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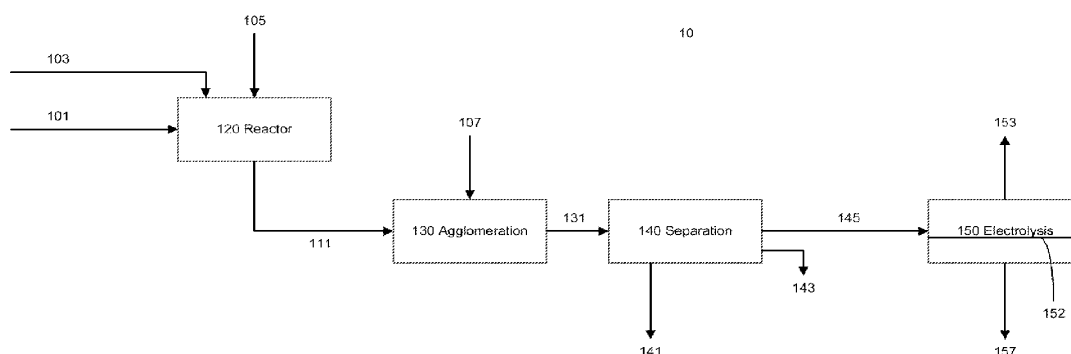


FIG. 1

(57) Abstract: The present technology provides a process comprising: contacting a hydrocarbon feedstock with an effective amount of sodium metal and an effective amount of exogenous capping agent at a temperature of 250-500°C, to produce a mixture of sodium salts and a converted feedstock, wherein the hydrocarbon feedstock comprises hydrocarbons with a sulfur content of at least 0.5 wt% and an asphaltene content of at least 1 wt%; the sulfur content comprises asphaltenic sulfur and non-asphaltenic sulfur; the converted feedstock comprises hydrocarbon oil with a sulfur content less than that in the hydrocarbon feedstock and an asphaltene content less than that in the hydrocarbon feedstock; and the proportion of asphaltenic sulfur to non- asphaltenic sulfur in the converted feedstock is lower than in the hydrocarbon feedstock.



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