Multi-Sensor Core Logger (MSCL-S SN51)

Attention:

Please note that the system can only be operated upon request. Operations with the MSCL-S requires experienced scientific staff on board. The system is not operated by the ship's crew. Announce operations with the MSCL-S to AWI-Logistics prior to the cruise and clarify the data transfer after the cruise.

Summary

Multi-Sensor Core Loggers capture physical measurands of sediment cores automated and non-destructive.

Manufacturer	Geotek Ltd.
Model	MSCL-S
Serial No	51
Type	Multi-Sensor Core Logger

Contacts

Role	Name
Principal Investigator	Frank Niessen
Data Scientist	Catalina Gebhardt
Engineer in Charge	Dietmar Penshorn

Components

The system consits of the measuring bench with a ballscrew, which pushes core section past 4 sensors measuring Gamma Density, P-wave Velocity, Magnetic Susceptibility (Loop and Point). All sensors simultaneously acquire the data, which is displayed real-time during logging. The acquired data is stored locally in the electronics with simple user interface.

Sensor Type	Gamma Density Sensor	P-Wave System	Magnetic Susceptibility Loop Sensor MS2C	Magnetic Susceptibility Point Sensor MS2F
Manufacturer	Geotek Ltd.	Geotek Ltd.	Bartington Instruments	Bartington Instruments
Components	Gamma ray source (137-Caesium source with energies at 0.662 MeV) detector sensor stand mount (alignment of source/detector with center of core)	Geotek ultrasonic (230 kHz) acoustic transducers Laser micrometer PRT temperature Probe	Magnetic Susceptibility Loop Sensor MS2C	Magnetic Susceptibility Point Sensor MS2F

Data logging, storage and archiving

Logged parameters

Gamma Density, P-wave Velocity, Magnetic Susceptibility (Loop and Point)

Rawdata storage on board

Local storage on MSCL-S electronic. Operator is in charge of data backup.

Documentation

- MSCL-S.pdf
- Discrete_P-wave_System.pdf
- MS2_MS3 DS0020.pdf
- http://www.geotek.co.uk/products/gammadensity/