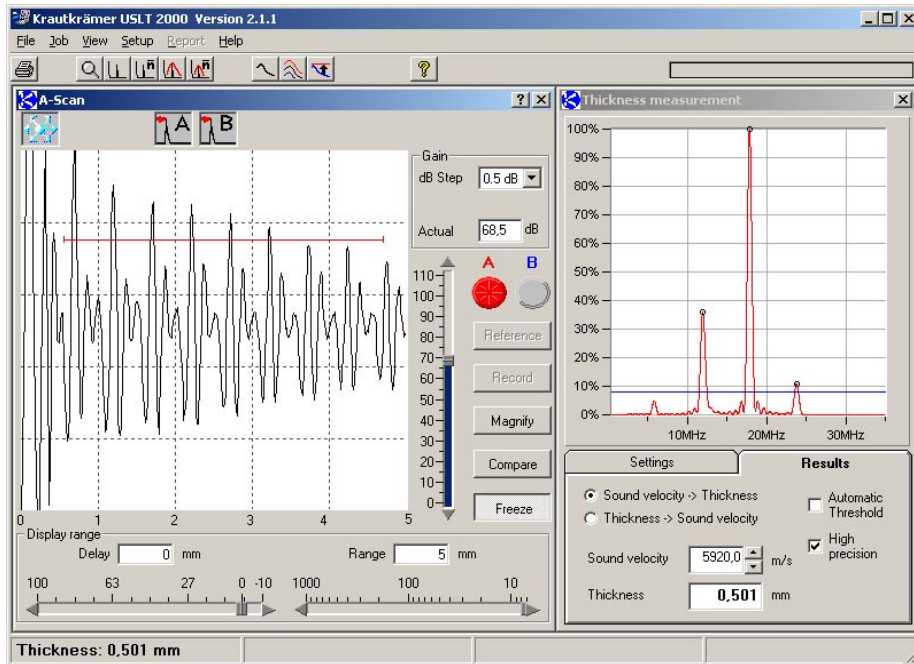


Krautkramer Software-Program Module RTM

...for precision thickness measurements on thin metal sheets and layers



A PLUS for the USLT 2000

The software program RTM is an additional module for the ultrasonic test system USLT 2000 that can be easily installed as an optional „Plug-In“. This additional software extends the range of functions of the USLT 2000; new fields of application are opened up.

The RTM module (Resonance Thickness Measurement) is used for carrying out a precision thickness measurement on very thin objects.

Wall thicknesses are usually determined on the basis of the time of flight of a sound pulse; in this connection, the wall thickness corresponds to half of the sound path (pulse-echo method).

However, this method only works if the wall thickness is larger than the wavelength.

The RTM method is used in particular if the wall thickness to be measured is smaller than the ultrasonic wavelength:

- because higher sound frequencies are not possible for reasons of instrument technology
- because low operating frequencies and consequently large wavelengths have to be used due to high sound attenuation
- when low frequencies have to be selected to carry out a measurement on heavily corroded sheet metal.

The applications ...

- **in sheet metal working:**
The RTM module makes precision thickness measurements on thin sheet metal and layer possible, which means for example by means of a 20 MHz probe on sheet metal between 0.15 mm and 1.5 mm at an accuracy of $\pm 5 \mu\text{m}$.
- **in shipbuilding:**
In yacht building, wall thickness measurements can be carried out for example on glass-fiber reinforced components.
- **in offshore operations:**
Even the checking of wall thicknesses on heavily corroded components in offshore operations is no longer a problem.

GE imagination at work 