

CLAIMS

1. A process for the preparation of a feedstock for a hydroprocessing unit, wherein said feedstock is based on crude oil containing asphaltenes, said
5 process comprising the steps of:

mixing said crude oil with a solvent, wherein said solvent is at least one member chosen from the group of steam cracker cracked distillate (CD), steam cracker carbon black oil (CBO), low asphaltenes containing crude oil residue having a boiling point above 300 deg C and aromatic rich hydrocarbons streams, wherein a
10 mixing ratio solvent: crude oil is such that no aggregation of asphaltenes in said combined mixture of solvent and crude oil takes place under mixing conditions;

feeding said combined mixture of solvent and crude oil to one or more hydroprocessing units,

wherein said combined mixture of solvent and crude oil prior to
15 entering one or more hydroprocessing unit, or its feed heaters, has a S value, measured as per ASTM D7157-12, of greater than 1.

2. A process according to claim 1, wherein said crude oil is a bottom stream from a crude oil distillation unit (CDU) and/or vacuum distillation unit (VDU).

3. A process according to anyone or more of the preceding claims,
20 further comprising deasphalting said crude oil, and separating the crude oil thus deasphalted in a stream having a low content asphaltenes and a stream having a high content asphaltenes, wherein said stream having a high content asphaltenes is mixed with said solvent.

4. A process according to anyone or more of the preceding claims,
25 wherein said one or more hydroprocessing units are chosen from the group of resid hydrocracking unit and coking unit.

5. A process according to anyone or more of the preceding claims, wherein said combined mixture of solvent and crude oil comprises 25 wt.% or more of cracked distillate, based on the total weight of the feed blend.

30 6. A process according to anyone or more of the preceding claims, wherein said combined mixture of solvent and crude oil comprises more than 25 wt.% of low asphaltenes containing crude oil, atmospheric or vacuum residue, based on the total weight of the feed blend.

7. A process according to anyone or more of the preceding claims, wherein said combined mixture of solvent and crude oil comprises a maximum of 55 wt.% of the higher asphaltenes containing crude stream in combination with lower asphaltenes containing crude oils and aromatic streams.