Inline control

Plastic extrusion / injection

Application

Inline viscosity measurement on plastics extrusion machinery - *OEM integration*

Targets: extruders manufacturers, integrators for polyethylene, polypropylene, polystyrene, polycarbonate, polyethylene terephthalate, polyvinyl chloride, polyamides and other melted polymers

Application and challenges

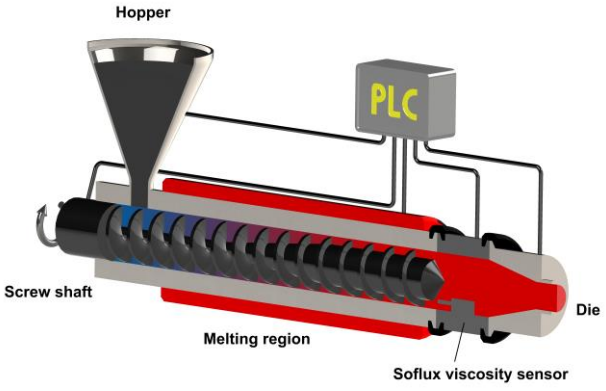
The plastic extrusion process applies to fluid and melted polymers. The material is fed to the extruder, melted and pushed through a system by a rotating screw into an extrusion die where the polymer under pressure is extruded according to a molding giving precise shape to the final part.

Material ingredients adjustment of the polymer, melting temperature, extrusion speed and pressure are many of the parameters influencing the final quality of the extruded polymer. **Viscosity is a physical characteristic of these non-Newtonian polymers and is correlated to intrinsic viscosity, melt flow index**... **Controlling inline the viscosity of the melted polymer before the extrusion die** is the ideal solution to bring precious process information in order to **set up and adjust the optimum extrusion parameters**, and consequently achieve **process savings** in material, labor, time and money.

Solution and installation

The installation of a vibrating **inline process viscometer** – ***Soflux viscosity sensor*** – linked to the process controller allows the correct viscosity to be maintained right before the extrusion die, so consistent extrusion quality is achieved.

Typical OEM extruder operation diagram



Key product characteristics

- Inline viscometer: continuous and real-time information
- Compact and small-size sensor
- Easy to clean and uncomplicated access to wetted parts
- Robust over time, no moving parts, no maintenance
- No product waste
- Cost-effective inline viscosity sensor
- Large viscosity range
- Large working temperature range
- Resistant to high pressure
- No drift in time

Any questions or comments? Contact Sofraser at instruments@sofraser.com