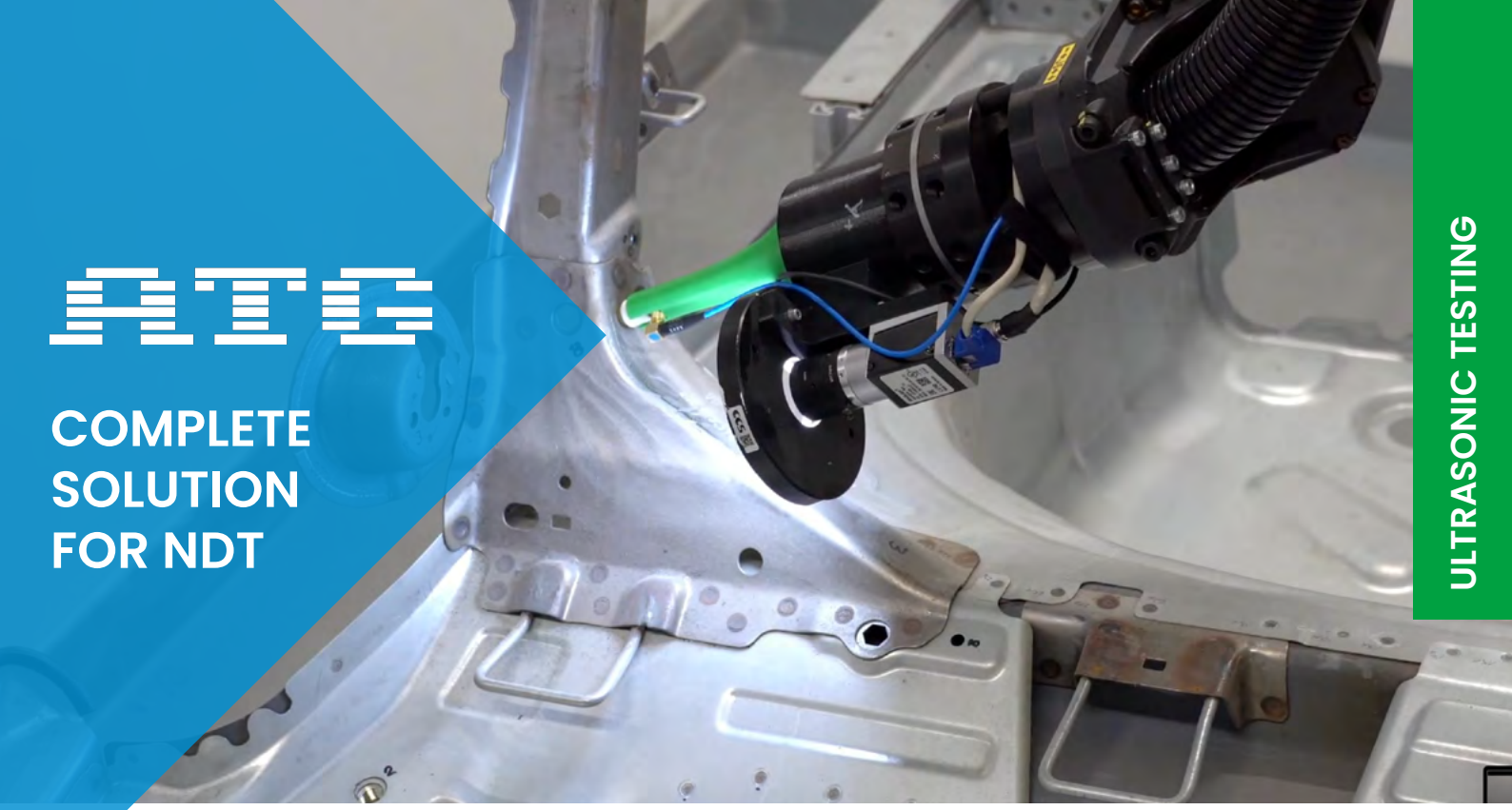

ULTRASONIC TESTING

COMPLETE SOLUTION FOR NDT

UTR-150-SW

Fully automated system for fast and precise testing of spot welds by ultrasonic method

The *UTR-150-SW* system is designed to perform spot weld tests using a conventional UT system and a contact UT probe. Handling of the probe and camera system is robotic. It enables automatic detection of the actual weld position and its inspection including evaluation. The *UTR-150-SW* plans an optimal and collision-free trajectory, detects the actual weld position, inspects the spot weld by UT method and then evaluates the weld quality (defect detection and classification). The system can be modified to test the entire car body using a single probe.

Key features

- Fully automated ultrasonic inspection and evaluation system
- High accuracy and reliability
- Possible integration into the production line
- Compatible with other systems
- Detection of dark welds on dark sheet metal
- Meets a wide range of automotive manufacturers' regulations
- Data archiving capability
- Wide range of detectable weld types
- Use of any type of appropriate UT probe
- Configurable user interface
- Reach hard-to-reach welds across the entire platform
- In case of unsuccessful weld detection, the test can be repeated
- Upgradeable to UT Phased Array
- Customizable solution according to customer requirements
- Testing at higher sheet metal flexibility
- Possible to perform the test on the entire car body

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Parameters

Ultrasonic system	SOCO-1-UT
Robot traversing speed and weld detection	Up to 1.5s/weld
Ultrasonic test speed	Up to 11.5s/weld
Reliability of optical weld detection	More than 98 %
Reliability of weld defect detection	More than 94 %
Repeatability of the test on one weld	More than 92 %

CZECH INSTITUTE OF INFORMATICS ROBOTICS AND CYBERNETICS CTU IN PRAGUE

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