INCIPIENTUS™

Drilling muds

Early warning detection can prevent environmental disasters.

Drilling fluids are used to aid the drilling of bore-holes into the earth, i.e. for extracting petroleum oil. The flow behavior properties of a drilling fluid contribute to several important factors for successful drilling of oil wells, e.g. pressure control, maximizing rate of penetration, providing wellbore stability and removing cuttings from the well. Each well is unique, making it important to be able to visualize and control the drilling fluid flow for each application. Accurately measuring the balance of the drilling fluids as a system (barrels-in versus barrels-out) provides important information to the driller and mud logger. It gives for example early warning kick detection and allows accurate monitoring of the mud transport velocity and lag times.

"Monitoring of drilling muds is critical for safe and effective drilling"

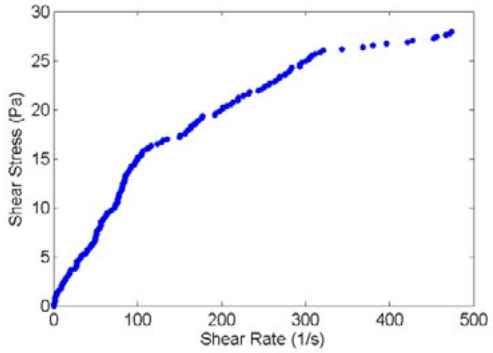
Benefits

In-line measurements of drilling muds

Process monitoring and control of drilling process

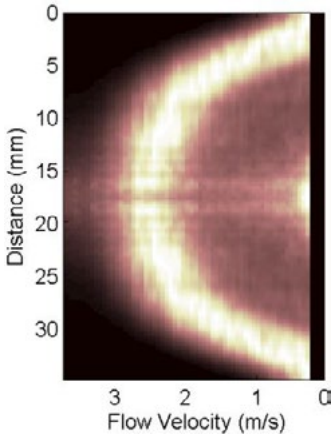
Monitor flow rate

Low cost of ownership



Rheology

A complete shear rate and shear stress distribution was instantly measured at one test flow rate. Measurements were performed in an industrial test facility under realistic environmental conditions using real-life oil-based drilling fluids.



2D Image of flow

A 2D scan of the drilling mud flowing inside the pipe. It is important that the sensors used are touch free. Incipientus sensors measures completely non-invasive allowing safe and undisturbed flow visualization.