

Abstract

The present invention relates to the petroleum refining field, and discloses wax oil hydrogenation method and system. The method comprises: (1) controlling wax oil as feedstock and a hydrogen-containing gas to contact with a first hydro-treating catalyst, dividing a first hydro-treated stream obtained through the contact into two parts, i.e., a first hydro-treated stream **A** and a first hydro-treated stream **B**, and performing gas-liquid separation of the first hydro-treated stream **A** to obtain a first hydro-treated gas-phase stream and a first hydro-treated liquid-phase stream; (2) controlling the first hydro-treated stream **B**, the first hydro-treated liquid-phase stream, and a hydrogen-containing gas to contact with a second hydro-treating catalyst, to obtain a resultant hydro-treated stream; (3) controlling the first hydro-treated gas-phase stream and light catalytic cracking cycle oil to contact a hydrofining catalyst to have a hydrofining reaction, to obtain a resultant hydro-fined stream. The method and system provided in the present invention can be used to produce high-quality catalytic cracking feedstock, and employ a flexible process and have low energy consumption.

[Fig. 3]