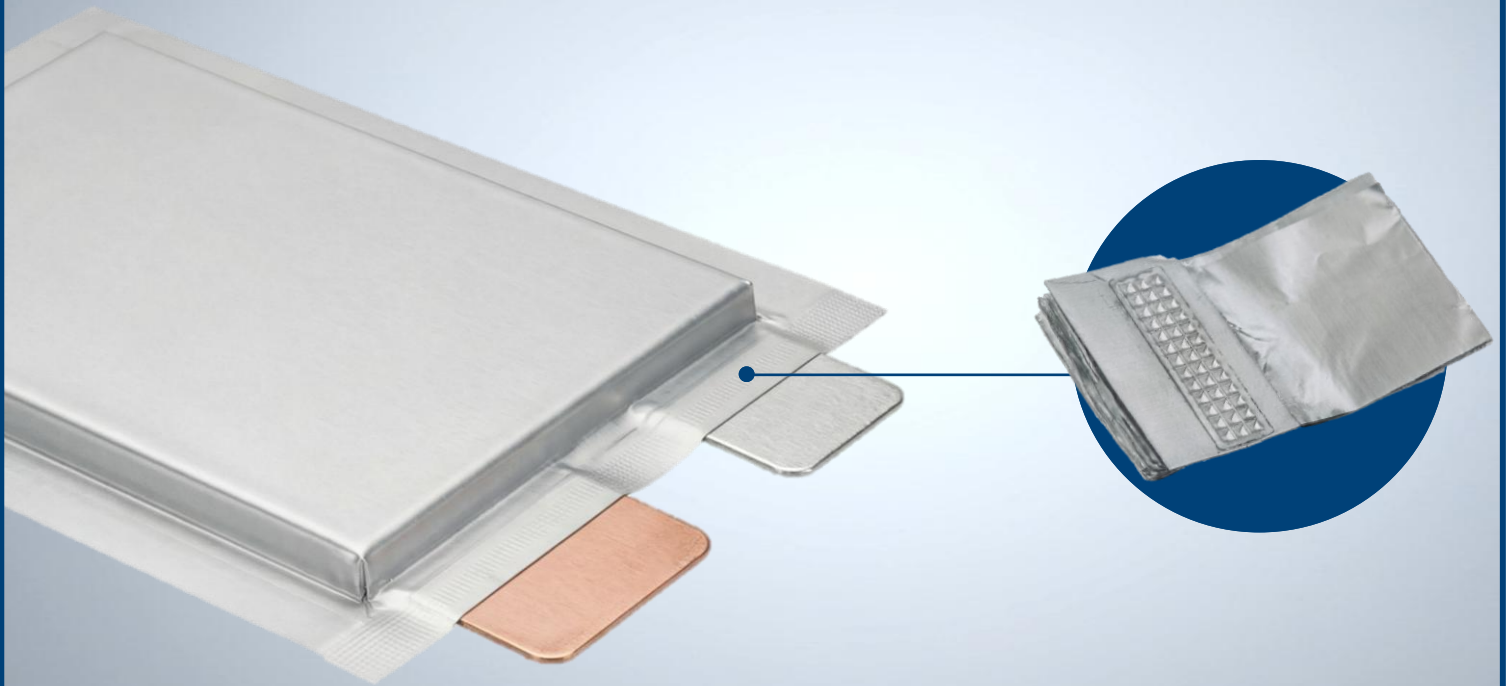


Contact-free

Battery Weld Inspection



hear with light - see with sound

xarion
laser acoustics

Contactless Quality Inspection of Battery Welds

In battery manufacturing, the quality of welded connections directly affects electrical performance, stability, and safety. Ultrasonic welding or laser welding are most commonly used to join foils, tabs, and bus bars.

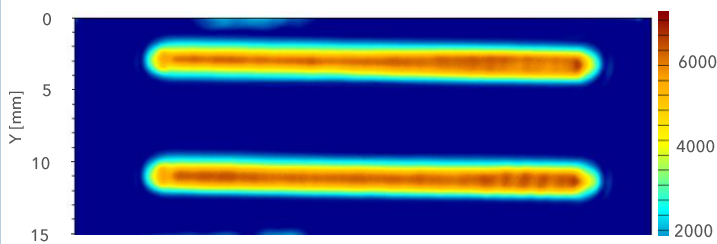
A key risk in these processes is **lack-of-fusion**, an insufficient material bond between the joined parts. This defect is not visible from the outside, yet it can significantly reduce electrical conductivity, mechanical strength and long-term reliability. Visual inspection alone is often insufficient.

XARION's inspection system enables **contact-free ultrasonic testing of tab and bus bar welds** directly after joining. The method allows non-destructive evaluation of the bonded area and enables reliable quality assessment, seamlessly integrated into fully automated battery production lines.

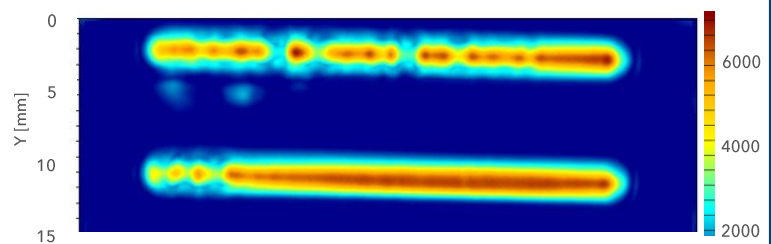
Key Features of XARION's Inspection Solution

- **Fast inspection** with **real-time evaluation**
- **Completely dry testing process** without water or wet coupling agents
- Visualization of **lack-of-fusion, pores, cracks, and disbonds**

Ultrasonic inspection results of laser welds



OK welds



NOK welds with lack-of-fusion

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