7. Method according to one of claims 1 to 6 in which at least a part of a hydrogen-rich gaseous effluent from the hydrogen supply and/or the gaseous effluent from the separation stage b) is injected mixed with at least a part of the hydro treated liquid effluent from stage b) or separately, upstream from the second catalytic zone.

8. Method according to one of claims 1 to 7 in which ~~the~~ an overall recycle rate is comprised between 1 and 5~~.~~, wherein the recycle rate is defined as the ratio of the mass flow rate of total recycled hydrotreated product in kilograms to the mass flow rate of fresh feed in kilograms.

9. Method according to claim 8 in which ~~the~~ an overall recycle rate is greater than 0.5 and ~~is strictly~~ less than 3, ~~.~~ wherein the recycle rate is defined as the ratio of the mass flow rate of total recycled hydrotreated product in kilograms to the mass flow rate of fresh feed in kilograms.

10. Method according to one of claims 1 to 9 in which at least a part of the non-recycled hydrotreated liquid effluent then undergoes a hydroisomerization stage in the presence of a selective hydroisomerization catalyst.

11. Method according to claim 10 in which the hydroisomerization catalyst comprises at least one group VIII metal and/or at least one group VIB metal as hydrodehydrogenating function and at least one molecular sieve or an amorphous mineral support as hydroisomerizing function.

12. Method according to ~~one of~~ claims ~~10 or~~ 11 in which said molecular sieve is a 10 MR one-dimensional ZBM-30 zeolite molecular sieve synthesized with the organic structuring agent triethylenetetramine.

13. Method according to one of claims 10 to 12 in which the hydroisomerization stage operates at a temperature comprised between 150 and 500°C, at a pressure comprised between 1 MPa and 10 MPa, at an hourly space velocity advantageously comprised between 0.1 h^{-1} and 10 h^{-1}, at a hydrogen flow rate such that the hydrogen/hydrocarbons volume ratio is advantageously comprised between 70 and 1000 Nm^3/m^3 of feed.