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

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KISS, Gabor** [US/US]; 4 Thomas Court, Hampton, NJ 08827 (US).
LATTNER, James, R. [US/US]; 10 Bay Oaks, Laporte, TX 77571 (US).(74) Agents: **BAKUN, Estelle, C.** et al.; EXXONMOBIL RESEARCH AND ENGINEERING COMPANY, 1545 Route 22 East, P.O. Box 900, Annandale, NJ 08801-0900 (US).

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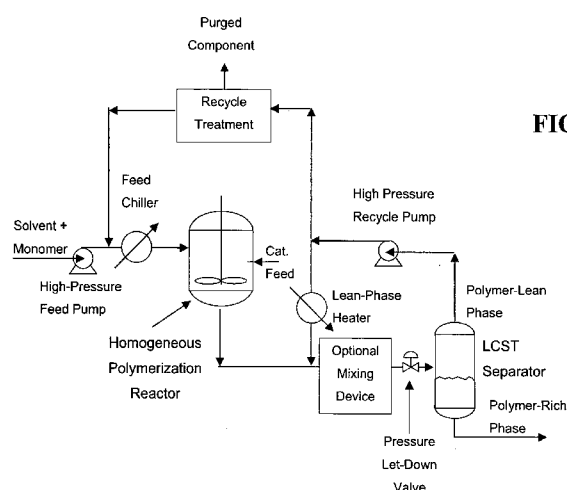


FIG. 2

(57) **Abstract:** Monomer / solvent separation and recycle processes for continuous supercritical, solution and advanced solution polymerization processes for propylene-containing polymers and their blends are provided. The advantageous monomer/solvent separation and recycle process includes heating a polymer-lean recycle stream coming from a gravimetric separator positioned downstream of the reactor to form a heated polymer-lean recycle stream, and subsequently combining the heated polymer-lean recycle stream with the one or more homogenous reactor effluent streams to form a heated reactor effluent mixed stream. The heated reactor effluent mixed stream may then be passed through a pressure let-down valve followed and a gravimetric separator, such as to provide for reduced fouling propensity of the polymer-rich phase and sufficient heating of the polymer-rich phase to be able to pass through the remainder of the processing steps to form a propylene based polymer product without additional heat.