

RIWA

REAL-TIME IN-LINE SPOT WELD ANALYZER

RIWA – is the ultrasonic device capable of measuring a spot weld quality immediately after the weld is produced. A high frequency ultrasonic transducer is integrated into the welding electrode. This transducer generates ultrasonic waves that pass through the electrode cap into the welded plates. These waves are reflected back and received by the same transducer.

The special software performs analysis and reports the size of the measured weld and its location with respect to the plate surface. Alternatively, the software can display a red, yellow, and green dots for quick weld quality estimation. A welding engineer can easily determine the current weld quality as well as stability of the process from collected statistics. At the present stage of development, the lifetime of the transducer is 3,000,000 welds.

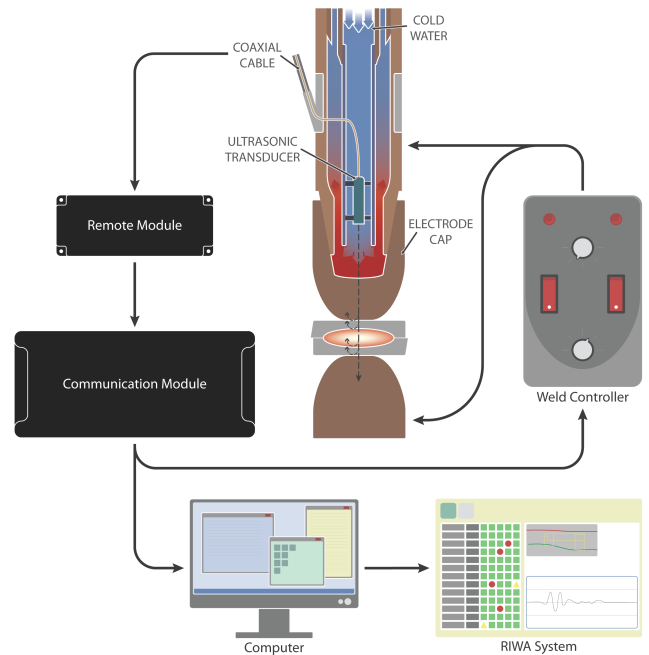


Hardware

- PC
- Laptop-size electronics box
- Ultrasonic transducer connected by the coaxial cable

The hardware is connected to the robot controller to get synchronizing signal and weld schedule information. RIWA system can be interfaced with the robot or PLC and stop the line in case the unacceptable weld is detected.

The device does not need constant supervision and can analyze the weld signatures in the auto mode for many hours. The system can be plugged into the local network to inform the central manager/operator of any problems.



Features

Metals:

- mild steel
- high strength
- dual phase
- aluminum

Coatings:

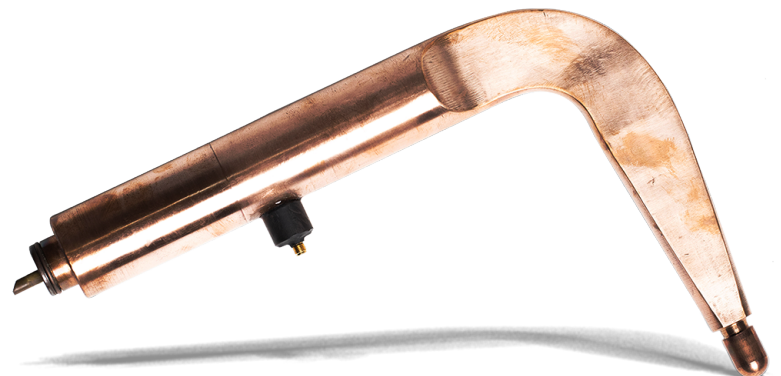
- bare
- galvaneal
- galvanized

Metal Thickness:

- in the range of 0.7 - 3.0 mm

Data Storage:

- Software stores millions of weld records on the hard drive
- Stored welds can be retrieved for reporting and analysis



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