

The invention relates to an installation for methyl or ethyl ester obtaining from vegetable oils that may be used as fuel for Diesel engines.

The installation for methyl or ethyl ether obtaining from vegetable oils comprises a capacity for vegetable oil (1), a reservoir for methanol/ethanol catalysate (4) and two transesterification blocks, each of which includes an ejector (7, 17), a high-pressure pump (8, 20), a transesterification reactor (11, 22) and a separator (14, 24), connected in series, at the same time the ejector (17) of the second block is connected directly to the reservoir (4), and the separator of the second block is connected in series to the accumulator-heater for methyl or ethyl ester (25), the ejector (29), the pump (30), the separator (32) and the ester dehydration apparatus (34) with vacuum pump (35). To the ejector (29) it is connected one more capacity with water for washing of the formed esters (26). The transesterification reactors (11, 22) include a mixer, a heat exchanger, consisting of a cylindrical body, tubes with blanked-off end faces and several spirals, connected in series. The tubes are installed into the body vertically round the edges and communicate in series by means of nipples of a diameter much smaller than the diameter of the tubes so that the axes of the nipples are perpendicular to the axes of the tubes and tangentially oriented to their circumferences. The spirals are installed into the heat exchanger one into another coaxially between them and the body, at the same time the inlet of each following spiral is joined with the outlet of the previous one, and at the outlet of the spiral with the smallest diameter of the coil it is mounted a system pressure regulating valve. The inlet of the spiral with the greatest diameter of the coil is joined with the outlet of the last tube, and the inlet of the first tube is joined with the mixer by means of a row of bushes so that each previous bush, made with external thread, is installed into the following blind bush, having an external thread, with formation of a space between its end and the bottom.

Claims: 3

Fig.: 7

