

Title (en)
Press for external hydroforming

Title (de)
Presse zum Aussenhochdruckformen

Title (fr)
Presse pour hydroformage extérieur

Publication
EP 1063028 B2 20070613 (DE)

Application
EP 00111618 A 20000531

Priority
DE 19928422 A 19990623

Abstract (en)
[origin: EP1063028A1] The press has a lockable press ram (2) and plate holders (3) with cylinders (7). These are formed as short stroke cylinders. The working cylinders (6) carrying the tool (9) are integrated in the ram. Ram and plate holders are driven by a common drive cylinder (5). The short stroke cylinders are operated individually or in groups, and the rams have hydraulic couplings (16).

IPC 8 full level
B21D 22/22 (2006.01); **B21D 22/20** (2006.01); **B21D 24/08** (2006.01)

CPC (source: EP US)
B21D 22/205 (2013.01 - EP US); **B21D 22/22** (2013.01 - EP US); **B21D 24/08** (2013.01 - EP US)

Citation (opposition)
Opponent :

- DE 4122128 A1 19930107 - DIEFFENBACHER GMBH MASCHF [DE]
- DE 4104136 A1 19920910 - DIEFFENBACHER GMBH MASCHF [DE]
- DE 19751035 A1 19990527 - FORSCHUNGSGES UMFORMTECHNIK [DE]
- DE 3321925 A1 19831222 - OS BAD ROZWOJOWY PODSTAW TECHN [PL]
- EP 0402800 A1 19901219 - SCHULER GMBH L [DE]
- "Blech Rohre Profile" Seiten 28,29 06/99
- "Werkstatt und Betrieb" Seiten 84,85 03/99
- "Produktion, Die Wochenzeitung für das Technische Management" Seiten 36,37 04/99

Cited by
EP1075882A3; DE10202411A1; CN107599062A; WO03062554A1

Designated contracting state (EPC)
DE ES FR IT

DOCDB simple family (publication)
EP 1063028 A1 20001227; **EP 1063028 B1 20011031**; **EP 1063028 B2 20070613**; CA 2312435 A1 20001223; CA 2312435 C 20060425; DE 19928422 A1 20001228; DE 50000026 D1 20011206; ES 2167301 T3 20020516; ES 2167301 T5 20080116; US 6481256 B1 20021119

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