



DensiTune Silt Density Probe:

The DensiTune is an accurate, easy to operate system to determine the in-situ density of fluid and semi-fluid siltation layers.

The name of the system refers to the "tuning fork" principle of measurement. The tuning fork responds (frequency and amplitude) is governed by the density and rheological characteristics of the surrounding medium.

The system measures vertical density profiles in liquid silt layers. High sampling rates ensure speed of measurement without concession to data quality. The DensiTune has virtually no operational restrictions:

- Manual operation from the smallest of vessels
- Stationary installation
- Fully automated measuring with our intelligent winch system.

The DensiTune serves to:

- Determine the nautical depth in navigation channels.
- Determine density of silt layers in dredge & dump areas.
- Accurate monitoring of siltation in ports and marine traffic areas.

The DensiTune is optimised to integrate with the SILAS acoustic profiling system. The SILAS on-line density mapper allows rapid tracing of critical locations, that require in-situ probing.

References:

- WSA Emden, Germany
- Port of Rotterdam, The Netherlands
- US Army Corps of Engineers, USA
- Port of Bristol, United Kingdom
- Tianjing Survey & Design Institute, China
- Shanghai Dredging, China
- Maritieme Autoriteit Suriname



DensiTune®

Silt Density Probe

Specifications:

Accuracy	<1% of measured density
Range	1000 - 1800 gr./litr.
Resolution	1 gr./litr.
Temperature range	0 - 60° C
Depth range	0 - 60 m
Viscosity range	0 - 600 Pa s
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
Depth accuracy	<0.15% of measured depth
Angle measurement	2 Inclinometers
Output	Ethernet UDP

Software:

DensCal - Calibration

Prior to surveying in a new area, the DensiTune has to be calibrated with a locally obtained silt sample.

DensCal converts calibration values to a calibration file, which is used by the software during the measurements and post-processing.

DensLog - Data Acquisition

This module is used during the actual measurements with the DensiTune. The module converts raw data into representative parameters, which are displayed in graphs and tables.

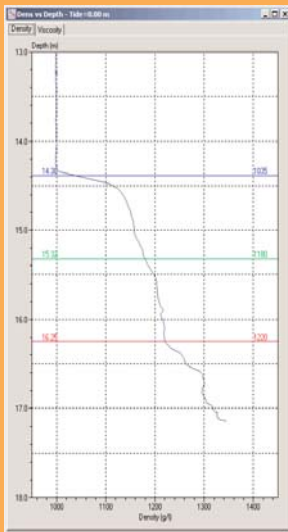
Also, this module takes care of data collection, computer interfacing and various print options.

DensEdit - Data Processing

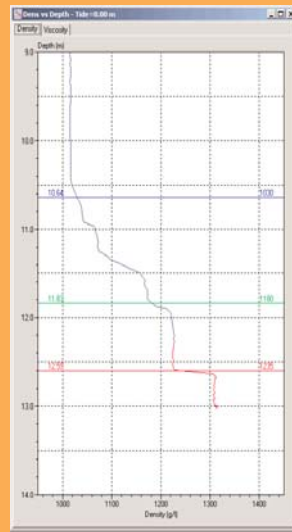
Density measurement data is processed with this module.

All necessary functions are available to edit data rapidly. Density versus depth profiles can be generated for presentation purposes.

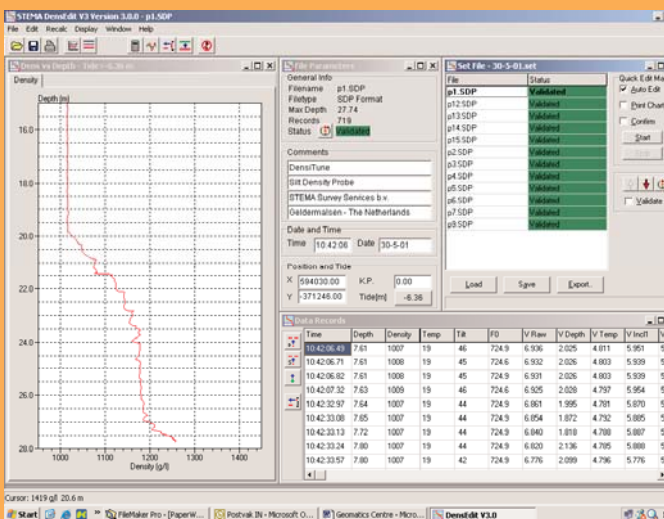
Export of data to DTM, CAD and SILAS.



Density profile



Density profile



DensEdit user interface



DensiTune in winch



For your local agent:

www.stema-survey.com

Tel: (0031)-345-580395
Fax: (0031)-345-570649

