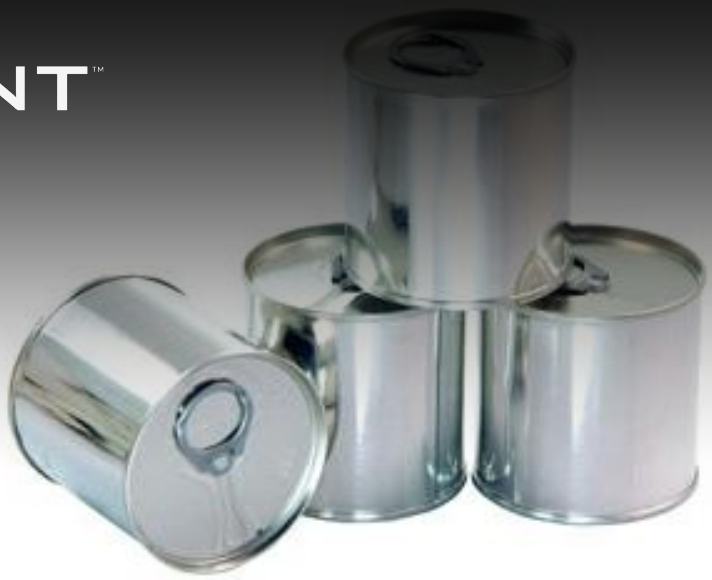


Uwagi dotyczące aplikacji 15.3.2024

Wall Thickness Measurements for Metal Cans, Containers, and Enclosures

Aluminum cans used in the beverage industry are routinely inspected for wall thickness. The "old-fashioned" inspection method involved cutting up the cans and then measuring the wall manually. With ultrasonic gauging, wall thickness can be measured instantly and digitally by simply coupling ultrasound into the part from the outside. Generally, taking ultrasonic measurements with a handheld transducer is a straightforward process.

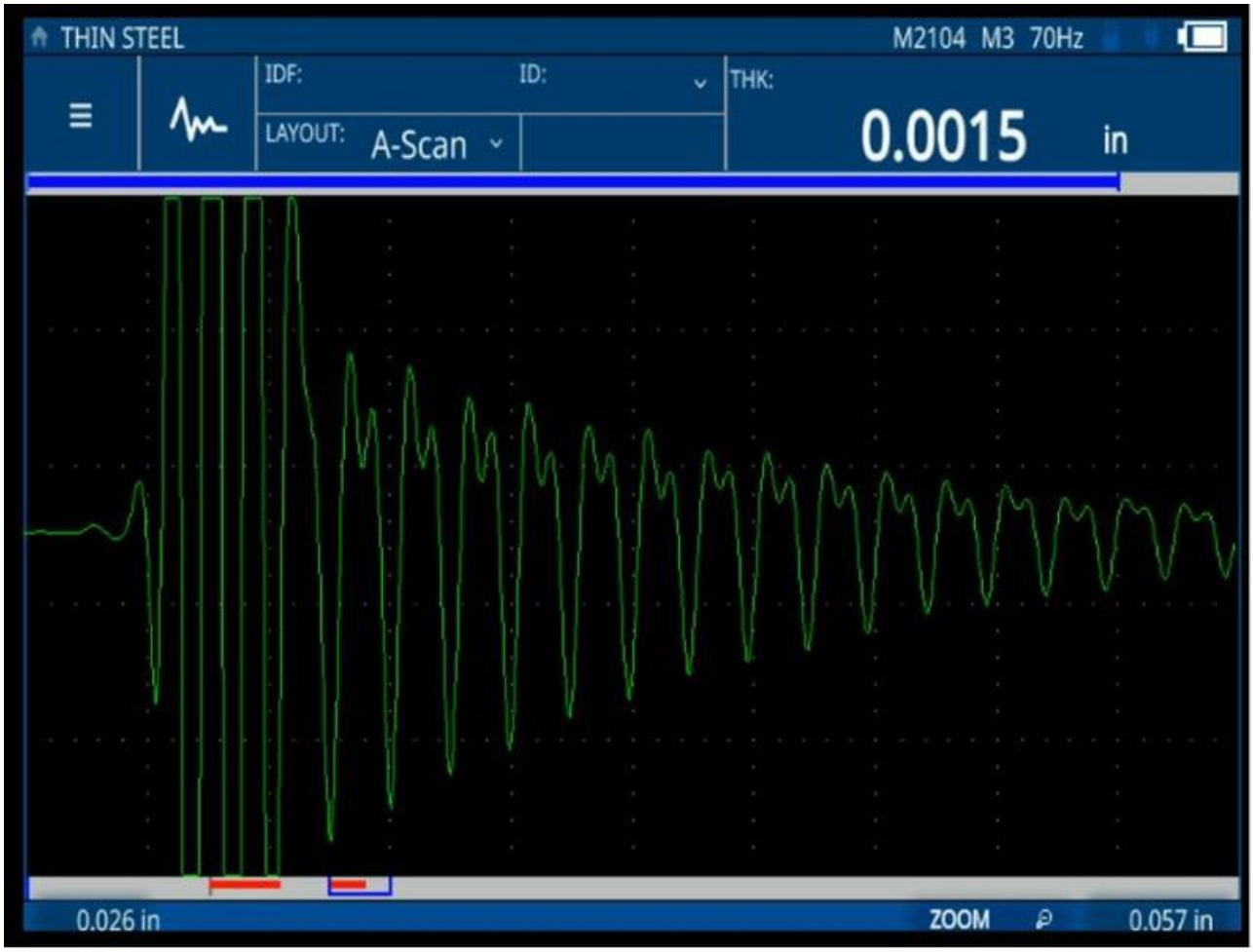
Quality control of deep drawn metal containers, such as heart pacemaker enclosures, can also benefit from ultrasonics. The radiused edges of these enclosures can be very thin and are critical areas for accurate thickness measurements.

Ultrasonic Equipment Used to Measure Wall Thickness of Metal Cans, Containers, and Enclosures

In general, metal wall thicknesses greater than 0.008 in. (0.203 mm) can be measured using the 45MG gauge with Single Element software or the 38DL PLUS gauge with a 20 MHz or 10 MHz delay line transducer to a calibrated accuracy of ±0.0002 in. or ±0.002 mm. Contact transducers are used for thicker metal up to 10 in. (250 mm) or more.

For thin-walled applications with thicknesses below 0.008 in. (0.203 mm), the 72DL PLUS™ high-frequency thickness gauge is recommended. As a high-speed instrument, the 72DL PLUS gauge features a waveform update rate of 60 Hz and a measurement rate of up to 2 kHz. It offers a large, full color touch screen for great visibility from different angles and supports wireless LAN for modern connectivity and integration.

The image below shows an example waveform using the 72DL PLUS gauge with the M2104 (125 MHz) transducer to measure a 0.0015 in. (0.0381 mm) steel sheet.



72DL PLUS gauge measures a thin steel sheet (0.0015 in. or 0.0381 mm) using the M2104 (125 MHz) transducer

Transducer selection depends on the exact application, so contact Evident for guidance. It should be noted that the thickness of aluminum and titanium containers and parts can also be measured with the Magna-Mike™ 8600 Hall-effect thickness gauge . This instrument uses the Hall effect to provide thickness measurements on any non-magnetic material in the range of 0 to 1.0 in. (0 to 25 mm).

Related Product

Magna-Mike 8600

Grubościomierz z czujnikiem hallotronowym Magna-Mike™ jest wyposażony w sondę magnetyczną umożliwiającą wykonywanie dokładnych pomiarów materiałów nieżelaznych i cienkich, takich jak butelki z tworzywa sztucznego.
Learn More ▸ https://www.olympus-ims.com/magna-mike8600/

72DL PLUS

The 72DL PLUS™ advanced ultrasonic thickness gauge delivers precision thickness measurements at high speed in a portable, easy-to-use device. Compatible with single element transducers up to 125 MHz, this innovative instrument is ideally suited to measure the thickness of ultra-thin materials, including multilayer paint, coatings, and plastic. It can simultaneously display the thickness of up to 6 layers.

Learn More ▸ https://www.olympus-ims.com/72dl-plus/

38DL PLUS

Wszechstronnego grubościomierza 38DL PLUS™ można używać z głowicami dwuprzetwornikowymi do wykonywania pomiarów skorodowanych rur oraz z głowicami jednoprzetwornikowymi do wykonywania bardzo precyzyjnych pomiarów grubości cienkich lub wielowarstwowych materiałów.
Learn More ▸ https://www.olympus-ims.com/$lang/38dl-plus/

45MG

Zaawansowany grubościomierz ultradźwiękowy 45MG dostępny jest ze standardowymi funkcjami pomiarowymi oraz z opcjami oprogramowania. Ten unikalny przyrząd jest kompatybilny z całą gamą głowic jedno- i dwuprzetwornikowych do pomiaru grubości firmy Olympus.
Learn More ▸ https://www.olympus-ims.com/pl/45mg/