

Title (en)

DEVICE FOR REDUCING FOULING INSIDE A TUBE

Title (de)

VORRICHTUNG ZUR REDUZIERUNG VON VERUNREINIGUNGEN IN EINEM ROHR

Title (fr)

DISPOSITIF POUR LA REDUCTION DE L'ENCRASSEMENT A L'INTERIEUR D'UN TUBE

Publication

EP 2367642 A1 20110928 (FR)

Application

EP 09801738 A 20091202

Priority

- FR 2009052374 W 20091202
- FR 0858848 A 20081219

Abstract (en)

[origin: WO2010076446A1] The invention relates to a device for reducing fouling inside a tube (1) through which a fluid (F) flows, comprising at least one turbulence generation device, said device comprising a mobile rotary element (2) connected to a stationary bearing element (3) rigidly connectable to the upstream end of the tube (1), said mobile rotary element (2) including an upstream portion (4) defining a journal and including a mechanical link (5) with the stationary bearing element (3) and enabling the free rotation of the mobile element (2) on itself about the axis of the tube (1), a helix-shaped downstream portion (6) including a plurality of turns and shaped so as to be rotated by the flow of fluid (F) in the tube (1), wherein the upstream (4) and downstream (6) portions of the mobile rotary element (2) are connected to each other by an elongate flexible connection capable of deformation along the entire length thereof (7), and the downstream portion (6) comprises at least one turn portion having a pitch (8) that is reversed relative to the pitch of the other turns. The invention also relates to a heat exchanger including a plurality of tubes through which a fluid flows and including at least one fouling-reducing device.

IPC 8 full level

B08B 9/032 (2006.01); **F28F 13/12** (2006.01); **F28F 19/00** (2006.01)

CPC (source: EP)

B08B 9/0321 (2013.01); **F28F 13/125** (2013.01); **F28F 19/008** (2013.01); **F28G 1/06** (2013.01)

Citation (search report)

See references of WO 2010076446A1

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO SE SI SK SM TR

DOCDB simple family (publication)

FR 2940152 A1 20100625; FR 2940152 B1 20110121; EP 2367642 A1 20110928; EP 2367642 B1 20130327; ES 2415908 T3 20130729; PL 2367642 T3 20130830; WO 2010076446 A1 20100708

DOCDB simple family (application)

FR 0858848 A 20081219; EP 09801738 A 20091202; ES 09801738 T 20091202; FR 2009052374 W 20091202; PL 09801738 T 20091202