

Title (en)

Expanded flow range edge flow control valve for use in a paper machine headbox

Title (de)

Durchfluss-Regelventil für die Randströmungen in einem Stoffauflauf einer Papiermaschine

Title (fr)

Vanne de régulation du débit du flux en contact avec la paroi pour une caisse de tête d' une machine à papier

Publication

EP 0936303 A2 19990818 (EN)

Application

EP 99630015 A 19990205

Priority

US 2124698 A 19980210

Abstract (en)

Edge flow control valves located within edge flow tubes of a tube bank in a headbox can be adjusted to optimize fiber orientation of paper produced in a papermaking process. The present invention uses a chamfer at the inlet of edge flow tubes in order to increase maximum flow of pulp through the edge tube and edge valve. The minimum flow range is not changed, therefore, the essential flow range of pulp through the edge flow valve is increased. Laboratory tests have shown at least a 15 percent increase in maximum flow while not changing the minimum flow. Using a chamfer tool with a stop collar to control the depth of the cut, a chamfer is provided at the inlet of each edge flow tube for optimum performance. According to the present invention, paper produced in a papermaking process will have an improved fiber orientation when more flow at the edges of a headbox is needed. <IMAGE>

IPC 1-7

D21F 1/02; **D21F 1/06**

IPC 8 full level

D21F 1/02 (2006.01); **D21F 1/06** (2006.01)

CPC (source: EP KR)

D21F 1/02 (2013.01 - EP); **D21F 1/026** (2013.01 - EP KR); **D21F 1/028** (2013.01 - EP KR); **D21F 1/06** (2013.01 - EP KR)

Cited by

EP1693507A3; US8214071B2

Designated contracting state (EPC)

DE ES FI FR GB IT SE

DOCDB simple family (publication)

EP 0936303 A2 19990818; **EP 0936303 A3 20000802**; **EP 0936303 B1 20070404**; BR 9900556 A 20000104; CA 2260725 A1 19990810; CA 2260725 C 20060627; DE 69935684 D1 20070516; DE 69935684 T2 20080821; ID 23563 A 20000504; JP 3170713 B2 20010528; JP H11279973 A 19991012; KR 100538115 B1 20051222; KR 19990072503 A 19990927

DOCDB simple family (application)

EP 99630015 A 19990205; BR 9900556 A 19990209; CA 2260725 A 19990204; DE 69935684 T 19990205; ID 990096 D 19990209; JP 2969399 A 19990208; KR 19990004363 A 19990209