

Title (en)  
DEVICE FOR MIXING WATER AND HEAVY FUEL OIL, APPARATUS AND PROCESS FOR PRODUCING A WATER/HEAVY FUEL OIL MICRO-EMULSION

Title (de)  
VORRICHTUNG ZUM MISCHEN VON WASSER UND SCHWERÖL, VORRICHTUNG UND VERFAHREN ZUR HERSTELLUNG EINER WASSER/SCHWERÖL-MIKROEMULSION

Title (fr)  
DISPOSITIF PERMETTANT DE MÉLANGER DE L'EAU ET DU FIOUL LOURD, APPAREIL ET PROCÉDÉ DE PRODUCTION D'UNE MICRO-ÉMULSION D'EAU/FIOUL LOURD

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Application  
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Abstract (en)  
[origin: WO2017013074A1] An apparatus (1) for preparing a water/heavy fuel oil micro-emulsion is described. The apparatus (1) comprises at least one heavy fuel oil feeding unit (2), at least one emulsifying composition feeding unit (3), at least one water feeding unit (4), at least one mixing tank (5) in fluid communication with the heavy fuel oil feeding unit (2), with the emulsifying composition feeding unit (3) and with the water feeding unit (4). The apparatus further comprises a mixing device (20) operatively connected to said mixing tank (5) and disposed upstream of the mixing tank (5). The mixing device (20) comprises at least one duct (40) for a flow of liquid, said duct extending along a main development direction (X-X) and presenting an inlet opening (41) and an outlet nozzle (42), wherein the inlet opening (41) comprises a first inlet (43) for water with emulsifying composition and a second inlet (44) for heavy fuel oil. The mixing device (20) further comprises a helix shaped rotor (49) arranged in at least a portion (45, 46, 48, 50) of said duct (40) and coaxial with the main development direction (X-X), said helix shaped rotor (49) being configured for defining a helix shaped advancement path for said liquid.

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