

Title (en)
Apparatus for removing rotating flows

Title (de)
Drallbrecher

Title (fr)
Dispositif pour éliminer des courants tourbillonaires

Publication
EP 0953677 A3 20000223 (DE)

Application
EP 99104323 A 19990304

Priority
DE 19819330 A 19980430

Abstract (en)
[origin: EP0953677A2] The pipe (2) to carry a fiber suspension along a main flow direction, has a swirl breaker (1) to reduce or eliminate rotary suspension flows round the main flow line. The swirl breaker has at least one plane (3) with a finite thickness, parallel to the main flow line, thicker than the length of the longest fibers in the suspension and pref. twice their length to give a thickness of ≥ 5 mm and pref. ≥ 8 mm. The plane is a flat plate or a plastics unit, connected to the pipe walls (7) at two opposite sides or at only one side. A number of planes can be used, intersecting at 90 degrees or 120 degrees . A gap between the side of a plane, and the nearest wall, is at least twice the mean fiber length in the suspension and max. two-thirds the pipe dia. At the bond with the pipe wall, the plane has a curvature matching the pipe shape and passing smoothly into it. The plane is at the pipe wall on both sides at an angle of significantly less than 90 degrees for the transit into the pipe wall curvature. The plane is thickened at the pipe wall and is bonded to the pipe wall without a gap by clamping and/or welding and/or an adhesive.

IPC 1-7
D21F 1/06

IPC 8 full level
D21F 1/02 (2006.01); **D21F 1/06** (2006.01)

CPC (source: EP)
D21F 1/02 (2013.01); **D21F 1/024** (2013.01); **D21F 1/065** (2013.01)

Citation (search report)
• [X] US 4080997 A 19780328 - BIORNSTAD PETER
• [X] US 4104116 A 19780801 - KOSKIMIES JOUNI
• [X] US 3846229 A 19741105 - KALLMES O
• [A] US 5255716 A 19931026 - WILCOX PAUL L [NO]

Cited by
GB2599516A; GB2599516B; EP3276312A1; FR3054316A1; EP1005587B1

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 0953677 A2 19991103; EP 0953677 A3 20000223; DE 19819330 A1 19991104

DOCDB simple family (application)
EP 99104323 A 19990304; DE 19819330 A 19980430