

Title (en)

METHOD FOR PRODUCING A STABLE HYDROCARBON-WATER DISPERSION FOR IMPROVING COMBUSTION PROCESSES, AND A WATER-HYDROCARBON DISPERSION THAT IS EASILY SEPARABLE INTO AT LEAST TWO PHASES AS PART OF THE CLEAN-UP PROCESS AT ACCIDENT LOCATIONS

Title (de)

VERFAHREN ZUR HERSTELLUNG EINER STABILEN KOHLENWASSERSTOFF-WASSER-DISPERSION FÜR DIE VERBESSERUNG DER VERBRENNUNGSPROZESSE UND EINER LEICHT IN MINDESTENS ZWEI PHASEN TRENNBAREN WASSER-KOHLENWASSERSTOFF-DISPERSION IM RAHMEN DES REINIGUNGSVERFAHRENS VON HAVARIEORTEN

Title (fr)

PROCÉDÉ DE PRODUCTION D'UNE DISPERSION STABLE D'HYDROCARBURES ET D'EAU POUR AMÉLIORER LES PROCESSUS DE COMBUSTION, ET UNE DISPERSION EAU-HYDROCARBURE QUI EST FACILEMENT SÉPARABLE EN AU MOINS DEUX PHASES EN TANT QUE PARTIE DU PROCESSUS DE NETTOYAGE À DES EMPLACEMENTS D'ACCIDENT

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Abstract (en)

[origin: WO2021148673A1] The present invention relates to a system for producing a stable hydrocarbon-water fine dispersion or an unstable water-hydrocarbon separation dispersion, comprising at least one unit for producing a stable hydrocarbon-water dispersion in the fine disperser from at least medium 1 as a hydrocarbon-containing medium and medium 2 as water, wherein said unit comprises: at least one first pump for a first increase in pressure in the inflow of the hydrocarbon-water coarse dispersion; at least one ultrasonic acoustic flow machine for producing a hydrocarbon-water dispersion by means of hydrodynamic cavitation, and at least one second pump for generating a negative pressure for establishing the cavitation regime in the ultrasonic acoustic flow machine; at least one heating apparatus upstream of the second pump for generating the thermocavitation; at least one second ultrasonic acoustic flow machine for producing a stable hydrocarbon-water dispersion by means of combining thermo- and hydrodynamic cavitation and at least one third pump for generating a negative pressure for establishing the cavitation regime in the second ultrasonic acoustic flow machine. The present invention further relates to a method for producing a stable hydrocarbon-water fine dispersion or an unstable water-hydrocarbon separation dispersion using a system of this kind.

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