

Title (en)
WORKING CYLINDER AND METHOD FOR THE PRODUCTION THEREOF

Title (de)
ARBEITSZYLINDER UND VERFAHREN ZU DESSEN HERSTELLUNG

Title (fr)
CYLINDRE DE TRAVAIL ET SON PROCÉDÉ DE PRODUCTION

Publication
EP 4363727 A1 20240508 (DE)

Application
EP 21746633 A 20210628

Priority
DE 2021000111 W 20210628

Abstract (en)
[origin: WO2023274432A1] The invention relates to a working cylinder, having a cylinder (1) with a cylinder tube (3), and having a piston unit (2), wherein the cylinder (1) has a coupling portion (7a) which has a closure part (4a) and the cylinder tube end portion (5a), wherein the cylinder tube end portion (5a) has a cylinder tube threaded portion (51a), a cylinder tube intermediate portion (52a) and a cylinder tube end (53a), wherein the closure part (4a) has an external thread (8a) and the cylinder tube threaded portion (51a) has an internal thread (9a) corresponding to the external thread (8a), wherein the external thread (8a) and the internal thread (9a) form a common threaded portion which is designed to couple the closure part (4a) and the cylinder tube (3) with a form fit, wherein the cylinder tube end (5a) is connected to the closure part (4a) by integral bonding by means of an encircling annular weld seam (10a), wherein the annular weld seam (10a) is designed as a laser-produced annular weld seam and forms a sealing plane which is tight to pressure medium, wherein, in a operating state under load alleviation, the common threaded portion does not absorb an axial tensile force, and wherein, in the operating state under load, the annular weld seam (10a) and the common threaded portion each absorb an axial tensile force. The invention further relates to a method for the production of such a working cylinder.

IPC 8 full level
F15B 15/14 (2006.01)

CPC (source: EP US)
F15B 15/1438 (2013.01 - EP US); **F15B 15/1447** (2013.01 - 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

Designated validation state (EPC)
KH MA MD TN

DOCDB simple family (publication)
WO 2023274432 A1 20230105; CN 117581028 A 20240220; EP 4363727 A1 20240508; JP 2024525351 A 20240712;
US 2024288009 A1 20240829

DOCDB simple family (application)
DE 2021000111 W 20210628; CN 202180099976 A 20210628; EP 21746633 A 20210628; JP 2023577670 A 20210628;
US 202118573099 A 20210628