

Title (en)
Press installation

Title (de)
Pressenanlage

Title (fr)
Installation de pressage

Publication
EP 0722793 A3 19970319 (DE)

Application
EP 96104634 A 19930617

Priority
• DE 4221147 A 19920627
• EP 93109676 A 19930617

Abstract (en)
[origin: EP0581008A2] In order to bring about a considerable decrease in investment and operating costs in the case of a press installation having a press frame composed of press stands (2), a press table (5) and a headpiece (1), the press parts being rigidly connected to one another by means of clamping tie elements (4); having pusher rods (7) for deformation; and having a transfer device (14, 15, 16) for transferring the workpieces between work stages (13, 6) and drive means (19, 20) for imparting movement to the pusher rod (7) and the transfer device (14, 15, 16), a combination of the following characteristics is proposed: - a pusher rod (7) extends over a plurality of work stages (6). - The pusher rod (7) is articulated without centres of pressure, and therefore directly, at four points (18) by means of connecting rods (17). - The centres of the two articulation points (18) in each case of one side of the pusher rod and of two clamping tie elements (4) which are situated opposite one another in the press frame are arranged on a common line (21) which is aligned horizontally and perpendicularly to the pressing path (35). - Inner pusher rods (8) are mounted so as to be vertically displaceable in the number of work stages (6) via guides (24), in the pusher rod (7) which takes the form of an outer pusher rod. - Between each of the inner pusher rods (8) and the outer pusher rod (7) there is arranged in each case at least one overload protection device (25) having a pressure chamber (28) in a pressure cylinder (27) and a piston (29). - The pressure chamber (28) is preloaded with pressure via pipes (33) so as to load the piston (29) and therefore the inner pusher rod (8) vertically downwards, to permit operation of the pressing installation. <IMAGE>

IPC 1-7
B21D 35/00; **B21D 43/05**; **B21D 37/08**; **B30B 15/28**; **B30B 15/06**

IPC 8 full level
B21D 35/00 (2006.01); **B21D 37/08** (2006.01); **B21D 43/05** (2006.01); **B30B 1/26** (2006.01); **B30B 15/00** (2006.01); **B30B 15/04** (2006.01); **B30B 15/06** (2006.01); **B30B 15/28** (2006.01)

CPC (source: EP US)
B21D 35/00 (2013.01 - EP US); **B21D 37/08** (2013.01 - EP US); **B21D 43/05** (2013.01 - EP US); **B30B 1/265** (2013.01 - EP US); **B30B 15/0035** (2013.01 - EP US); **B30B 15/04** (2013.01 - EP US); **B30B 15/065** (2013.01 - EP US); **B30B 15/284** (2013.01 - EP US)

Citation (search report)
• [Y] GB 2199525 A 19880713 - HONDA MOTOR CO LTD
• [Y] EP 0485755 A2 19920520 - MUELLER WEINGARTEN MASCHF [DE]
• [Y] DE 2657911 A1 19770714 - KOMATSU MFG CO LTD
• [DA] EP 0388610 A1 19900926 - SCHULER GMBH L [DE]
• [A] FR 2640895 A1 19900629 - MUELLER WEINGARTEN MASCHF [DE]
• [A] DE 3334021 C1 19840628 - MUELLER WEINGARTEN MASCHF
• [A] PATENT ABSTRACTS OF JAPAN vol. 009, no. 168 (M - 396) 13 July 1985 (1985-07-13)
• [A] PATENT ABSTRACTS OF JAPAN vol. 007, no. 193 (M - 238) 24 August 1983 (1983-08-24)

Cited by
ITMI20101949A1

Designated contracting state (EPC)
DE ES FR GB IT SE

DOCDB simple family (publication)
EP 0581008 A2 19940202; **EP 0581008 A3 19940511**; **EP 0581008 B1 19961127**; CZ 125393 A3 19941019; CZ 282708 B6 19970917; DE 4221147 A1 19940105; DE 59304577 D1 19970109; DE 59310259 D1 20020314; EP 0722793 A2 19960724; EP 0722793 A3 19970319; EP 0722793 B1 20020123; ES 2096144 T3 19970301; ES 2169772 T3 20020716; US 5375513 A 19941227

DOCDB simple family (application)
EP 93109676 A 19930617; CZ 125393 A 19930623; DE 4221147 A 19920627; DE 59304577 T 19930617; DE 59310259 T 19930617; EP 96104634 A 19930617; ES 93109676 T 19930617; ES 96104634 T 19930617; US 8078393 A 19930624