

Title (en)

METHOD FOR PRODUCING A WATER-FUEL EMULSION AND A COMPOSITE MULTICOMPONENT FUEL

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER WASSER-BRENNSTOFF-EMULSION UND EINES MEHRKOMPONENTEN-
VERBUNDBRENNSTOFFS

Title (fr)

PROCÉDÉ DE FABRICATION D'UNE ÉMULSION EAU-COMBUSTIBLE ET COMBUSTIBLE COMPOSÉ À COMPOSANTS MULTIPLES

Publication

EP 2420313 A2 20120222 (EN)

Application

EP 10741445 A 20100209

Priority

- KZ 2010000003 W 20100209
- KZ 20090172 A 20090210

Abstract (en)

The invention deals with making hydrocarbon fuel used as process fuel at industrial facilities, in particular thermal power plants, metallurgical works, chemical plants and other high heat and power consumption facilities. The invention can be used for making fuel from moist mazut fuel oils, furnace oils, oil-slimes, heavy residual oil fractions, as well as coal tar oils and resins with simultaneous utilization of bottom water polluted with hydrocarbons. The technical result of using the invention is a simpler method of making high-quality fuel-water emulsion and multicomponent composite fuel from hydrocarbon inputs - mazut fuel oil, furnace oils, oil-slimes, heavy residual oil fractions, as well as coal tar oils and resins with simultaneous utilization of bottom water polluted with hydrocarbons - without adding gaseous hydrocarbons, which makes the method more effective. Such a result is achieved thanks to the following: the invented method of making a fuel-water emulsion and multicomponent composite fuel uses heating of the hydrocarbon input with the water content of up to 50 wt % to the temperature of 120°C, processing it with pressure, and cavitation-processing it to make a fine-particle fuel-water emulsion with 0.5 - 5.0 micrometer water particles to subsequently burst hydrocarbon shells with steam for the second-phase fuel spray.

IPC 8 full level

B01F 3/08 (2006.01); **C10L 1/32** (2006.01)

CPC (source: EP)

B01F 23/41 (2022.01); **B01F 23/4145** (2022.01); **B01F 23/49** (2022.01); **B01F 23/708** (2022.01); **B01F 25/4521** (2022.01); **B01F 35/1453** (2022.01); **C10L 1/328** (2013.01)

Cited by

CN110681309A; DE102022131430A1; WO2024115431A1

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)

EP 2420313 A2 20120222; **EP 2420313 A4 20120815**; EA 013093 B1 20100226; EA 200900610 A1 20100226; KZ 22398 A4 20100315; WO 2010093228 A2 20100819; WO 2010093228 A3 20101007

DOCDB simple family (application)

EP 10741445 A 20100209; EA 200900610 A 20090427; KZ 20090172 A 20090210; KZ 2010000003 W 20100209