CLAIMS

1. A process for fractionating hydrocarbon feeds employing at least one fractionation zone provided with separator internals, and at least two switchable bottom zones connected together in series and at least one first bottom zone is connected to the bottom of the fractionation zone in a manner such as to be able to operate in a cyclic and successive manner for a period at most equal to the plugging period of the bottom zone furthest from the fractionation zone in accordance with an operating protocol wherein, when the bottom zone furthest from the fractionation zone becomes plugged or before it becomes plugged, it is disconnected for cleaning, while the feed fractionation process continues with the other bottom zone or zones preceding said bottom zone, and when cleaning of said bottom zone is finished, it is rendered operational and connected directly to the head of the series, the operating protocol being repeated each time the bottom zone furthest from the fractionation zone becomes plugged or before it becomes plugged.

2. The process as claimed in claim 1, in which the bottom zones are capable of receiving bottom fractions of the feed with a boiling point greater than the temperature of the theoretical stage at the bottom of the fractionation zone.

3. The process as claimed in one of the preceding claims, in which the bottom zones are provided with separator internals such as plates, or structured or unstructured packing.

4. The process as claimed in one of the preceding claims, in which the bottom fractions of the feed have a boiling point greater than the temperature of the theoretical stage at the bottom of the fractionation zone.

5. The process as claimed in claim 4, in which the bottom fractions of the feed have a boiling point of at least more than 40°C under the pressure conditions corresponding to atmospheric pressure.

6. The process as claimed in one of the preceding claims in which, during passage through the bottom zones, the bottom fractions undergo stripping by means of a gas stream.

7. The process as claimed in claim 6, in which the gas stream is injected as a counter-current into the bottom zones so as to entrain the light fractions towards the fractionation zone.

8. The process as claimed in claim 6, in which the gas stream is a chemical cut which vaporizes under the temperature and pressure conditions at the point of injection into the bottom zone.

9. The process as claimed in claim 6, in which the gas stream is selected from steam, hydrogen, nitrogen or a gas stream obtained from reboiling the bottom of the fractionation zone.

10. The process as claimed in claim 6 in which, when the bottom zones are disposed in series, the gas stream is injected as a counter-current into the bottom zone furthest from the fractionation zone then the resulting gas stream is subsequently sent to the other bottom zones before being returned to the fractionation zone.

11. The process as claimed in one of the preceding claims, in which the feed is selected from crude oil feeds or from feed effluents obtained from the distillation of crude oil and/or from refining processes, or from feeds obtained from the direct liquefaction of coal or obtained from the direct liquefaction of lignocellulosic biomass, alone or as a mixture with coal.

12. The process as claimed in one of the preceding claims, in which the feed is selected from feed effluents obtained from thermal cracking processes, in particular from gasolines obtained from catalytic cracking, from fluid catalytic cracking, from a coking process, from a visbreaking process, or from a pyrolysis process.