

Title (en)
EMULSIFYING METHOD AND DEVICE FOR REALISING THE SAME

Title (de)
EMULGIERVERFAHREN UND GERÄT ZU DESSEN DURCHFÜHRUNG

Title (fr)
PROCEDE D'EMULSIFICATION ET DISPOSITIF DE MISE EN OEUVRE DE CE PROCEDE

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Abstract (en)
The present invention relates to an emulsifying method and to an emulsifying device in which liquids are processed together by applying a mechanical action. The liquids to be processed are fed into the chamber (1) of a rotating working wheel (2) that comprises a plurality of vanes. The liquid mixture is then removed from the working wheel chamber through a series of outlet openings (8) formed in said wheel and further supplied into an annular chamber (5) located between the annular peripheral wall (20) of the working wheel and the opposite coaxial wall (21) of a stator (4). The emulsion is then discharged from the annular chamber towards the outlet opening of the stator either directly or through a series of draining openings (11) which can be formed in the coaxial opposite wall (21) of said stator. The method also comprises complying to the preferred following empirical relations: $R = 1,1614 K$ (mm), $\Delta R = 1,1614 C$ (mm) and $n - 3,8396 K^{<-1,5> \times 10^{<6>}}$ (rev./min.), wherein R is the radius of the peripheral surface of the working wheel, ΔR is the radial dimension of the annular chamber, n is the rotation speed of the working wheel, K is the number of outlet openings in the working wheel and C is an integer ranging from 1 to K/5. This invention provides simple and highly efficient technical means for producing high-dispersion and long-stability emulsions from liquids which cannot dissolve into one another. These emulsions can be used in numerous applications such as in crude-oil extraction, in the conversion of petroleum products, in thermal power-plants, in fuels, in road construction as well as in many other branches of the industry. <IMAGE>

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Cited by
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