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(71) **Applicant**: **EXXONMOBIL RESEARCH AND ENGINEERING COMPANY** [US/US]; 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (US).

(72) **Inventors**: **SIRCAR, Cristina, M.**; 2251 Pimmit Drive, Apt. 905, Falls Church, VA 22043 (US). **ALDOUS, Keith, K.**; 191 Warm Springs Road, Winchester, VA 22603 (US). **FREEMAN, James, J.**; 12 Front Street, Hopewell, NJ 08525 (US). **GOYAK, Katy, O.**; 1617 Susan Circle, Easton, PA 18040 (US).

(74) **Agents**: **MIGLIORINI, Robert, A.** et al.; Exxonmobil Research And Engineering Company, 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (US).

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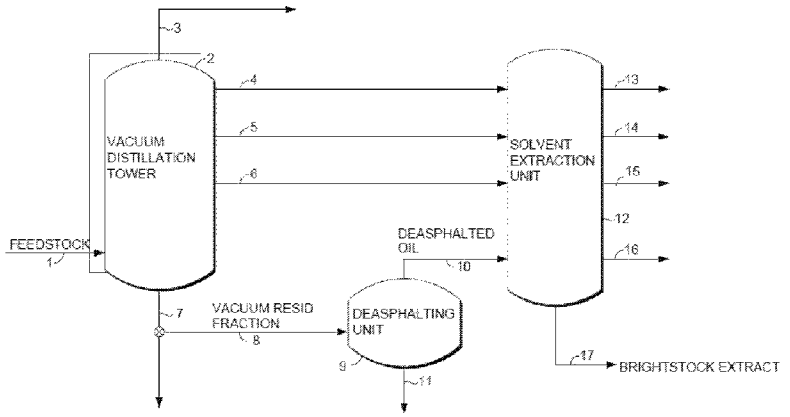


FIG. 1

(57) **Abstract**: Provided are multiple correlations for relationships between MI value for a brightstock extract and the distillation cut point temperature used for separation of the vacuum resid that is used to form the brightstock extract. Based on these correlations, a BSE having a desired MI value can be formed based on an adjustment of the distillation cut point temperature. A first correlation establishes a relationship between a fractional weight boiling temperature for a vacuum resid fraction and a distillation cut point temperature for separating the vacuum resid fraction from at least one distillate fraction in a feedstock. A second correlation establishes a relationship between a fractional weight boiling temperature for a brightstock extract derived from the vacuum resid fraction, and the fractional weight boiling temperature for the vacuum resid fraction. A third correlation has been established between the fractional weight boiling temperature for the brightstock extract and a mutagenicity index value.

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