

Title (en)  
Extended nip press roll for a paper machine

Title (de)  
Schuhpresswalze für eine Papiermaschine

Title (fr)  
Rouleau de presse à pinçage élargi pour une machine à papier

Publication  
**EP 0740016 B1 20000510 (DE)**

Application  
**EP 96101385 A 19960201**

Priority  
DE 19515832 A 19950429

Abstract (en)  
[origin: US5688375A] A shoe press roll for a paper machine which, together with a backing roll, forms a press nip through which a press jacket guided over the shoe press roll travels together with a paper web. The shoe press roll comprises a press shoe which can be pressed by at least one hydraulic element against the backing roll. The hydraulic element is developed as a cylinder/piston unit that acts between a stationary support member and the press shoe. The unit includes a first pressure chamber which can be acted on by hydraulic pressure and is in communication via a small diameter throttle point passing through the piston with a second pressure chamber which is open toward the press shoe. The edge of the piston rests with a sealing surface against the press shoe. Hydraulic pressure is transmitted from the first pressure chamber under approximately static conditions, to the second pressure chamber through the throttle point and thus to the press shoe. Should the press shoe tilt permitting pressure to escape from the second chamber at the shoe, the throttle point prevents rapid continuous flow of hydraulic pressure out of the first pressure chamber. The tilting produces a pressure drop in the second pressure chamber which causes the press shoe to apply itself against the cylinder/piston unit as a result of the external pressure applied from the first pressure chamber.

IPC 1-7  
**D21F 3/02**

IPC 8 full level  
**B30B 3/00** (2006.01); **D21F 3/02** (2006.01); **D21F 3/08** (2006.01)

CPC (source: EP US)  
**D21F 3/0218** (2013.01 - EP US)

Cited by  
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Designated contracting state (EPC)  
AT IT SE

DOCDB simple family (publication)  
**US 5688375 A 19971118**; AT E192800 T1 20000515; CA 2173890 A1 19961030; DE 19515832 C1 19960502; EP 0740016 A1 19961030; EP 0740016 B1 20000510; FI 113068 B 20040227; FI 960908 A0 19960227; FI 960908 A 19961030; JP H08302582 A 19961119

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**US 62827896 A 19960405**; AT 96101385 T 19960201; CA 2173890 A 19960411; DE 19515832 A 19950429; EP 96101385 A 19960201; FI 960908 A 19960227; JP 3691696 A 19960223