

Title (en)

APPARATUS FOR FEEDING AND DIFFUSING AIR OR ANOTHER GAS INTO A LIQUID

Title (de)

APPARAT ZUM EINFÜHREN UND ZERSTREUEN VON LUFT ODER EINEM ANDEREN GAS IN EINE FLÜSSIGKEIT

Title (fr)

APPAREIL POUR INTRODUIRE ET DIFFUSER DE L'AIR OU UN AUTRE GAZ DANS UN LIQUIDE

Publication

EP 0687197 A1 19951220 (FR)

Application

EP 94907608 A 19940223

Priority

- FR 9400198 W 19940223
- FR 9302602 A 19930305

Abstract (en)

[origin: WO9420200A1] An apparatus consisting of a hollow shaft (6) with water pumps peripherally attached to the end thereof at a certain distance therefrom, said water pumps having vacuum pockets (3) communicating with the inside of the shaft (6) via ducts (5). The lower portion of the shaft is plugged and its upper portion has peripheral perforations (8) providing free access for air or another gas into the shaft so that it can reach the vacuum pockets (3) of the water pumps. The top end of the shaft is coupled to an electric motor (9) either directly or via a motor reducer (10). When the shaft and the water pumps are rotating within a liquid, the liquid pressure at the tips (2) of the water pumps creates a vacuum, whereby fine bubbles of air or another gas can be fed into and diffused through the liquid at the submerged depth of said water pumps.

IPC 1-7

B01F 3/04

IPC 8 full level

B01F 3/04 (2006.01); **B01F 7/16** (2006.01); **B01F 7/00** (2006.01)

CPC (source: EP US)

B01F 23/2331 (2022.01 - EP US); **B01F 23/23311** (2022.01 - EP); **B01F 23/23314** (2022.01 - EP); **B01F 23/2368** (2022.01 - EP US);
B01F 23/23311 (2022.01 - US); **B01F 23/23314** (2022.01 - US); **B01F 27/112** (2022.01 - EP US); **B01F 27/192** (2022.01 - EP US)

Citation (search report)

See references of WO 9420200A1

Designated contracting state (EPC)

BE CH DE DK ES FR GB IT LI NL SE

DOCDB simple family (publication)

WO 9420200 A1 19940915; AU 6111494 A 19940926; AU 685425 B2 19980122; CA 2157027 A1 19940915; DE 69404285 D1 19970821;
DE 69404285 T2 19980102; DK 0687197 T3 19980223; EP 0687197 A1 19951220; EP 0687197 B1 19970716; ES 2105650 T3 19971016;
FR 2702159 A1 19940909; FR 2702159 B1 19950428; JP H08507250 A 19960806; US 5795504 A 19980818

DOCDB simple family (application)

FR 9400198 W 19940223; AU 6111494 A 19940223; CA 2157027 A 19940223; DE 69404285 T 19940223; DK 94907608 T 19940223;
EP 94907608 A 19940223; ES 94907608 T 19940223; FR 9302602 A 19930305; JP 51964294 A 19940223; US 51854895 A 19950823