

Title (en)
RADIAL FORGING MACHINE WITH HYDRAULIC CYLINDER

Title (de)
RADIALSCHMIEDEMASCHINE MIT HYDRAULIKZYLINDER

Title (fr)
MACHINE DE FORGEAGE RADIAL AVEC VÉRIN HYDRAULIQUE

Publication
EP 3443229 B1 20211110 (DE)

Application
EP 17715115 A 20170331

Priority
• DE 102016205973 A 20160411
• EP 2017057708 W 20170331

Abstract (en)
[origin: WO2017178249A2] The invention relates to a hydraulic cylinder comprising a cylinder (2), a piston element (3) movably guided in the cylinder (2) in a working direction (W) and comprising an active surface (5, 7), and a first opening for feeding a fluid into a cylinder chamber (4, 6) by means of the active surface (5, 7). A working pressure of the fluid acting on the active surface (5, 7) drives the piston element (3) in the working direction (5, 7). The active surface comprises a first partial surface (5) and at least one second partial surface (7), the cylinder chamber being divided into a first sub chamber (4) with the first opening (4a) by means of the first active surface (5) and a second partial surface (6) with a second opening (6a) by means of the second partial surface (7), and the partial surfaces (4, 6) are hydraulically separated from each other at least in a selectable operating mode.

IPC 8 full level
F15B 11/02 (2006.01); **F15B 11/036** (2006.01)

CPC (source: EP US)
B21J 9/12 (2013.01 - US); **F15B 11/022** (2013.01 - EP US); **F15B 11/036** (2013.01 - EP US); **F15B 15/1428** (2013.01 - US); **F15B 15/1447** (2013.01 - US); **F15B 2211/428** (2013.01 - US); **F15B 2211/7055** (2013.01 - EP US); **F15B 2211/75** (2013.01 - EP US); **F15B 2211/775** (2013.01 - EP 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

DOCDB simple family (publication)
DE 102016205973 A1 20171012; CN 109072953 A 20181221; EP 3443229 A2 20190220; EP 3443229 B1 20211110; JP 2019516934 A 20190620; US 11167338 B2 20211109; US 2019217373 A1 20190718; WO 2017178249 A2 20171019; WO 2017178249 A3 20171214

DOCDB simple family (application)
DE 102016205973 A 20160411; CN 201780022864 A 20170331; EP 17715115 A 20170331; EP 2017057708 W 20170331; JP 2019503624 A 20170331; US 201716092871 A 20170331