

Abstract

The present invention discloses a process for converting inferior feedstock oil, wherein said process comprises: a) the inferior feedstock oil is subjected to a low severity hydrogenation reaction, the resultant reaction product is separated to produce a gas, a hydrogenated naphtha, a hydrogenated diesel and a hydrogenated residual oil; wherein, in the low severity hydrogenation reaction, based on the inferior feedstock oil, the yield of the hydrogenated residual oil is 85%-95% by weight, the property of the hydrogenated residual oil is substantially kept at a constant level; b) the hydrogenated residual oil obtained in step a) is subjected to a first catalytic cracking reaction, the resultant reaction product is separated to produce a first dry gas, a first LPG, a first gasoline, a first diesel and a first FCC-gas oil; c) the first FCC-gas oil obtained in step b) is subjected to a hydrogenation reaction of gas oil, the resultant reaction product is separated to produce a hydrogenated gas oil; d) the hydrogenated gas oil obtained in step c) is subjected to the first catalytic cracking reaction of step b) or a second catalytic cracking reaction. The process of the present invention can increase the run length of the hydrogenation unit of the inferior feedstock oil and reduce the chemical hydrogen consumption.

FIG. 1