

Title (en)

Apparatus for multiphase pumping or compression and its application.

Title (de)

Mehrphasige Pump- oder Kompressionsvorrichtung und ihre Anwendung.

Title (fr)

Dispositif de pompage ou de compression polyphasique et son utilisation.

Publication

EP 0468877 B1 19940511 (FR)

Application

EP 91402038 A 19910723

Priority

FR 9009607 A 19900727

Abstract (en)

[origin: EP0468877A1] The present invention relates to a compression device for a multiphase fluid comprising a liquid phase and a gaseous phase, and its use. The device comprises a housing (1), a pulse generator having an inlet section and an outlet section, the said pulse generator comprising a hub having an axial symmetry (28) of axis Ox and a number n of blades rotating about the said axis, these blades having a leading edge (C1; C2) and a trailing edge (C'1; C'2). The said fluid enters into the said pulse generator through the inlet section (41) and emerges therefrom through the outlet section (42), the said axis being aligned in the direction of advance of the said fluid, the number of rotating blades (29, 30) being equal to or greater than 2. It is characterised in that it comprises at least one duct or passage defined by two successive blades (29, 30), of which the orthoradial cross section S(x) is in the form, to within 5% and preferably to within less than 3%: $S(x) = a x^2 + b(c - x^2)^{1/2} + d$ over at least part of its length, the said part lying between two orthoradial planes, the variable x corresponding to the abscissa according to the said axis, the origin of which largely corresponds to the radial plane passing through the leading edge of the said blades, the said radial planes defining the said part having as its abscissa x1 and x2, a, b, c and d being parameters. <IMAGE>

IPC 1-7

F04D 29/18; **F04D 3/02**

IPC 8 full level

F04C 18/16 (2006.01); **F04D 3/02** (2006.01); **F04D 29/18** (2006.01); **F04D 29/38** (2006.01); **F04D 31/00** (2006.01)

CPC (source: EP)

F04D 3/02 (2013.01); **F04D 29/181** (2013.01); **F04D 31/00** (2013.01)

Cited by

CN110578706A; RU2674479C2; FR2782755A1; CN108005950A; US6312216B1; US10753187B2; WO2015127410A3

Designated contracting state (EPC)

DE DK GB IT NL

DOCDB simple family (publication)

EP 0468877 A1 19920129; **EP 0468877 B1 19940511**; BR 9103220 A 19920218; CA 2047975 A1 19920128; CA 2047975 C 20020709; DE 69101953 D1 19940616; DE 69101953 T2 19941013; DK 0468877 T3 19940711; FR 2665224 A1 19920131; FR 2665224 B1 19921113; JP 3393653 B2 20030407; JP H074371 A 19950110; NO 300469 B1 19970602; NO 912904 D0 19910725; NO 912904 L 19920128

DOCDB simple family (application)

EP 91402038 A 19910723; BR 9103220 A 19910726; CA 2047975 A 19910726; DE 69101953 T 19910723; DK 91402038 T 19910723; FR 9009607 A 19900727; JP 20980991 A 19910726; NO 912904 A 19910725