THE MOBILE DIAGNOSTIC LABORATORY

A mobile laboratory based on the AUGUR-TF automated ultrasonic inspection system for zonal non-destructive testing in the field.

The use of the ECHOPLUS Company mobile laboratory makes it possible to significantly reduce the time of ultrasonic testing and improve the working conditions.

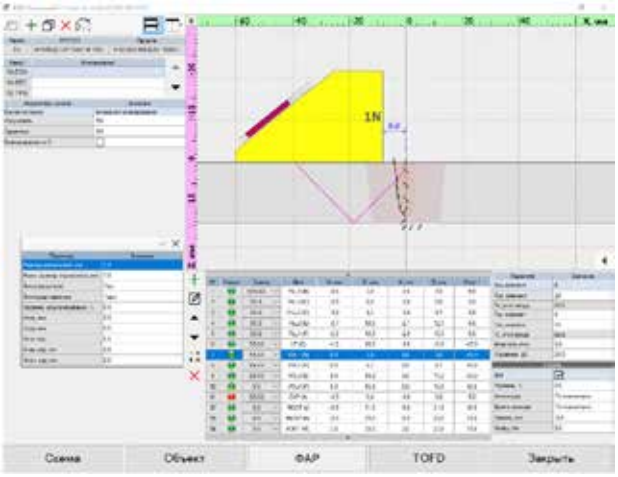
The laboratory can be implemented on the selected vehicle and equipped with non-destructive testing and other devices in accordance with the tasks to be solved according to Customer requirements.

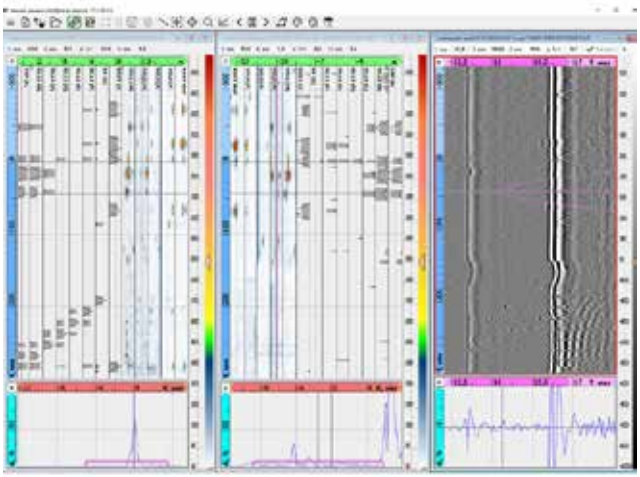
The laboratory includes

- Modular automated ultrasonic control system AUGUR-TF. The control is carried out by an ultrasonic echo pulse method using phased array antenna technology (FAR) and diffraction-time method (TOFD) with a contact method of ultrasound input from an external surface using a single-coordinate scanner. When using the HEADLIGHT method, zonal partitioning technology is used.
- A pull-out stand for the tuning sample.
- A tuning sample for conducting zonal control for a specific size of the welded joint and welding technology.
- The Visual Measuring Control kit.
- Multichannel FAR and DFA (Digital Focusing Antenna) manual ultrasonic flaw detector of the AUGUR-ART series.

Zonal partitioning technology

Zonal splitting technology is a method of ultrasonic inspection, in which the weld is divided into zones (no more than 3 mm) corresponding to the height of the deposited metal during welding. A separate ultrasonic channel with its own control scheme is created for each of the zones. For each control scheme, reference reflectors (flat-bottomed holes and grooves along the cutting boundary) are inserted into the tuning sample, according to the reflections from which the condition of the equipment is monitored before and after the inspection of each welded joint. This approach ensures the highest level of reliability and quality of control results without compromising the high productivity of the welding column operating on extended construction sites.





Examples of the results of ultrasonic testing using zonal partitioning technology.