

Title (en)
A MICROBUBBLE GENERATOR

Title (de)
MIKROBLÄSCHENGENERATOR

Title (fr)
GÉNÉRATEUR DE MICRO-BULLES

Publication
EP 2558189 A4 20131002 (EN)

Application
EP 11769190 A 20110418

Priority
• US 32480010 P 20100416
• SG 2011000153 W 20110418

Abstract (en)
[origin: WO2011129775A1] A microbubble generator comprising a pump configured to mix a liquid and a gas to form a pressurized gas-liquid mixture therein; a contact chamber in fluid connection with the pump and configured to enhance dissolution of the gas in the pressurized gas- liquid mixture therein; and a valve in fluid connection with the contact chamber and configured to discharge a microbubble emulsion comprising the liquid and microbubbles of the gas.

IPC 8 full level

B01D 17/02 (2006.01); **B01D 19/00** (2006.01); **B01D 61/20** (2006.01); **B01D 65/00** (2006.01); **B01D 65/08** (2006.01); **B01F 25/60** (2022.01);
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CPC (source: EP US)

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C02F 2103/007 (2013.01 - EP); **C02F 2103/008** (2013.01 - EP); **C02F 2103/30** (2013.01 - EP); **C02F 2103/322** (2013.01 - EP);
C02F 2103/42 (2013.01 - EP); **C02F 2201/008** (2013.01 - EP); **C02F 2301/08** (2013.01 - EP); **C02F 2303/20** (2013.01 - EP);
Y02W 10/10 (2015.05 - EP)

Citation (search report)

- [X] US 5759408 A 19980602 - JAERVENPAAE VILJO [FI]
- [X] DE 102008033780 A1 20100121 - KURTZE INGOLF [DE]
- [X] DE 202008004126 U1 20080828 - TENG MIN CHIEN [TW]
- [X] DE 10251923 A1 20040519 - FAN SEPARATOR GMBH [DE]
- See references of WO 2011129775A1

Cited by

CN106927558A; US10654732B2

Designated contracting state (EPC)

AL 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 RS SE SI SK SM TR

DOCDB simple family (publication)

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DOCDB simple family (application)

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