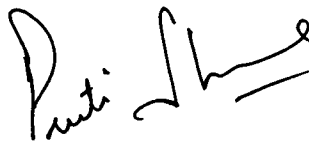


We Claim:

1. An apparatus for extractive distillation of an extract from a feed stream, said apparatus comprising:
 - an extractive distillation column;
 - a reboiler coupled to the extractive distillation column, wherein the reboiler further comprises an internal steam sparger device;
 - a steam input line couple to the internal steam sparger device, and wherein the extract is an aromatic hydrocarbon ; and
 - a liquid stream line from the extractive distillation column coupled to the internal steam sparger device.
2. The apparatus as claimed in claim 1, wherein the extractive distillation column comprises a one- stage vaporization system.
3. The apparatus as claimed in claim 1, wherein the aromatic hydrocarbon is styrene.
4. The apparatus as claimed in claim 1, wherein the reboiler is a kettle reboiler.
5. An apparatus for extractive distillation of an extract from a feed stream, said apparatus comprising:
 - an extractive distillation column;
 - a kettle reboiler coupled to the extractive distillation column, wherein the kettle reboiler further comprises an internal steam sparger device;
 - a feed stream input line;
 - a solvent input line;
 - a steam input line coupled to the internal steam sparger device;
 - an output line for removing a mixture of distillate and solvent; and
 - a liquid stream line from the extractive distillation column to the internal steam sparger device, wherein the extract is an aromatic hydrocarbon.
- 6 The apparatus as claimed in claim 5, wherein the extractive distillation column comprises a one- stage vaporization system.

7. The apparatus as claimed in claim 5, wherein the aromatic hydrocarbon is styrene.
8. The apparatus as claimed in claim 5, wherein the steam input line comprises a steam system generation loop.
9. An apparatus for extractive distillation of an extract from a feed stream, said apparatus comprising:
 - an extractive distillation column;
 - a reboiler coupled to the extractive distillation column, wherein the reboiler comprises an interior space and an exterior surface and further comprises an internal steam sparger device;
 - a steam input line coupled to the internal steam sparger device; and
 - a liquid stream line from the extractive distillation column to the internal steam sparger device, wherein the extract is an aromatic hydrocarbon.
10. The apparatus as claimed in claim 9, wherein the reboiler is selected from the group consisting of a kettle reboiler, a thermosyphon reboiler and a forced circulation reboiler.

Dated this 23rd day of March 2012.



PREETI SHARMA
of KAN AND KRISHME
AGENT FOR THE APPLICANT(S)

To,
The Controller of Patents,
The Patent Office,
Delhi

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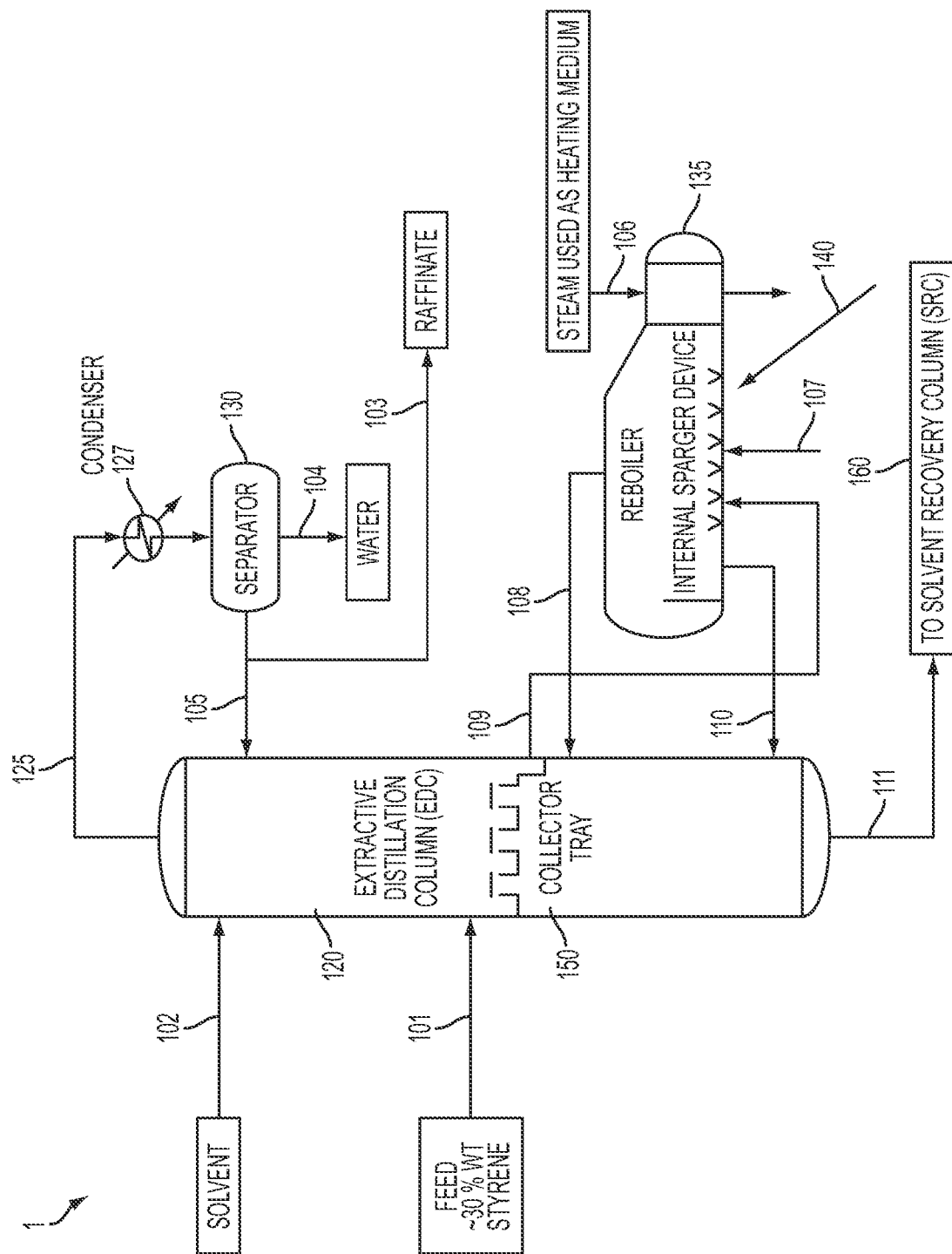


FIG. 1