SOLUTION POLYMERIZATION PROCESS

ABSTRACT

Disclosed herein is a system for solution polymerization comprising a reactor system that is operative to receive an anti-solvent, a monomer, and a solvent, and to react the monomer to form a polymer; where the anti-solvent is not a solvent for the polymer and is operative to reduce the lower critical solution temperature; a plurality of devolatilization vessels located downstream of the reactor system, where each devolatilization vessel operates at a lower pressure than the preceding devolatilization vessel and wherein the plurality of devolatilization vessels receives a polymer solution from the reactor system; and a liquid-liquid separator that is operative to receive a polymer solution from the reactor system and to facilitate a separation between the polymer and volatiles by reducing the pressure and temperature of the polymer solution in the liquid-liquid separator.

(Figure 1)