TECHNOLOGY OFFER

Features & Benefits

- Miniaturized Sensors
- Online condition monitoring capability
- Different measurement principles for different applications

Users & Application

- Fluid property monitoring
- Laboratory measurements

Status – our offer

- Expertise
- R&D cooperation

Contact data

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References, Publications

B Jakoby et al. "Miniaturized sensors for the viscosity and density of liquids-performance and issues." IEEE transactions on ultrasonics, ferroelectrics, and frequency control 57.1 (2009): 111-120.

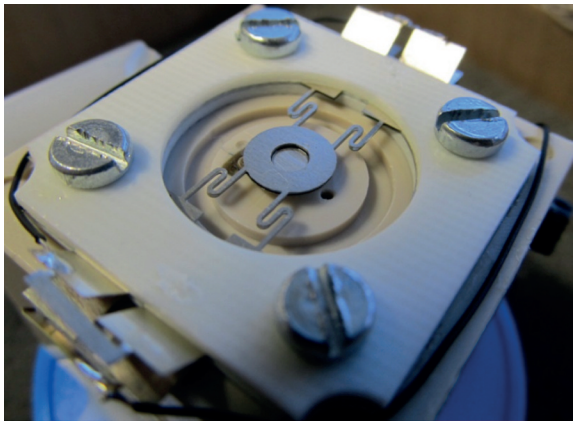
JOHANNES KEPLER UNIVERSITY LINZ

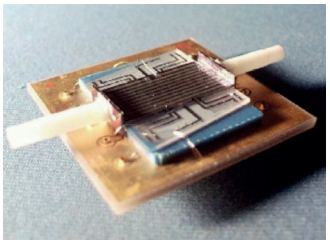
Physical Fluid Monitoring using Vibrating Sensors

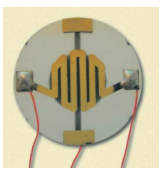
Shaken, not stirred!

The viscosity (and density) of fluids are characteristic parameters for fluids that are often suitable for process or condition monitoring. They can not only provide information on the physical state of the fluid but also its chemical properties. Vibrating and, in particular, resonant sensors are an interesting alternative to conventional rheometers when it comes to online capability, small size and sensitivity.

Viscosity is a very important physical fluid property for e.g. chemical-, biochemical- or food- industry. The reaction progress of many processes is closely related to this parameter which makes viscosity an ideal input parameter for a process control system.
Today a large number of viscosity measurement systems are offered, most of them are bulky and expensive laboratory measurement systems based on the cone-plate or the cuvette principle. But also smaller and cheaper sensors are on the market. Most of these sensors work on a resonant measurement principle interacting with the fluid via an in-plane oscillating surface.
Over the years we have investigated many different principles targeting different parameter ranges and rheological domains, which can be adapted to the problem at hand.







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