

ABSTRACT

APPARATUS FOR PRODUCING MICROEMULSION

Conventionally, the fuel mixture produced by adding an emulsifier to fuel oil and water is costly because of the high cost of the emulsifier, and has milky-white color which is not typical appearance of fuel oil. In the present invention, water used for subsequent mixing is pretreated with a water softener 2, a water purifier 3, and a water ionizer 4 to form strong alkaline water having a negative oxidation-reduction potential, and the water is transferred to a mixing member 7. Oil used for subsequent mixing is pretreated with an oil ionizer 5 and a potential applicator 6 to form positive potential oil having positive oxidation-reduction potential, and the oil is transferred to the mixing member 7. In the mixing member 7, mixing is carried out by crossing a water mist and an oil mist, in which the water mist is formed by applying a negative potential to the water and by spraying the water, and in which the oil mist is formed by applying a positive potential to the oil and by spraying the oil. The liquid mixture is in a microemulsion form, and the color is the same as that of the original oil. Additionally, since no emulsifier is used, the cost is reduced.

Fig. 1