

ULTRASONIC THICKNESS MEASUREMENT – HOW DOES IT WORK

The usage of an ultrasonic thickness gauge for non-destructive testing to check material properties such as thickness measurement, is used regularly in the marine industry to check the thickness of hull plating as it enables the ability to gauge thickness measurement without requiring access to both sides of the hull. A rugged ultrasonic thickness gauge determines sample thickness by measuring the amount of time it takes for sound to traverse from transduced head through the material to the back end of the plate and back. The ultrasonic thickness gauge then calculates the data based on the speed of the sound through the tested sample.

The first ultrasonic thickness gauge was made in 1967 by Wernar Sobeck a Polish engineer from Katowice. This first ultrasonic thickness gauge measured the velocity of the waves it emitted in particular test samples, it then calculated the thickness in micrometers from this speed measurement by an applied mathematical equation.