

ABSTRACTMETHOD FOR PRODUCING LIQUID HYDROCARBON FUEL

The present invention relates to a method for producing a liquid hydrocarbon fuel comprising a first reaction step and a second reaction step given below: (1) a first reaction step: hydrocracking a raw material oil in the presence of a hydrocracking reaction catalyst at a feeding pressure of hydrogen of from 0.2 to 0.95 MPa, a liquid hourly space velocity of a liquid volume of the raw material oil of from 0.05 to 0.5 hr⁻¹, and a ratio of a flow rate of the hydrogen to a flow rate of the raw material oil of from 100 to 1,000 NL of the hydrogen per 1 L of the raw material oil; and (2) a second reaction step: hydrogenating the cracked solution in the presence of a hydrogenation reaction catalyst at a feeding pressure of hydrogen of from 0.2 to 0.95 MPa, a liquid hourly space velocity of a liquid volume of the raw material oil of from 0.2 to 5 hr⁻¹, and a ratio of a flow rate of the hydrogen to a flow rate of the raw material oil of from 100 to 1,000 NL of the hydrogen per 1 L of the raw material oil. According to the present invention, a desired liquid hydrocarbon fuel can be produced by carrying out a combination of the hydrocracking reaction and the hydrogenation reaction of a raw material oil such as fats and oils in a given composition by feeding a low-pressure hydrogen of nearly a normal pressure.

No Suitable Figure