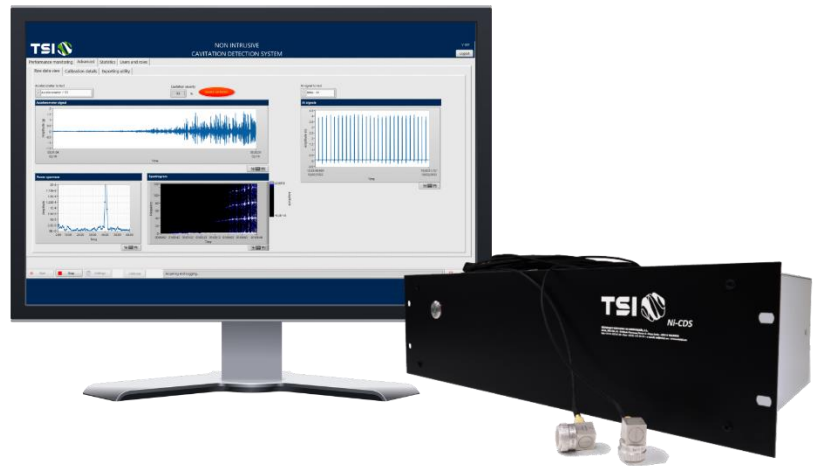


Ni-CDS

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.
- 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.
- 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	482,2 x 132,5 (Front panel) x 263 mm
Weight	5 Kg
Number of analogue inputs	1 shaft line: 3 dynamics channels & 4 static channels 2 shaft lines: 6 dynamics channels & 8 static 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)
SSD	Planar SLC NAND 4GB
RAM	DDR3L 2GB
Operating temperature	-20 °C to 55 °C
Operating humidity	10% RH to 90% RH, non-condensing

*More information regarding the device can be obtained by contacting with TSI SL.

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.
- Rack mounted: standardized, fast and safe.
- Easy installation of the accelerometers and the tachometers.
- Ethernet, DB9 or analogue connection to ship's system for operating parameters.
- Two screens: navigation bridge and engine control room.

Installation

- Low maintenance requirements.
- Firmware/software updates when available.
- NI-CDS is provided with a calibration certificate of each of its components.
- An overall certificate might be issued by TSI SL at the request of the customer.
- The system will be verified by a TSI SL technician every one or two years (client's choice).
- If the measurement is out of range (TSI SL's quality guide), the system will be uninstalled and sent to certified laboratories for its calibration.

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