Title (en)

Enhanced mixing corrugated jet pump

Title (de)

Mischstrahlpumpe mit einem Wellenprofil

Title (fr)

Pompe à jet mélangeuse ondulée

Publication

EP 0719945 A1 19960703 (EN)

Application

EP 95120233 A 19951220

Priority

US 36538694 A 19941228

Abstract (en)

An apparatus for increasing the mixing efficiency of low- and high-energy fluids within a jet pump is described. A jet pump utilizing said enhanced mixing apparatus is referred to as a corrugated jet pump. A corrugated jet pump incorporates a straight or an annular nozzle ring with a variable corrugated ogive that, during pumping operations, creates alternating low and high velocity zones in the ogive of the nozzle. These different velocity zones propagate shear planes that enhance the jet pump's downstream mixing. At the same time the core, or central portion, of the corrugated annular nozzle ring creates alternating vortices in the low- and high-energy fluids which also enhances mixing. The corrugated annular nozzle incorporates composite laminates for its fabrication. Advantages of the (composite laminate) corrugated jet pump design include: an reduction in boost pump length of as much as 75%, a weight savings, and significantly reduced production manufacturing costs. <IMAGE>

IPC 1-7

F04F 5/24

IPC 8 full level

F04F 5/10 (2006.01); **F04F 5/24** (2006.01); **F04F 5/46** (2006.01)

CPC (source: EP)

F04F 5/24 (2013.01)

Citation (search report)

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Designated contracting state (EPC)

DE FR GB

DOCDB simple family (publication)

EP 0719945 A1 19960703; JP H08232899 A 19960910

DOCDB simple family (application)

EP 95120233 A 19951220; JP 33521295 A 19951222