

# ULTRASONIC THICKNESS MEASUREMENT



**TOMTEC NDT MARINE SERVICES PTE LTD**

**ULTRASONIC THICKNESS MEASUREMENT (UTM)** is a widely used non-destructive testing technique for measuring the thickness of a material from one side. It is fast, reliable, and versatile, and unlike a micrometer or caliper it requires access to only one side of the test piece.

Thickness measuring is essential across many industries to monitor corrosion, erosion and damage. Ultrasonic Thickness Measurement (UTM) is commonly used and the method can be applied to a wide range of structures and components that includes ship hulls, piping, pressure vessels and structural steels.

Detection of metal loss caused by corrosion, erosion or damage is vital to ensure the continued safety and operation of the inspected item/structure. It can also help determine if repair work or replacement is needed or if the item/structure should be retired. Ultrasonic Thickness Measurement data gives customers the necessary information required to determine if the tested item has the adequate metal thickness for which it was designed.

An ultrasonic thickness gauge works by precisely measuring how long it takes for a sound pulse that has been generated by a small probe called an ultrasonic transducer to travel through a test piece and reflect back from the inside surface or far wall. From this measurement, the thickness of the test piece is calculated and displayed on a digital screen. The portability of the testing equipment allows for on-site inspection and results are instant. If a problem has been detected by the technique, additional non-destructive testing methods can be used to further investigate the findings.



TOMTEC inspectors are highly experienced in performing ultrasonic thickness measurements and corrosion evaluations for all industry sectors including marine, offshore, oil and gas, power generation, construction industries. In addition, TOMTEC provides solutions for all your thickness gauging and corrosion monitoring requirements as we can perform follow-up non-destructive testing to further investigate results.

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## Advantages

- ✓ Easy to use
- ✓ Good accuracy
- ✓ Quick and simple method
- ✓ Fast, reliable, and versatile
- ✓ Provide immediate results
- ✓ No cutting or sectioning required
- ✓ Portable equipment allows for on-site inspections
- ✓ Can be easily deployed, does not require laboratory conditions
- ✓ Does not require access to both sides of the sample
- ✓ Can be engaged to cope with coatings, linings, etc.



Our commitment to responsive turnaround times will ensure that we meet your schedules and our expertise means we guarantee your components are tested to industry standards, codes or customer specifications. We are able to provide CAP, CAS, Special Survey, Intermediate Survey / Annual Survey & Close up Surveys.

At TOMTEC, we ensure that all our technicians are competent and certified to internationally recognized standards. TOMTEC performs Ultrasonic Thickness Measurement in accordance with Class Requirements, Client specific requirements, ASTM E797, BS EN 14127, ASME, AWS, and similar national and international standards.

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