Ni-CDS

Portable Non-intrusive Cavitation Detection System

Product Description

The Non-intrusive Cavitation Detection System is a monitoring system which autonomously detects the existence of cavitation phenomenon by monitoring the vibration transmitted to the hull.

By the use of the algorithm patented by TSI, cavitation might be determined in terms of both occurrence and intensity.

Main Features

- Stand-alone or integrated configuration into navigation bridge and engine control room systems.
- Local touchscreen and remote access from PC installed on the bridge or other locations.
- Visual/acoustic alarm and graphic displays in navigation bridge and engine control room.
- Identification and continuous monitoring of propeller cavitation.
- Low cost and quick integration of the electronic and display units.
- Reliable operation and low maintenance.
- Data collection for statistical purposes.
- Optional Modbus TCP connection for registering operating parameters.
- Report generation – Data exportation to Excel files.
- Flexible and adaptable to customer's needs.
- Suitable for one and two propellers propulsion

Product Specification

Number of propellers	1/2
Main dimensions	42 x 35 x 18 cm (GRP portable case)
Weight	10 Kg approx.
Analog inputs	1 shaft line: 3 dynamics channels & 4 static channels 2 shaft lines: 6 dynamics channels & 8 static channels
Digital interface (optional)	Modbus TCP
Analog outputs (optional)	4 channels
Connections	Ethernet, DB9, USB
Number of accelerometers	3 accelerometers per shaft line

Number of tachometers	1 tachometer per shaft line
Sample rate	102.4 Ks/s/ch
Voltage	DC 24 V
Power consumption	<40 W
Storage	32 GB
CPU	Intel Atom E3930
Number of cores	2
CPU frequency	1.3 GHz (base)
Internal SSD	Planar SLC NAND 4GB
External SSD	1 TB
RAM	DDR3L 2GB
Operating temperature	-20 °C to 55 °C
Operating humidity	10% RH to 90% RH, non-condensing

*For further information regarding the product, please contact your TSI sales representative.

Maintenance and calibration

- Non-intrusive installation: no hull penetrations, holes or other severe interventions required.
- No need of dry dock services, leading to time and economic savings.
- Portable integrated system with touchscreen: easy transportation and installation.
- Easy installation of the accelerometers and the tachometers.
- Ethernet, DB9 or analog connection to ship's system for registering operating parameters.

Installation

- Low maintenance requirements.
- Firmware/software updates when available.
- NI-CDS is optionally provided with a FAT report of each one of its components.
- The system will be verified by a TSI, S.L. technician every one or two years (client's choice).
- If the measurement is out of range (TSI, S.L. quality guide), the system will be uninstalled and sent to TSI for its detailed verification.

Avda. Pío XII 44. Torre 2 – Bajo izda.
28016. Madrid, España.
(+34) 913 459 730
tsi@tsisl.es
www.tsisl.es