

Title (en)
EXPANDING DEVICE AND METHOD FOR THE PRODUCTION THEREOF

Title (de)
DEHNSPANNEINRICHTUNG UND VERFAHREN ZU DEREN HERSTELLUNG

Title (fr)
DISPOSITIF DE SERRAGE EXTENSIBLE ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 2237916 A1 20101013 (DE)

Application
EP 09703827 A 20090120

Priority
• DE 2009000080 W 20090120
• DE 102008005719 A 20080123

Abstract (en)
[origin: WO2009092365A1] The invention relates to an expanding device made of a base body and a thin-walled expanding bushing made of steel, connected to the base body forming a closed, ring-shaped pressure chamber by means of a solder joint, wherein the pressure chamber can be acted on by a pressure medium under elastic deformation of the expanding bushing, in order to implement a clamping effect for a tool to be received. The invention further relates to a method for producing such an expanding device. While the aim of the invention is to propose an expanding device and a method for the production thereof ensuring a high-strength but elastic connection between the base body and expanding bushing, said aim is achieved in a generic expanding device in that the base body (2) and the expanding bushing (3) are made of steels having different carbon and/or chromium content, so that a high-strength joint is made when joining the base body (2) and the expanding bushing (3) by brazing, by forming columnar crystallites (9) due to alloying of the steel (10) having the lower carbon and/or chromium content. In the method for producing an expanding device wherein a base body is connected to an expanding bushing by high-temperature brazing, the aim is achieved in that steels having different carbon and/or chromium content are used for the base body (2) and the expanding bushing (3), the brazing gap is 10 to 150 µm, and the brazing takes place in a temperature range from 900-1200 °C and at a soak time at the brazing temperature of 1 to 30 min.

IPC 8 full level
B23K 1/00 (2006.01); **B23B 31/30** (2006.01); **B23K 1/19** (2006.01); **B23K 103/04** (2006.01)

CPC (source: EP)
B23B 31/305 (2013.01); **B23K 1/0008** (2013.01); **B23K 1/19** (2013.01); **B23K 2103/04** (2018.07); **B23K 2103/05** (2018.07)

Citation (search report)
See references of WO 2009092365A1

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 TR

Designated extension state (EPC)
AL BA RS

DOCDB simple family (publication)
WO 2009092365 A1 20090730; DE 202008017445 U1 20090903; EP 2237916 A1 20101013

DOCDB simple family (application)
DE 2009000080 W 20090120; DE 202008017445 U 20080123; EP 09703827 A 20090120