RHEOTUNE®

fluid mud rheometry probe

The RheoTune is the state of the art successor of the DensiTune Silt Density probe, with its proven track record in nautical depth assessment worldwide. Ongoing research on the tuning fork response in fluid and semi fluid muds has led to an in-situ measurement system to assess rheological characteristics.

These parameters are the direct relevant input for nautical depth assessment and coastal studies.

Stema Survey, the specialist in tuning fork silt measurement systems, succeeded to implement the theoretical background into a hands-on measuring device. The RheoTune provides fast and accurately vertical rheometric profiles (yieldstrength and viscosity) and possesses complete DensiTune functionality. The RheoTune is delivered with a factory calibration for both yield strength and density.

THE RHEOTUNE WILL BE YOUR PARTNER IN:

- Water bottom stability assessment in coastal studies
- Managing dredging resources and disposal area's
- Monitoring of siltation quantities
- Assurance of the nautical accessibility of your harbour

The RheoTune is a versatile system to be operated from the smallest vessel or stationary installation. To increase productivity an intelligent winch system is available for fully automated operation.

The RheoTune is optimized to integrate with the SILAS seismic profiling system. The SILAS real-time density mapper allows rapid tracing of critical locations that require in-situ probing.

RHEOTUNE

- Simultaneous yield, density and viscosity
- Calibration free yield strength
- Supports fully automated winch operation
- High-speed ethernet data transmission
- Fast update rate

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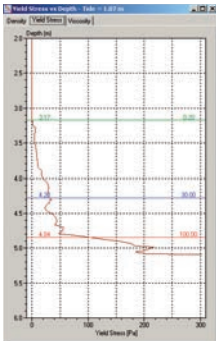
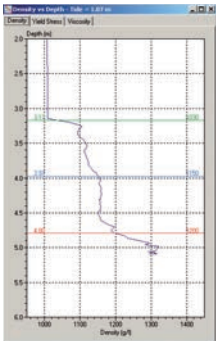
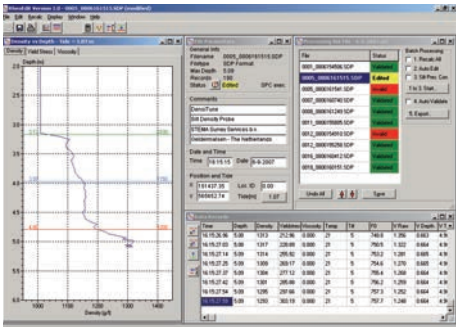


yield profile



density profile



RheoEdit user interface

SPECIFICATIONS

Range Yield	0 - 400 Pa
Range Viscosity	0 - 600 Pa s
Range Density	1000 - 1800 gr./ltr.
Accuracy	<1% (Newtonian fluid)
Resolution	1 gr./ltr.
Temperature range	0 - 60º C
Depth range	0 - 60 m
Depth accuracy	<0.15% of measured depth
Update rate	20 Hz
Power supply	110 - 220 VAC, 35 W
Dimensions (max)	650 mm x 150 mm diameter
Housing	Stainless Steel
Weight (dry)	15 kg
Angle measurement	2 Inclinometers
Output	Ethernet UDP

The hands-on DensiTune software suite is updated for the rheometric processing. Rheometric data is logged and related to rheometric parameters based on correlation with laboratory rheometer tests.

REFERENCES

RHEOTUNE

- WSA Emden, Germany
- USACE, USA
- Guangzhou MSA, China
- Van Oord, Dredging and marine contractors
- Universidade Federal do Rio de Janeiro, Brasil
- Tianjing Survey & Design Institute, China

DENSITUNE

- Port of Rotterdam, The Netherlands
- Maritieme Autoriteit Suriname, Suriname
- Shanghai Dredging, China
- Port of Bristol, UK

Windows XP Windows 2000