

Pressure Rise Tests for Detecting Particles in Polymers

Wenyi Huang, Michael D. Read, Todd Hogan, and Anthony C. Neubauer

SPE ANTEC Technical Papers, 60, 1196 (2014)

Abstract

A pressure-rise test method was developed and qualified to detect undesired particles in polymers. The feasibility of this method was confirmed by a polymer with a large number of particles, and the key parameters for defining pressure-rise were characterized as the initial pressure, initial slope and pressure-rise per hour. The theoretical simulations of initial pressure and pressure-rise due to screen blockage were demonstrated and validated with experimental data. This test method is useful for resin quality assurance, screen life determination, and new formulation development of polymers for many extrusion processes.