

Leak Detection Hatch Cover Ultrasonic Tightness Testing: 3 steps towards reducing claims

Water-damaged cargo remains one of the most pressing problems for the industry as a whole. Owners, P&I Clubs and insurers are faced with several hundred million dollars of water damage claims a year, not counting missed deadlines and serious disruption to client operations.

Now ultrasonic tightness testing can dramatically improve the n° 1 cause for claims each year – simply, accurately and reliably!



"Packages steel plates contaminated by sea water"

1. Nothing works like ultrasonic

Ultrasonic is more than just another form of testing tightness. It offers a complete, global solution with unheard-of accuracy and reliability. Accuracy that has received Classification Society Type Approval. The only thing hose and chalk tests demonstrate is whether or not there is contact between the rubber packing and compression bar. Users get no idea of the actual compression. Once at sea, it is often too late to see the shortcomings of this method. Only ultrasonic testing can show you when you have the required or acceptable compression.

2. Ultrasonic testing is custom-made for maritime applications

Nothing beats ultrasonic testing for simplicity and pin-point accuracy:

- It is totally reliable, accurate – and repeatable
- There's no need for water or for complicated operations
- Ultrasonic testing slashes the time needed to test the condition of hatch covers, RoRo doors, bulkheads or windows
- It ensures that hatch covers offer true cargo worthiness and prevent water ingress
- Hand-held operation can be carried out by one man
- It reduces costly idle time in ports
- Easy, fast pre-load inspection.



Accurate testing in sub-zero conditions.

3. A global solution: instrument, training and certification

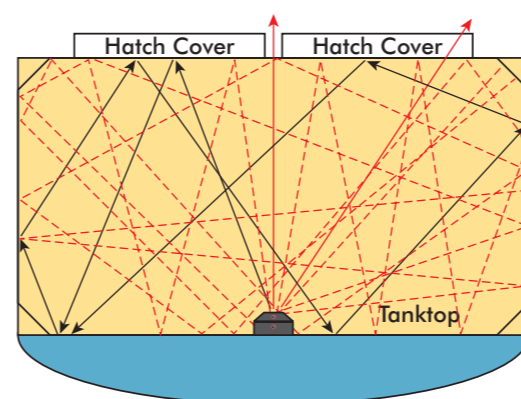
The industry recognition is not just for the SDT SHERLOG line itself. Why? Because only the Sherlog equipments come with the SDT-IMCS training programme. Trainee operators are given, as required by Class and the industry, comprehensive theoretical and on-board practical training in ultrasonics, rules and regulations, hatch cover designs and deficiencies as well as ultrasonic testing procedures. Successful candidates receive a Certificate of Qualification and are added to the growing list of Certified Surveyors (see www.sdt.be/sherlog.html) Significantly, the training programme is approved by Class and accredited by the Nautical Institute. So not only is the Sherlog TA a superior testing instrument, it is also a comprehensive programme that has led to a new standard in the marine industry.



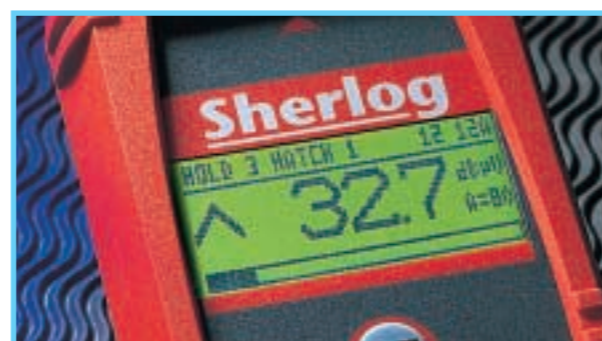
On-board practical training.

How does ultrasonic testing work?

The principle for ultrasonic testing is remarkably simple. An ultrasonic transmitter is placed in the hold (empty or with cargo) and emits ultrasound waves. The hatch cover is then closed, fully cleated and battened. The surveyor or operator then uses the SDT Sherlog ultrasonic detector to listen from the outside and pick up all "leaking" ultrasonic sounds that pass through the sealing arrangements, vents and/or cracks.



Ultrasonic testing is far more accurate than other testing methods, enabling operators and surveyors to pinpoint leaks that are a problem – or are likely to become one.



Leak measurements in dBµV of a hold and hatch in testing phase.

When combined with computer systems, ultrasonic testing offers the maritime world a complete tamper-free solution. Surveyed data can be memorised for analysis and the data downloaded to PC for fast, reliable and documented reporting.



The H.R.S.Type Approval Certificate

Approved by Classification Societies

As requested by the IACS Unified Requirement Z.17, the SDT SHERLOG TA has been formally type approved by classification societies. These include the all-important LRS, ABS, DNV, RMRS and HRS – with other type approvals in the process.

Currently the SHERLOG TA is the only instrument of its kind in the world to hold these many high-level approvals.

The SDT Sherlog Range

	Sherlog TA	Sherlog S
Main fields of applications		
<ul style="list-style-type: none"> ■ The only type approved ultrasonic detector with incorporated software and built-in hatch cover tightness survey routine ■ Designed for routine HCO inspections & surveys ■ Provides a wide range of other ultrasonic and non-ultrasonic applications (with external sensors, see hereafter) 	•	•
Data storage capacities		
<ul style="list-style-type: none"> ■ Tamper-proof HCO surveyed measurements and data logging and transfer to PC ■ General data memorising capacity in 1000 storage locations, each with 4 storage positions 	•	•
A complete kit		
<ul style="list-style-type: none"> ■ One Sherlog detector with internal ultrasonic sensor, accessories, 1 battery pack and battery loader and built-in HCO Survey Software ■ One Sherlog detector with internal ultrasonic sensor, accessories, 1 battery pack and battery loader ■ One flexible ultrasonic sensor, 820 mm, Ø 15 mm ext. ■ One noise isolating headphone set, 130 dB ■ One 3.5' diskette with software for data transfer to PC ■ One RS 232 Stewart – Sub DB9 female, 150 cm ■ One SDT 8 Sherlog multi-transmitter, multisetting (6 positions) with accessories, one battery pack, one battery loader, one spare battery pack and its adapter ■ One SDT 8 Sherlog multi-transmitter (no multisetting capacity) with accessories, one battery pack, one battery loader 	•	•

	Transmitter	Detector
Main technical specifications		
<ul style="list-style-type: none"> ■ Operating temperatures ■ Battery autonomy ■ Battery reloading time ■ Weight 	-20°C to +50°C / -4°F to +122°F 2.5 a 3.5 hours 6 hours 1.5kg/52.90 oz	-15°C to +60°C / 14°F to 140°F 8 to 10 hours 5 a 6 hours 750gr/26.45 oz

