

Title (en)
TITANIUM ALLOY BOLT MANUFACTURING FACILITY AND METHOD FOR MANUFACTURING TITANIUM ALLOY BOLT USING SAME

Title (de)
ANLAGE ZUR HERSTELLUNG EINER TITANLEGIERTEN SCHRAUBE UND VERFAHREN ZUR HERSTELLUNG EINER TITANLEGIERTEN SCHRAUBE

Title (fr)
INSTALLATION POUR FABRIQUER UN BOULON EN ALLIAGE DE TITANE ET PROCÉDÉ DE FABRICATION D'UN BOULON EN ALLIAGE DE TITANE L'UTILISANT

Publication
EP 2543453 B1 20200205 (EN)

Application
EP 09852089 A 20091209

Priority
• KR 2009007354 W 20091209
• KR 20090121529 A 20091209
• KR 20090121534 A 20091209

Abstract (en)
[origin: WO2011071196A1] The present invention relates to a facility for manufacturing titanium alloy bolts, which is capable of making titanium alloy bolts through the warm forging process, and a method for manufacturing titanium alloy bolts using same. The facility for manufacturing a titanium alloy bolt according to the present invention comprises: material supply device (100) for supplying raw material (W) prepared by cutting a rod material formed of a titanium alloy by a predetermined length; loader (200) supplied with raw material (W) from material supply device (100) for conveying the same; heating device (300) for heating raw material (W) which is conveyed along loader (200); forging device (400) provided with forging mold (420) for molding heated raw material (W) into forged component (F); material injecting device (500) for guiding raw material (W) heated by heating device (300) to forging mold (420); a heat treatment device for carrying out the heat treatment of forged component (F); an oxide film removing device for removing an oxide film from the surface of the heat-treated forged component (F); a machining device for machining one side of forged component (F) from which the oxide film has been removed; a rolling device for forming a screw thread on the outer surface of the forged component of which the one side has been machined; and a washing device for washing the surface of a titanium alloy bolt formed with the screw thread. According to this configuration, productivity may be maximized and the dimensional accuracy and mechanical strength of the titanium alloy bolt may be improved.

IPC 8 full level
B21K 1/44 (2006.01); **B21H 3/02** (2006.01); **B21J 1/06** (2006.01); **B21K 27/02** (2006.01); **B21K 29/00** (2006.01); **C21D 9/00** (2006.01); **C22F 1/18** (2006.01); **B21J 3/00** (2006.01); **B21J 5/02** (2006.01); **F27D 3/12** (2006.01)

CPC (source: EP)
B21H 3/02 (2013.01); **B21K 1/44** (2013.01); **B21K 27/02** (2013.01); **B21K 29/00** (2013.01); **C22F 1/183** (2013.01); **B21J 1/06** (2013.01); **B21J 3/00** (2013.01); **B21J 5/02** (2013.01)

Cited by
IT201900018347A1; CN103128506A; CN113714440A; CN106734796A; US2023330739A1; WO2021069961A1

Designated contracting state (EPC)
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 SE SI SK SM TR

DOCDB simple family (publication)
WO 2011071196 A1 20110616; EP 2543453 A1 20130109; EP 2543453 A4 20170719; EP 2543453 B1 20200205

DOCDB simple family (application)
KR 2009007354 W 20091209; EP 09852089 A 20091209