

Title (en)

Machine with hydraulically controlled counterpressure holding element

Title (de)

Vorrichtung mit druckmittelbetätigtem Gegendrückhaltelement

Title (fr)

Dispositif à contrôle hydraulique pour élément de tenue à contrepression

Publication

**EP 0974410 A3 20030423 (EN)**

Application

**EP 99850120 A 19990709**

Priority

SE 9802566 A 19980717

Abstract (en)

[origin: EP0974410A2] The invention relates to a machine with a hydraulically controlled counterpressure element. The machine comprises a frame and top and lower machine parts (1, 2) in a conventional way for performing the embossing. According to the invention the counterpressure element (6, 11) is connected to a hydraulic cylinder (4, 12), said counterpressure element engaging the plate (3). The hydraulic cylinder (4, 12) is connected to a hydraulic circuit having a controllable hydraulic pressure, so that the counterpressure element is pressed back at the controlled pressure during an embossing operation. The counterpressure element may be included in a holding means to hold the plate securely during the embossing. According to the invention a machine part (1) is then connected to a positive counterpressure element (10) and another machine part (2) is connected to a hydraulic cylinder (4), said hydraulic cylinder (4) having a plunger and a stem (5) connected to a gripping means (6) holding the plate (3) together with the positive counterpressure element (10), such that the plunger during an embossing operation is pressed back at a controlled pressure. The holding means provides a secure holding through the whole press operation. The counterpressure element may also be included in an embossing counterpressure element, in which the counterpressure may be set in order to achieve a pre-embossing or a pressure controlled embossing. The invention may be applied to all types of machines in which counterpressure elements are required. <IMAGE>

IPC 1-7

**B21D 24/14**

IPC 8 full level

**B21D 22/02** (2006.01); **B21D 24/14** (2006.01)

CPC (source: EP)

**B21D 22/02** (2013.01); **B21D 24/14** (2013.01)

Citation (search report)

- [X] EP 0565347 A2 19931013 - TOYOTA MOTOR CO LTD [JP]
- [X] DE 4035005 A1 19920507 - ERFURT UMFORMTECHNIK GMBH [DE]
- [X] EP 0806256 A2 19971112 - MUELLER WEINGARTEN MASCHF [DE]
- [X] EP 0692323 A2 19960117 - TOYOTA MOTOR CO LTD [JP]

Cited by

US11292047B2; WO2004005044A3

Designated contracting state (EPC)

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**EP 0974410 A2 20000126; EP 0974410 A3 20030423**; SE 518856 C2 20021126; SE 9802566 D0 19980717; SE 9802566 L 20000118

DOCDB simple family (application)

**EP 99850120 A 19990709**; SE 9802566 A 19980717