

Title (en)

SUCTION NOZZLE, METHOD OF OPERATING IT AND ITS USE

Title (de)

SAUGDÜSE, VERFAHREN ZUM BETRIEB UND VERWENDUNG DER DÜSE

Title (fr)

BUSE D'ASPIRATION, PROCEDE PERMETTANT SON FONCTIONNEMENT, ET SON UTILISATION

Publication

**EP 0768834 B1 19991229 (DE)**

Application

**EP 95922396 A 19950704**

Priority

- CH 9500153 W 19950704
- CH 216594 A 19940705

Abstract (en)

[origin: WO9601071A1] Conventional suction nozzles work are designed to more or less vertical to the work surface and draw particles and/or fluid up against the force of gravity. The suction nozzle proposed has lateral apertures which form additional flows (12) in directions tangential to the main suction flow (2), thus easily detaching the material to be sucked up and carrying it away without requiring much energy. A method of operating the nozzle involves the formation of tangential auxiliary flows by means of oppositely oriented tongues in the tube (1) of the nozzle. In a further embodiment of the method, a pressure flow is superimposed on the whirling stream components in the suction zone, thus producing a greater shear force. Owing to the vortices formed parallel to the longitudinal axis of the nozzle, the nozzle is also suitable for use in heat exchangers, smokestacks and separators, the design of the nozzle preventing the undesirable occurrence of cavitation at the inlet.

IPC 1-7

**A47L 9/02**; **A47L 9/16**

IPC 8 full level

**A47L 9/02** (2006.01); **A47L 9/16** (2006.01)

CPC (source: EP US)

**A47L 9/02** (2013.01 - EP US)

Cited by

DE102012223337A1; DE102012223337B4; WO2018036603A1

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

DOCDB simple family (publication)

**WO 9601071 A1 19960118**; AT E188105 T1 20000115; AU 2731095 A 19960125; DE 59507533 D1 20000203; EP 0768834 A1 19970423; EP 0768834 B1 19991229; JP H10502275 A 19980303; US 5924823 A 19990720

DOCDB simple family (application)

**CH 9500153 W 19950704**; AT 95922396 T 19950704; AU 2731095 A 19950704; DE 59507533 T 19950704; EP 95922396 A 19950704; JP 50359796 A 19950704; US 76521197 A 19970106