SOLUTION POLYMERIZATION PROCESS

ABSTRACT

Disclosed herein too is a method comprising charging to a reactor system a feed stream comprising a catalyst, a monomer and a solvent; reacting the monomer to form a polymer; where the polymer is contained in a single phase polymer solution; transporting the polymer solution to a pre-heater to increase the temperature of the polymer solution; charging the polymer solution to a liquid-liquid separator; reducing a pressure of the polymer solution in the liquid-liquid separator and separating a polymer-rich phase from a solvent-rich phase in the liquid-liquid separator; transporting the polymer-rich phase to a plurality of devolatilization vessels located downstream of the liquid-liquid separator, where each devolatilization vessel operates at a lower pressure than the preceding devolatilization vessel; and separating the polymer from volatiles present in the polymer rich phase.

Fig. 1