BR PI0620584 A2 20111116; EP 1960558 A2 20080827; EP 1960558 A4 20100901; JP 2009518543 A 20090507;
KR 20080089379 A 20081006; US 2010263770 A1 20101021; WO 2008048307 A2 20080424; WO 2008048307 A3 20080703;
WO 2008048307 A8 20080814

DOCDB simple family (application)
US 56795606 A 20061207; BR PI0620584 A 20061208; EP 06851783 A 20061208; JP 2008544518 A 20061208; KR 20087016334 A 20080704;
US 2006046774 W 20061208; US 82867010 A 20100701