

Title (en)

An emulsion formation system and mixing device

Title (de)

Ein Emulsionsherstellungssystem und Mischapparat

Title (fr)

Système de fabrication d'une émulsion et dispositif de mélange

Publication

EP 0732144 A1 19960918 (EN)

Application

EP 95104001 A 19950317

Priority

EP 95104001 A 19950317

Abstract (en)

A method for preparing oil in water HIPR emulsions includes the steps of providing a Newtonian liquid including a mixture of a viscous hydrocarbon, an emulsifying additive and water; subjecting the Newtonian liquid to a first shear force whereby a substantial portion of the Newtonian liquid is radially displaced and mixed so as to form a non-Newtonian liquid; thereafter subjecting remaining non-radially displaced Newtonian liquid to a second shear force to mix the remaining non-radially displaced Newtonian liquid into the non-Newtonian liquid to form the HIPR emulsion, which emulsion is a stable oil in water emulsion having a droplet size of between about 1 to 30 microns and having a droplet size distribution (x) no greater than about 1, the droplet size distribution being defined as follows: $\langle x \rangle = \frac{\sum D_i^3}{\sum D_i}$ wherein D90 is a droplet size wherein about 90% by volume of all droplets in said emulsion are equal to or below; D10 is a droplet size wherein about 10% by volume of all droplets in said emulsion are equal to or below; and D50 is a droplet size wherein about 50% by volume of all droplets in said emulsion are equal to or below.

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Citation (search report)

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