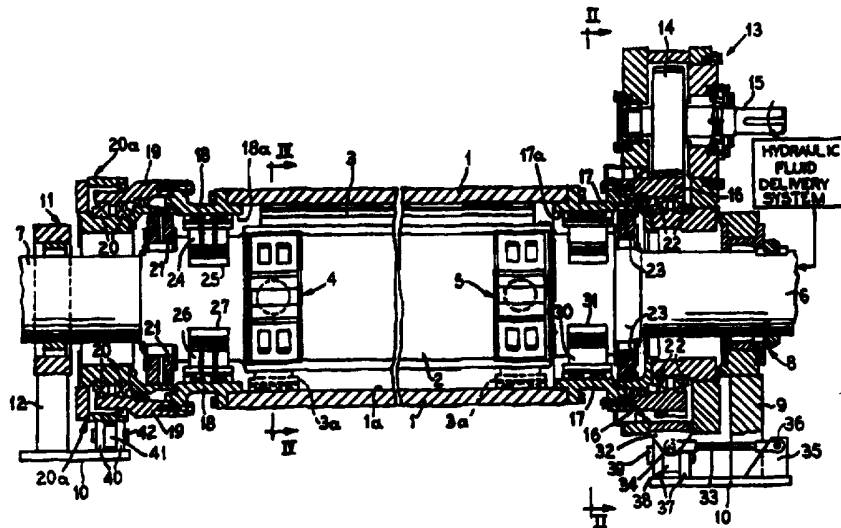




INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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| <p>(21) International Application Number: PCT/US95/10216 (22) International Filing Date: 10 August 1995 (10.08.95) (30) Priority Data: 08/291,382 16 August 1994 (16.08.94) US (71) Applicant: BELOIT TECHNOLOGIES, INC. [US/US]; Suite 3001, 3513 Concord Pike, Wilmington, DE 19803 (US). (72) Inventors: BROWN, Dale, A.; 7238 M-H Townline Route 1, Milton, WI 53563 (US). ROERIG, Arnold, J.; 5348 South Marble Drive, Gold Canyon, AZ 85219 (US). (74) Agent: MATHEWS, Gerald, A.; One St. Lawrence Avenue, Beloit, WI 53511 (US).</p> | | <p>(81) Designated States: BR, CA, DE, FI, GB, JP, KR, SE, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE). Published <i>With international search report.</i> (86) Date of publication of the international search report: 20 June 1996 (20.06.96)</p> |

(54) Title: HYDROSTATIC SELF-LOADING CONTROLLED DEFLECTION ROLL



(57) Abstract

A hydrostatic self-loading controlled deflection roll has a central, hydraulically operated shoe which extends substantially the entire cross-machine width of the rotating roll shell (1), and two outboard shoes (24, 26, 28, 30) disposed, in the cross-machine direction, outside of the nip loading zone. The use of the outboard shoes (24, 26, 28, 30) permits the use of a single, full-length nip shoe (3) within the nip loading zone, which simplifies control and provides for more uniform temperature distribution. The outboard shoes (24, 26, 28, 30) also provide better crown control. The outboard shoes (24, 26, 28, 30) are preferably disposed within a head flange (17, 18) area of the roll, at the location where spherical bearings would normally be present in a conventional roll. A bearing ring is disposed axially outside of the head flange (17, 18) and around a portion of a bearing box at either end of the roll for rotatably supporting the roll shell about bearings in the bearing box. A barrier seal is disposed between the stationary roll shaft and the roll shell (1) intermediate the bearings and outboard shoes (24, 26, 28, 30).

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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER
IPC 6 D21G1/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 6 D21G F16C

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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