

Title (en)
DOUBLE ACTING DOUBLE ROD CYLINDER FOR AN EXTRUSION PRESS

Title (de)
GLEICHGANGZYLINDER FÜR STRANGPRESSANLAGEN

Title (fr)
VÉRIN À DOUBLE EFFET AVEC DEUX TIGES POUR UNE PRESSE D'EXTRUSION

Publication
EP 3417178 B1 20210414 (DE)

Application
EP 17702621 A 20170201

Priority
• DE 102016202357 A 20160216
• DE 102016214767 A 20160809
• EP 2017052135 W 20170201

Abstract (en)
[origin: WO2017140499A1] The invention relates to a synchronizing cylinder (1), preferably for an extrusion plant, comprising an outer cylinder (10), an inner cylinder (20) accommodated therein and arranged concentrically thereto, a double-acting working piston (41) that is displaceably provided in the inner cylinder, and a bypass device (50) having a bypass valve (52). The working piston (41) subdivides the inner cylinder (20) into two pressure chambers (42) and can be acted upon by both pressure chambers (42) with a hydraulic fluid. The bypass device (50) is designed such that in a bypass position of the bypass valve (52), a fluid connection between the two pressure chambers (42) is established via a direct connection, preferably at least one bypass line, and in a working position of the bypass valve (52), no such fluid connection exists.

IPC 8 full level
F15B 13/02 (2006.01); **F15B 15/14** (2006.01); **F15B 15/20** (2006.01)

CPC (source: EP KR US)
F15B 11/22 (2013.01 - US); **F15B 13/021** (2013.01 - EP KR US); **F15B 15/1428** (2013.01 - EP KR US); **F15B 15/149** (2013.01 - EP KR US); **F15B 15/202** (2013.01 - EP KR US); **F15B 2211/7054** (2013.01 - EP KR 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 102016214767 A1 20170817; CN 108603521 A 20180928; CN 108603521 B 20210604; EP 3417178 A1 20181226; EP 3417178 B1 20210414; ES 2880351 T3 20211124; JP 2019511681 A 20190425; JP 6851388 B2 20210331; KR 102166035 B1 20201015; KR 20180098346 A 20180903; TW 201738010 A 20171101; US 10670052 B2 20200602; US 2019017522 A1 20190117; WO 2017140499 A1 20170824

DOCDB simple family (application)
DE 102016214767 A 20160809; CN 201780010751 A 20170201; EP 17702621 A 20170201; EP 2017052135 W 20170201; ES 17702621 T 20170201; JP 2018543196 A 20170201; KR 20187021301 A 20170201; TW 106103952 A 20170207; US 201716066701 A 20170201