

Title (en)

COOLING ROLLER WITH AN OUTER ROLLER ENVELOPE AND AN INNER BODY

Publication

**EP 0022156 B1 19830921 (DE)**

Application

**EP 80102676 A 19800514**

Priority

DE 2927198 A 19790705

Abstract (en)

[origin: US4351386A] To provide for axial guidance of cooling fluid, typically water, through a double-jacketed cooling roller which has an outer jacket (5) rotatably positioned over an inner stationary displacement body (6), in which the inner displacement body is smaller than the inner surface of the outer jacket to define a space (19) for flow of cooling fluid therethrough, the inner surface of the outer rotating jacket (5) is formed with spirally extending surface deformations (16), such as grooves or ridges or ribs or vanes, to transport water being centrifugally pressed against the inner walls of the rotating jacket (5) in axial direction. The axial end of the chamber (19) preferably is formed by an enlarged radially extending chamber (21) in which guide vanes (22) are located to return water flow to a hollow central shaft (9) for removal of cooling fluid axially therethrough. The hollow shaft (9) preferably acts as a central stationary shaft about which the outer jacket (5) rotates, so that rotary seals for water supply and removal can be eliminated.

IPC 1-7

**F28D 11/02**

IPC 8 full level

**F25C 1/14** (2006.01); **B22D 11/06** (2006.01); **B22D 11/128** (2006.01); **C21D 1/00** (2006.01); **F28D 11/02** (2006.01)

CPC (source: EP US)

**F28D 11/02** (2013.01 - EP US); **Y10S 165/148** (2013.01 - EP US)

Citation (examination)

- **US 2849951 A 19580902** - HEINRICH HARALD H
- **FR 520305 A 19210623** - HANS JORGEN JENSEN BIGUM [DK]

Cited by

FR2628830A1; US4582128A; CN113002158A; DE3536236A1; GB2181816A; GB2181816B; WO8402573A1

Designated contracting state (EPC)

CH DE FR GB IT LI SE

DOCDB simple family (publication)

**EP 0022156 A2 19810114**; **EP 0022156 A3 19810408**; **EP 0022156 B1 19830921**; DD 151717 A1 19811104; DE 2927198 A1 19810115; DE 3064895 D1 19831027; JP H01136279 U 19890919; JP H0435728 Y2 19920824; JP S5620994 A 19810227; US 4351386 A 19820928

DOCDB simple family (application)

**EP 80102676 A 19800514**; DD 22226180 A 19800630; DE 2927198 A 19790705; DE 3064895 T 19800514; JP 14351688 U 19881104; JP 9161880 A 19800704; US 16023180 A 19800617