Viscometry in closed products cycles

In all industrial application spheres in which oils, gels and emulsions are pumped, stirred, filtered and physically or chemically treated, the flowability of these substances plays a very important role in plant engineering. At the same time, viscosity is a special peculiarity of the product which can be very important for the quality assessment. That is why the viscosity of these substances should be controlled and documented at different single stages of the production.

Very often the samples are taken from the regular production cycle and are studied in the laboratory in connection to their viscosity. As the viscosity of the product depends a lot on the environmental conditions (pressure, temperature, flow) in the closed production process, the laboratory study of the viscosity can hardly give the conclusions about the viscosity in the process. The comparability of the viscosity measurements at the laboratory and during the process is in these cases not unambiguous, faulty or not possible.
In these cases, the process-oriented measurement by means of process viscometers inline (in the normal product stream), online (in bypass) or in open systems as special application is possible. This has the great advantage as the viscosity can be detected as a control signal.

The measuring principles known from the laboratory sphere can be used as basis also in online viscometry. The technical design of the sensors is adapted to the conditions of the process.