RheoTune

Density and yield stress measurement

Deliverables

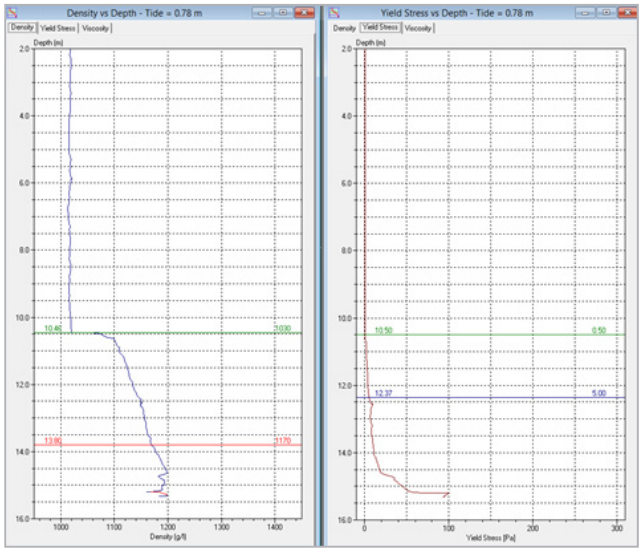
- Properties of fluid mud
- Yield stress profile
- Density profiles

The RheoTune is a versatile system that provides both density as well as yield stress profiles of fluid mud simultaneously.

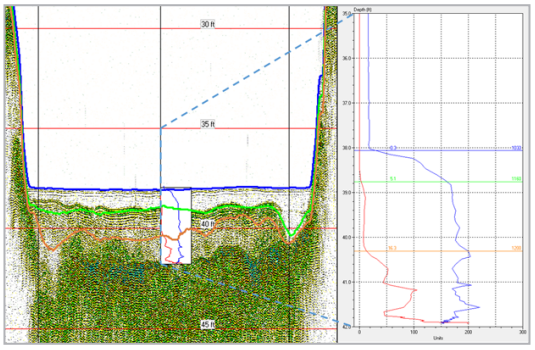
The fact that the RheoTune is **pre-calibrated** makes it easy and quick to deploy, enabling **swift and accurate data acquisition**. Running proprietary software for both acquisition and processing results in a detailed almost real time display of the profile that can be imported into sub–bottom profiling processing suites enabling a full and comprehensive picture of the fluid mud and its characteristics.

To increase productivity further an automated electrical winch or manual light weight winch with slip ring is available. The Tune system is optimized to integrate with the Silas Seismic Processing Suite.

Stema RheoTune in action. Both density and yield stress are measured in-situ without the need of field calibration.



RheoTune software displaying both density (left) and yield stress (right).



Density and yield stress results of RheoTune plotted in a Silas record.

Key features

- Constant accurate results
- Easy to deploy and operate
- Pre-calibrated

Related products

Silas
Winch
Rental

RheoTune

Density and yield stress measurement

Specifications

System
RheoTune

Output parameters
Density, Yield stress, Viscosity
Dry solids, Temperature, Depth (P)
Material classification

Density

Accuracy	< 1% of density (Newtonian fluid)
Resolution	1 g/L
Range	800 – 1500 g/L (semi fluid materials with Bingham yield stress < 1 kPa) 1500 – 1800 g/L (with adapted calibration in semi fluid materials)

The design of RheoTune is kept simple and robust.

Yield stress (Bingham)

Accuracy	Ca. 5% of Yield stress
Resolution	1 Pa
Range	0 – 500 Pa

Viscosity

Accuracy	Depending on site calibration*
Resolution	1 Pa s
Range	0 – 600 Pa s

* Viscosity is derived from density based on a roto visco laboratory test for site specific material.

Temperature

Accuracy	2% FS
Resolution	1 °C
Range	0 – 60 °C

Depth

Accuracy	0,25% of depth
Resolution	0,01 m
Range	0 – 60 m

Housing

Probe	Stainless steel (IP68, 250 m) Fork
Control box	Plastic box (IP65)

Dimensions

Probe	75 cm with ⌀ 15 cm
Transport case	80 x 58 x 48 cm

Weight

Probe	15 kg (+9 kg weight optional)
Transport	35 kg (excl extra weight)

Power

Input	110 / 220 V AC, 35W

Output

Type	UDP and Ethernet standard, Wi-Fi optional
Update rate	20 Hz