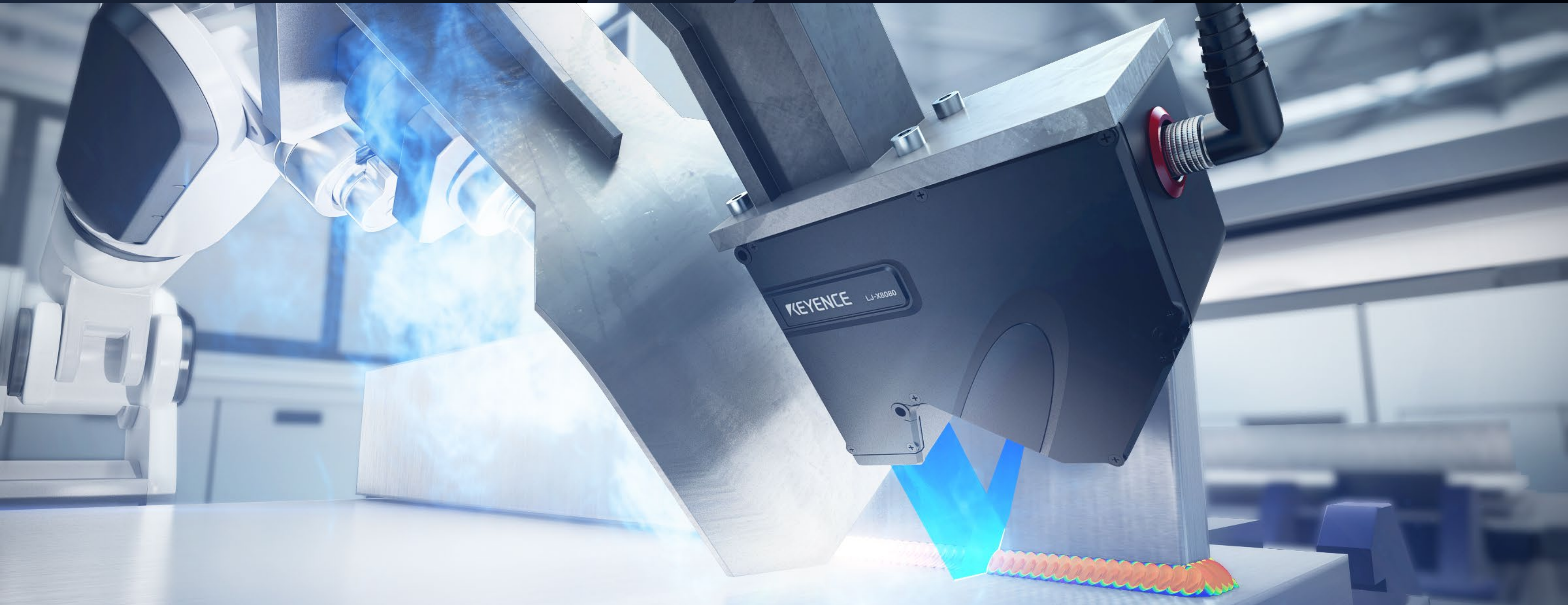


KEYENCE

3D Laser Profiler

Welding Inspection Application Guide

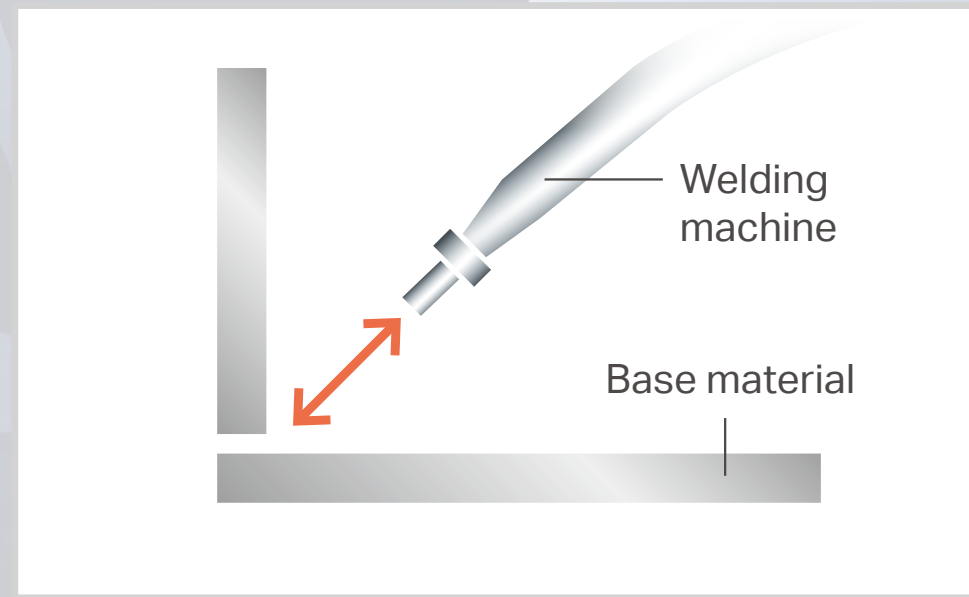
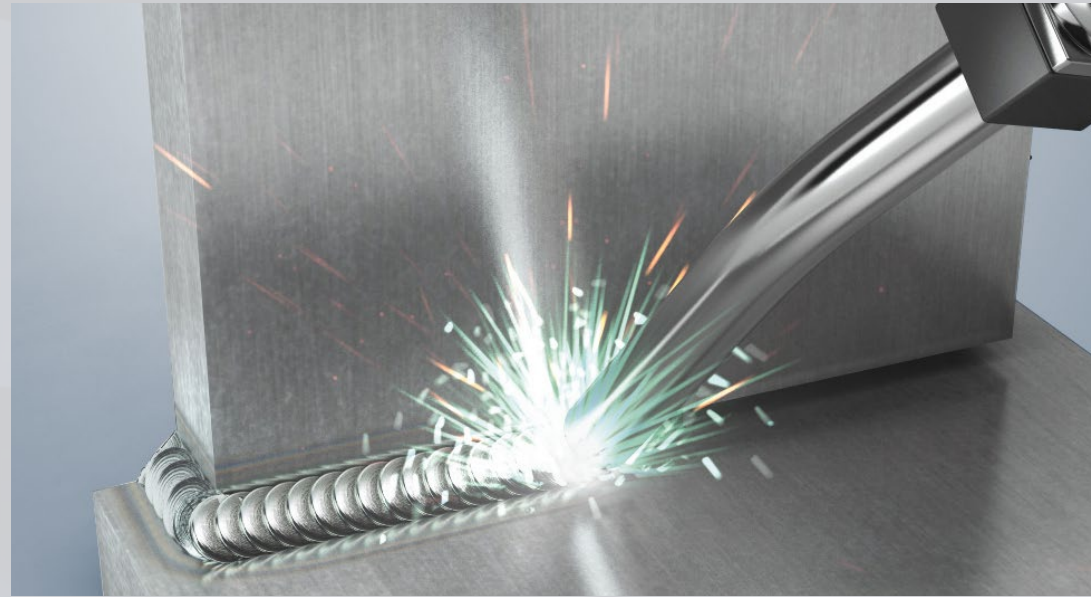


Pre-welding applications

Groove control

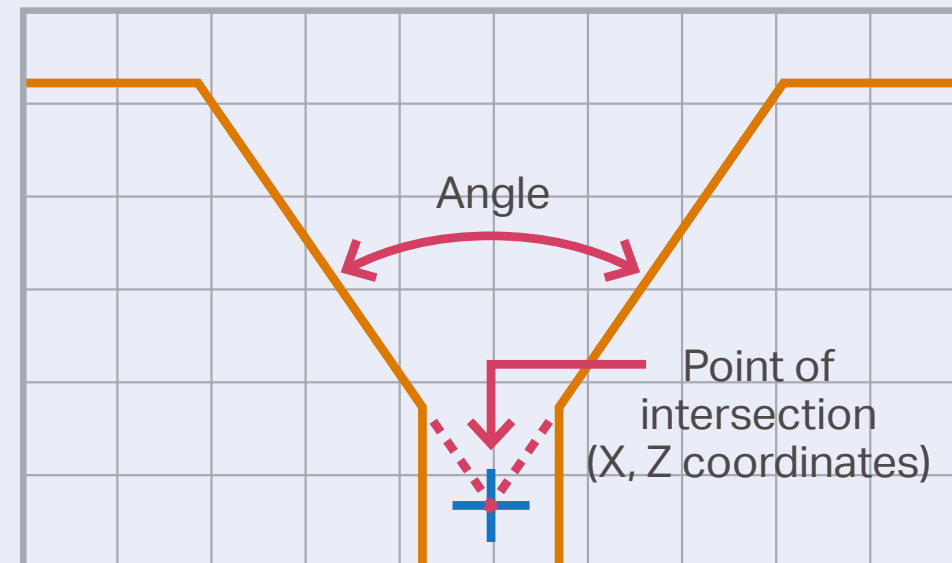
Measurement Benefit

Welding accuracy can be improved by providing measurement data to the welding machine, which can be used to identify the groove position on the base material.



After installing the LJ-X Series

The laser line enables measurement over a wide range with a single head. Also, if the object is mispositioned, position correction ensures that no measurement points are misaligned.



Post-welding applications

Bead inspection

Measurement Benefit

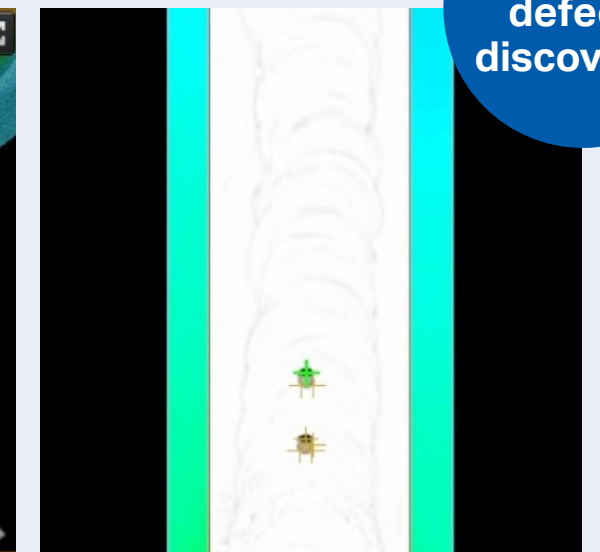
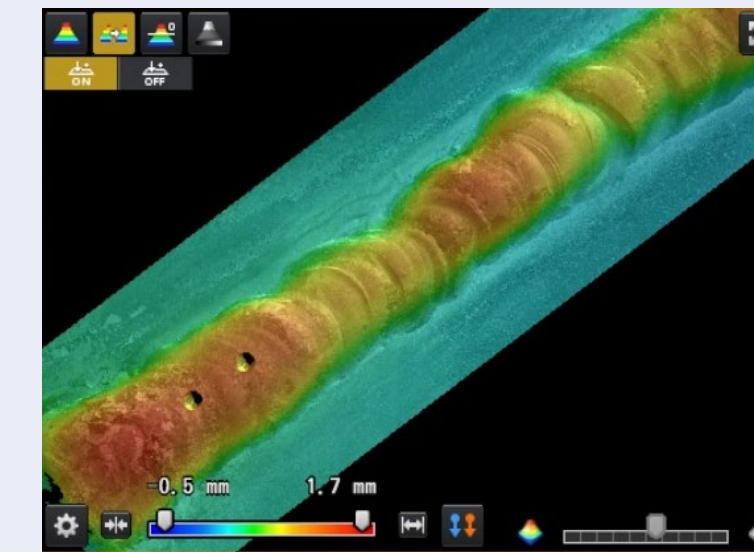
It is necessary to perform a 100% inspection of the welding bead. (Undercut, blow holes, dimensions such as throat thickness and leg length, etc.)



After installing the LJ-X Series

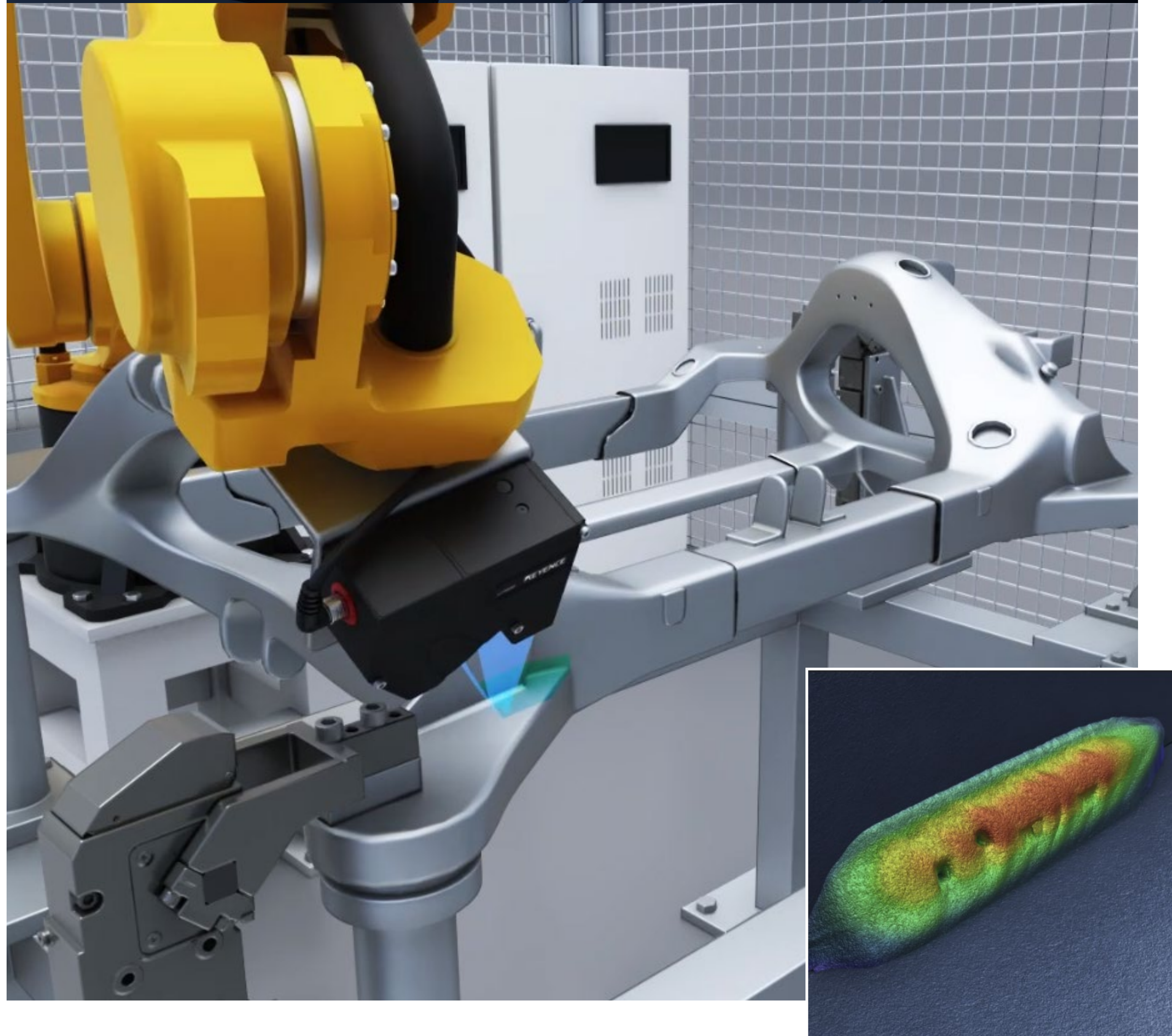
Moving the sensor head so it tracks the torch of the welding machine allows for inline and automated 100% inspection.

The measurement of the beads determines whether they pass the inspection, which eliminates false detections caused by uneven colors.

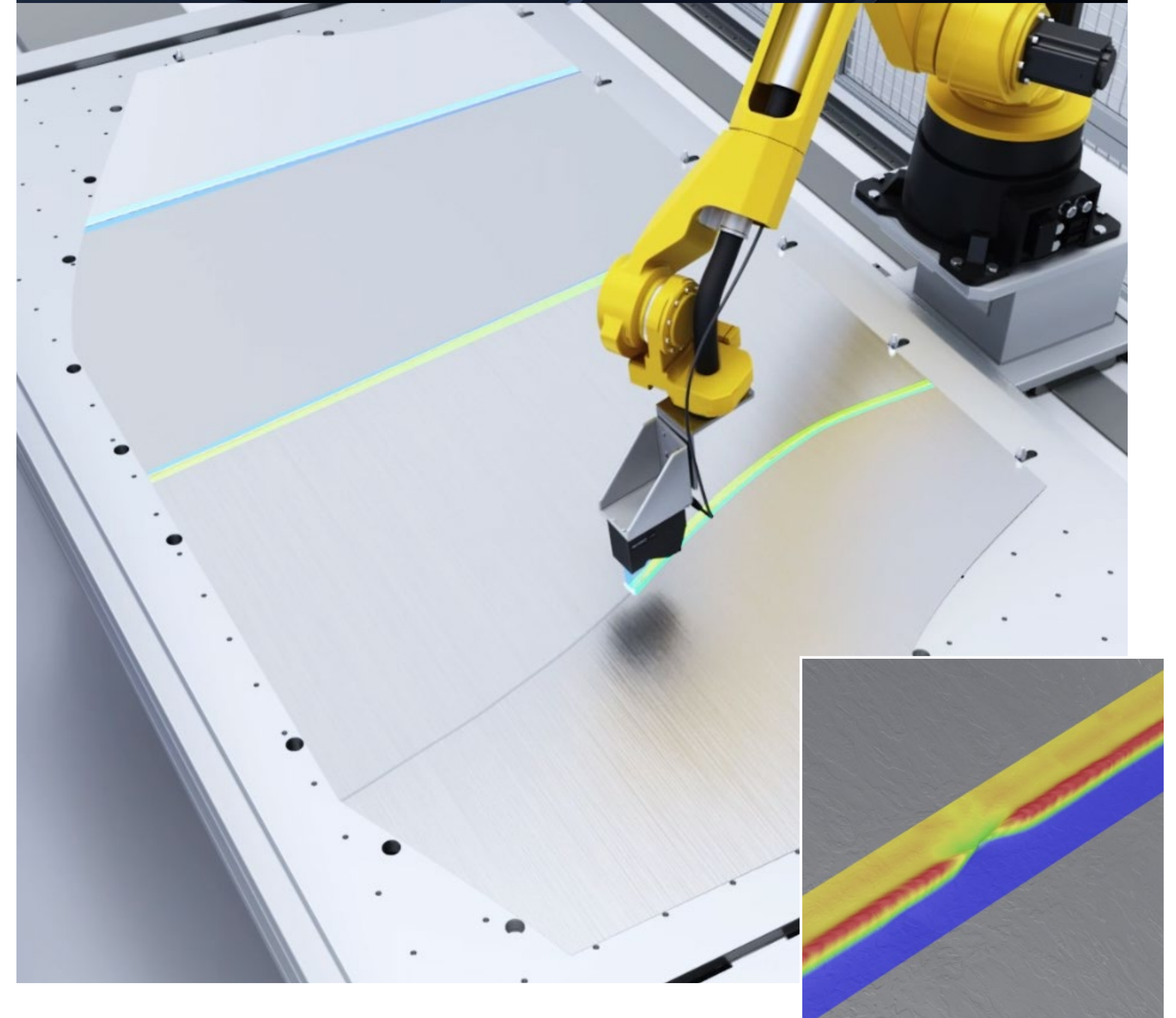


Welding defects discovered

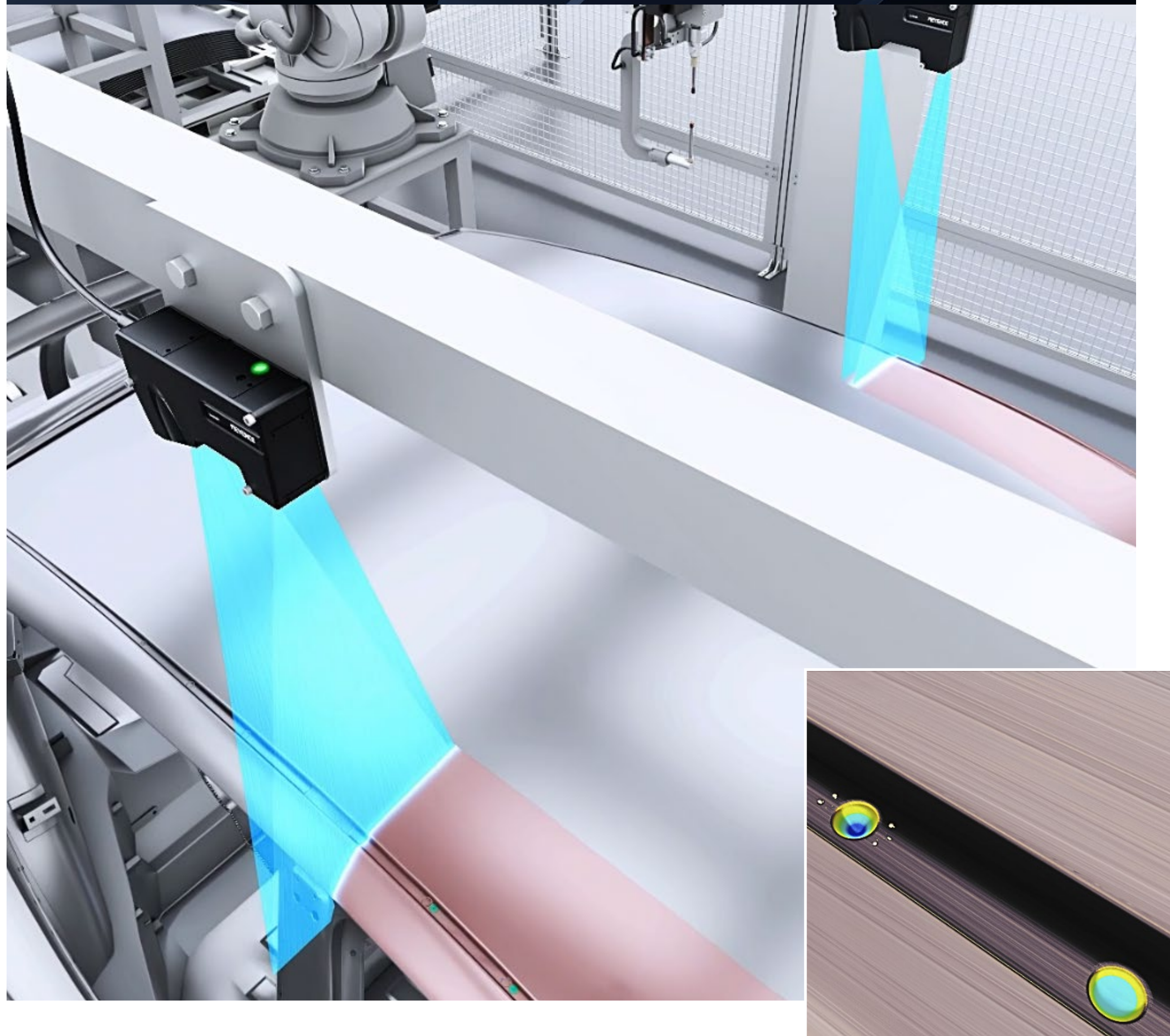
Suspension component arc welding bead shape inspection



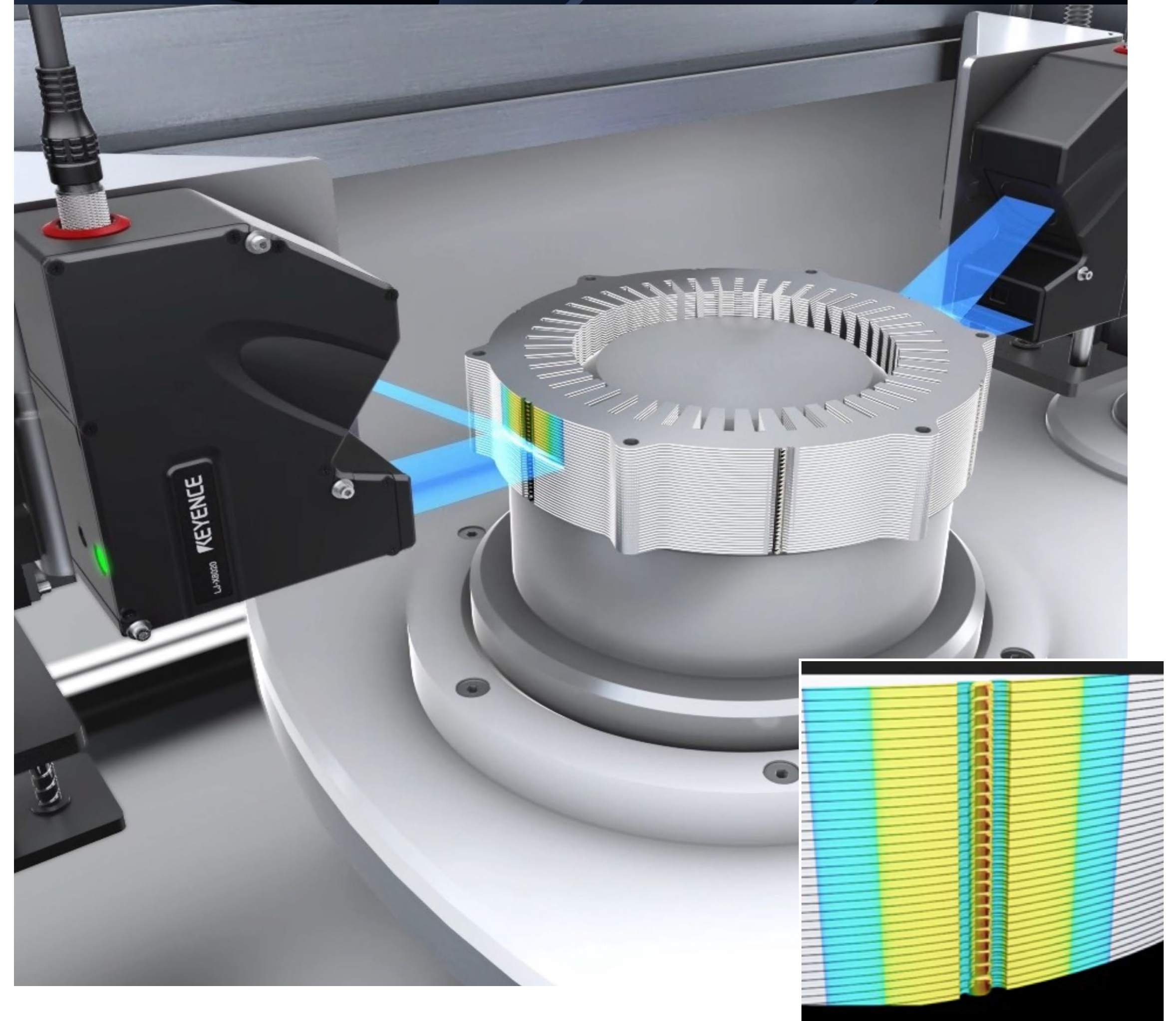
Laser welding bead appearance inspection



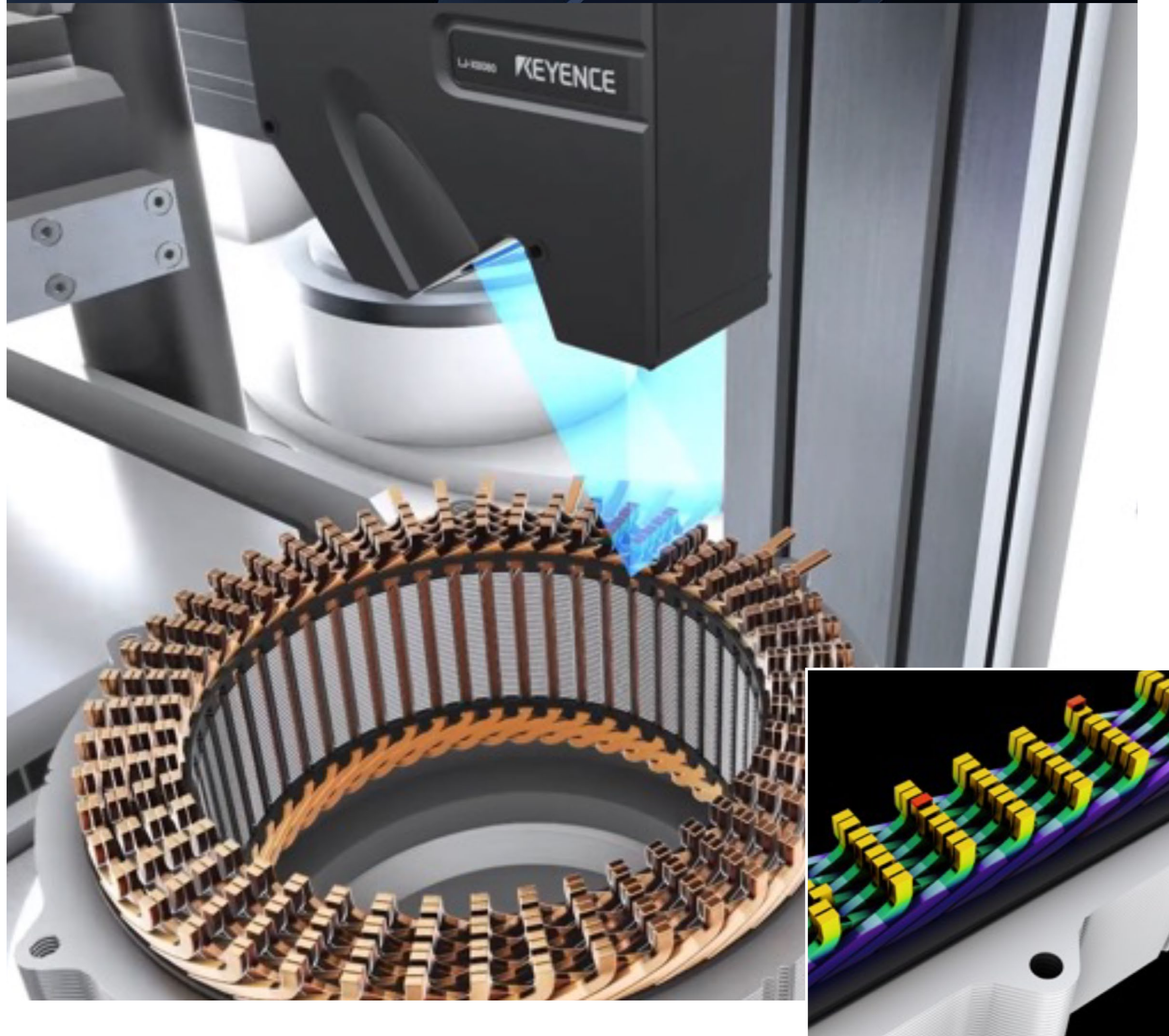
Roof assembly spot welding appearance inspection



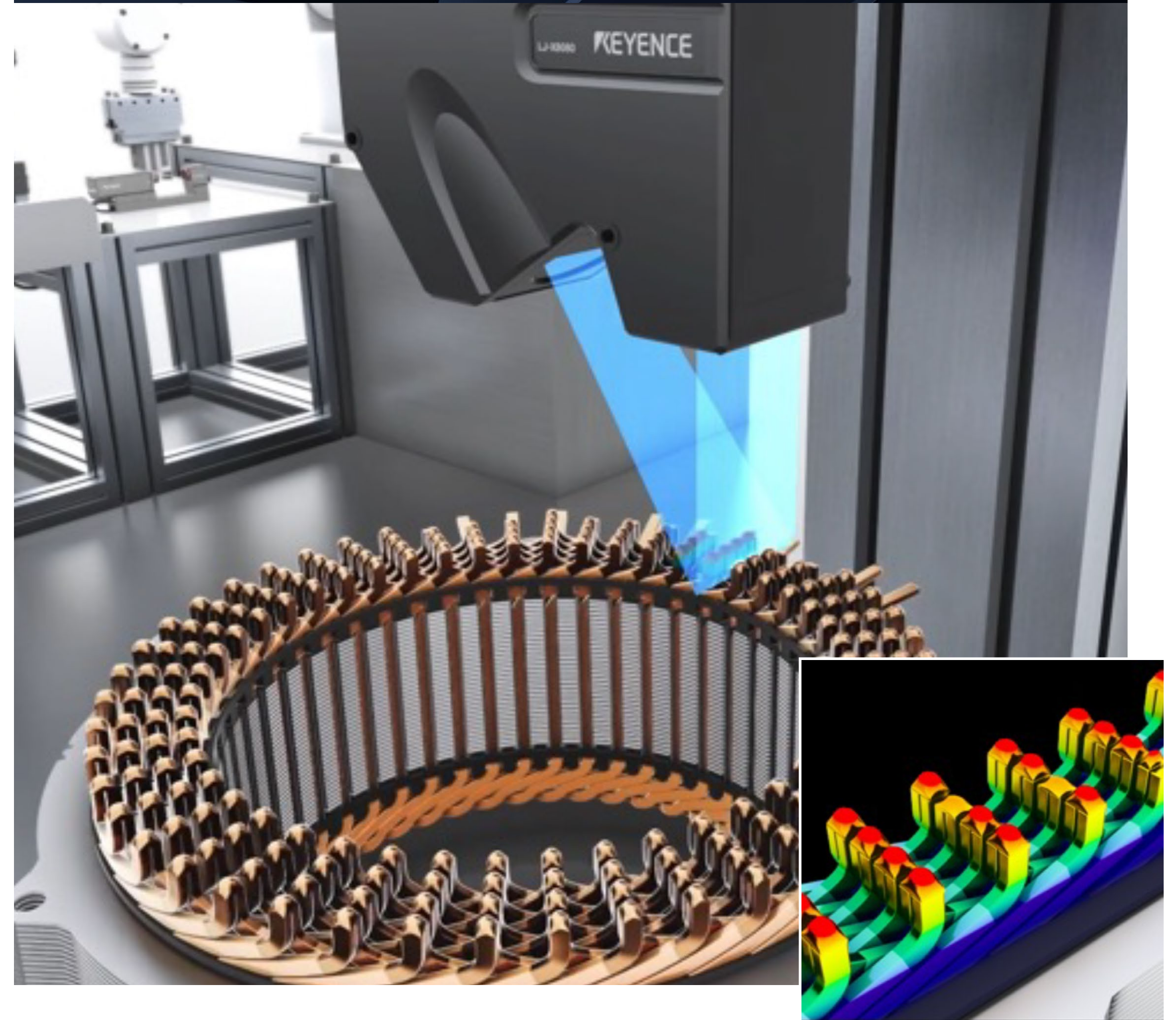
Motor core welding bead inspection



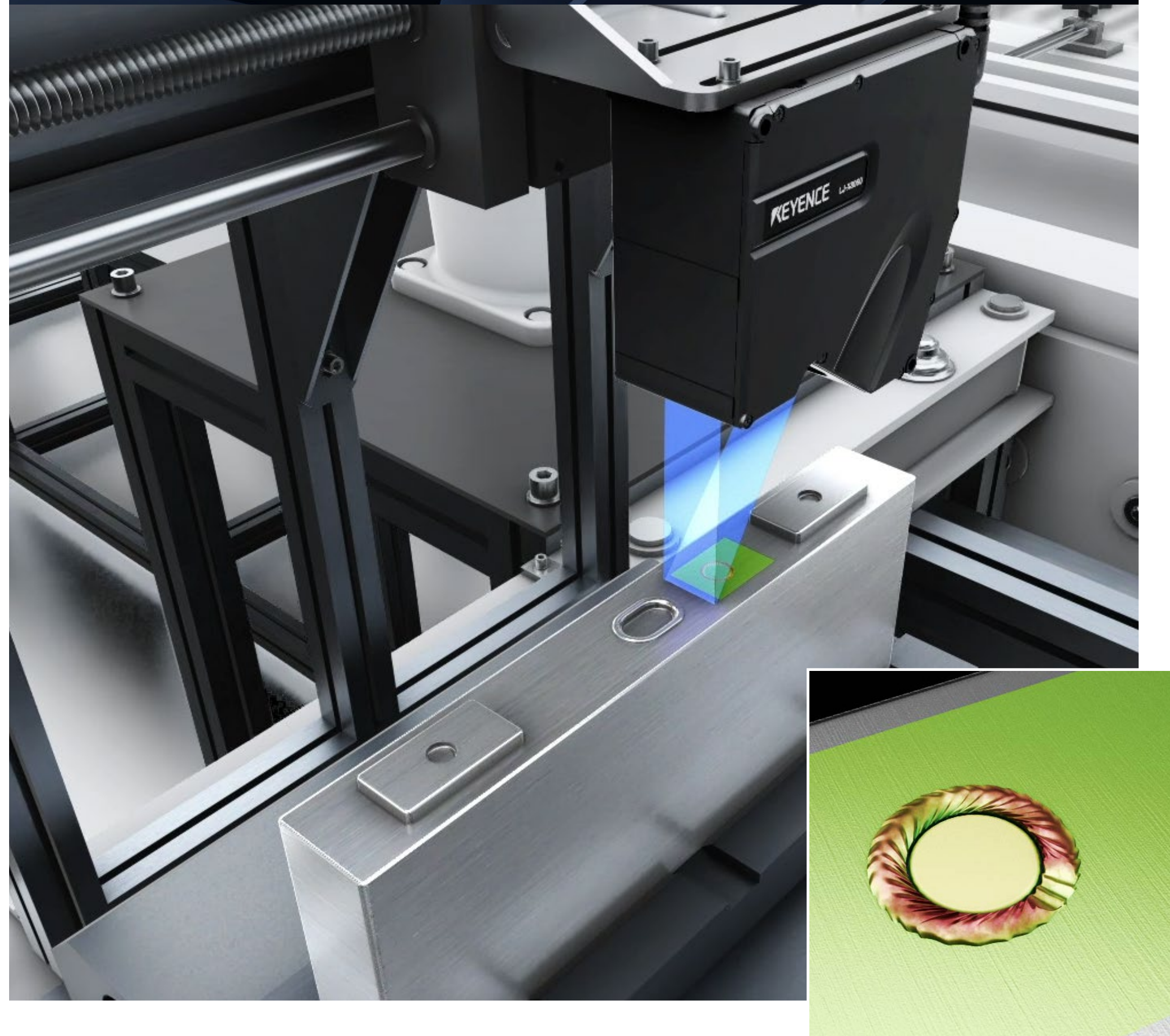
Height/position measurement of flat wire before welding



Welding ball appearance inspection after welding



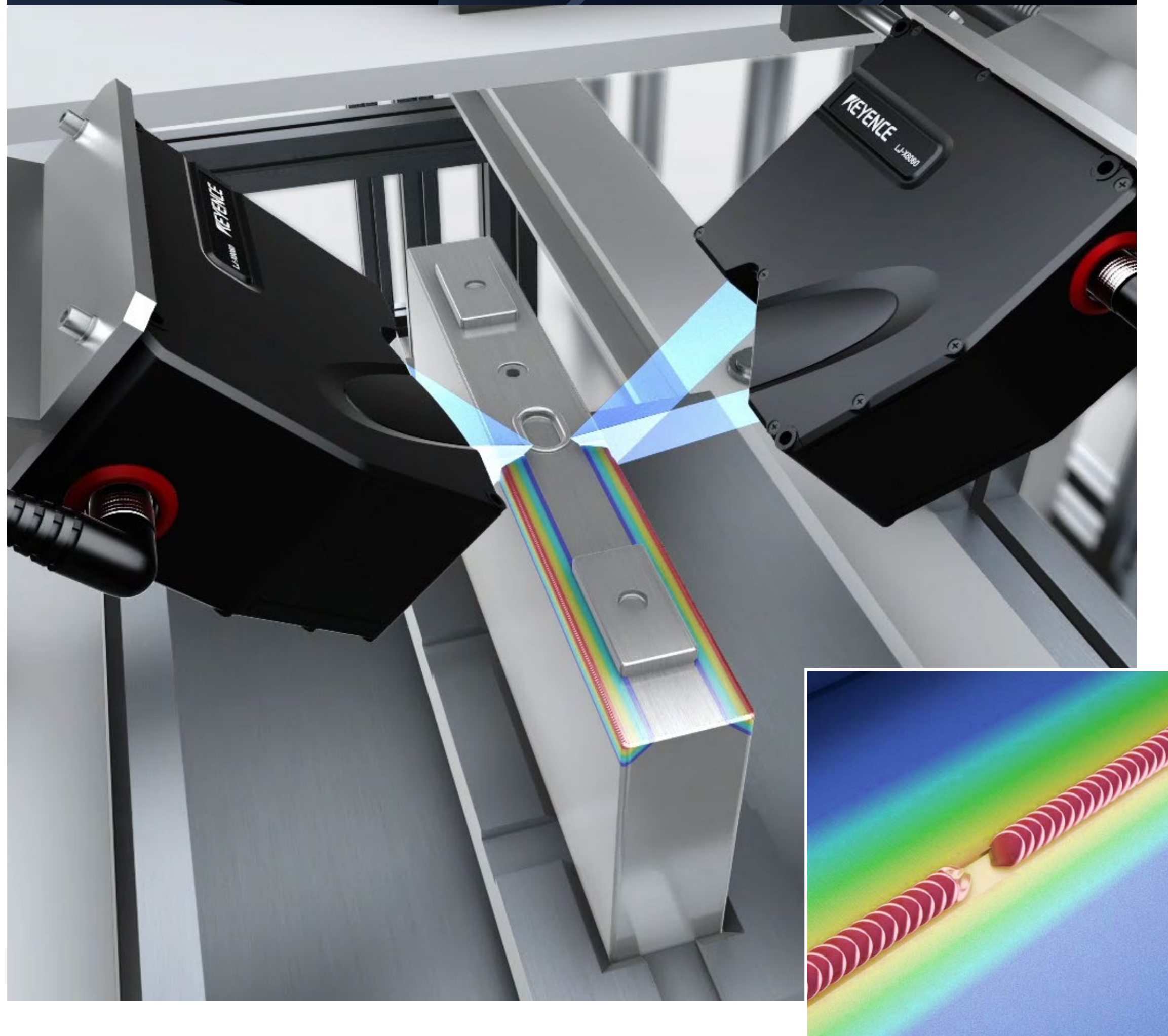
Welding bead shape inspection after injection port welding



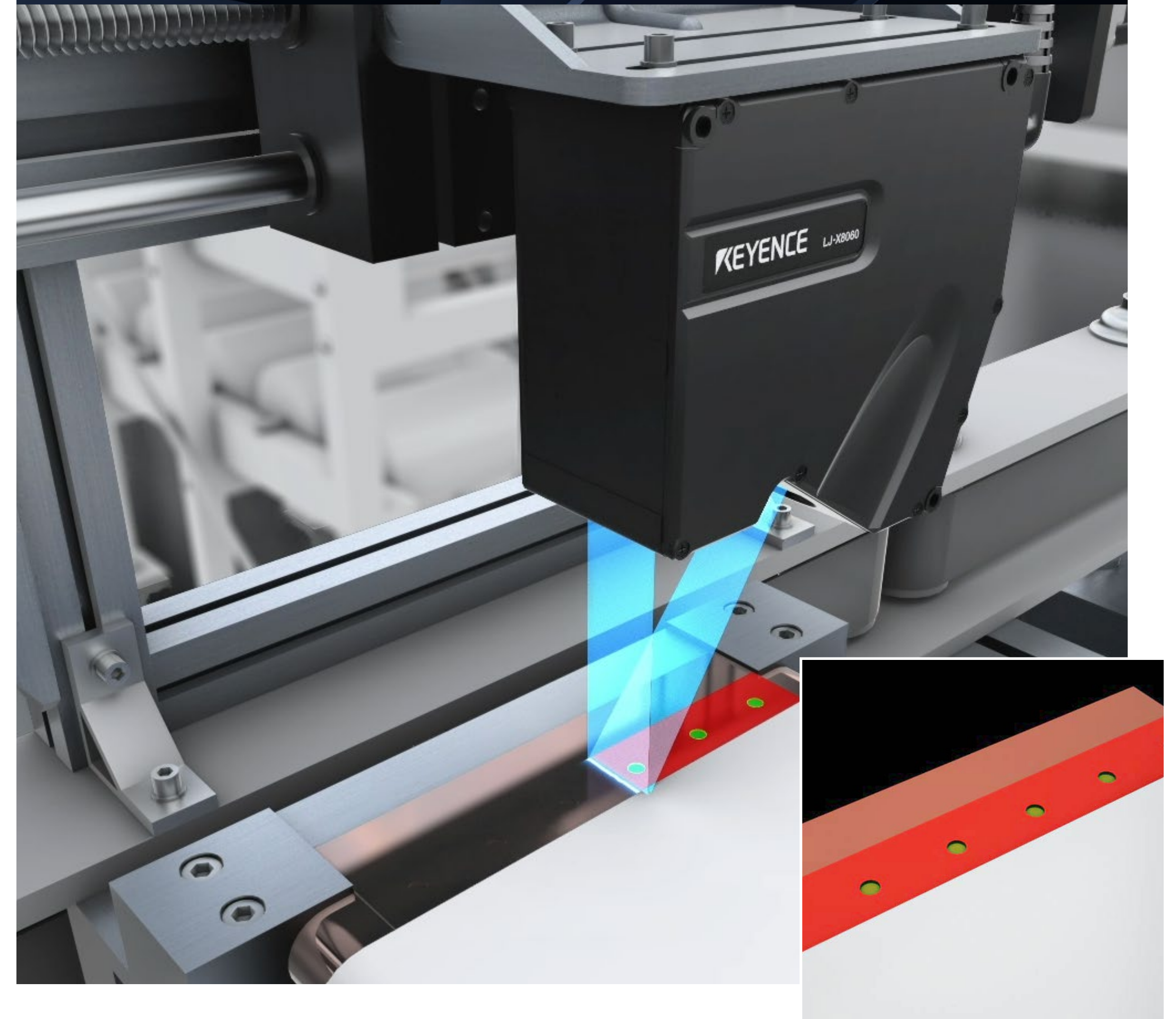
Bus bar welding shape inspection



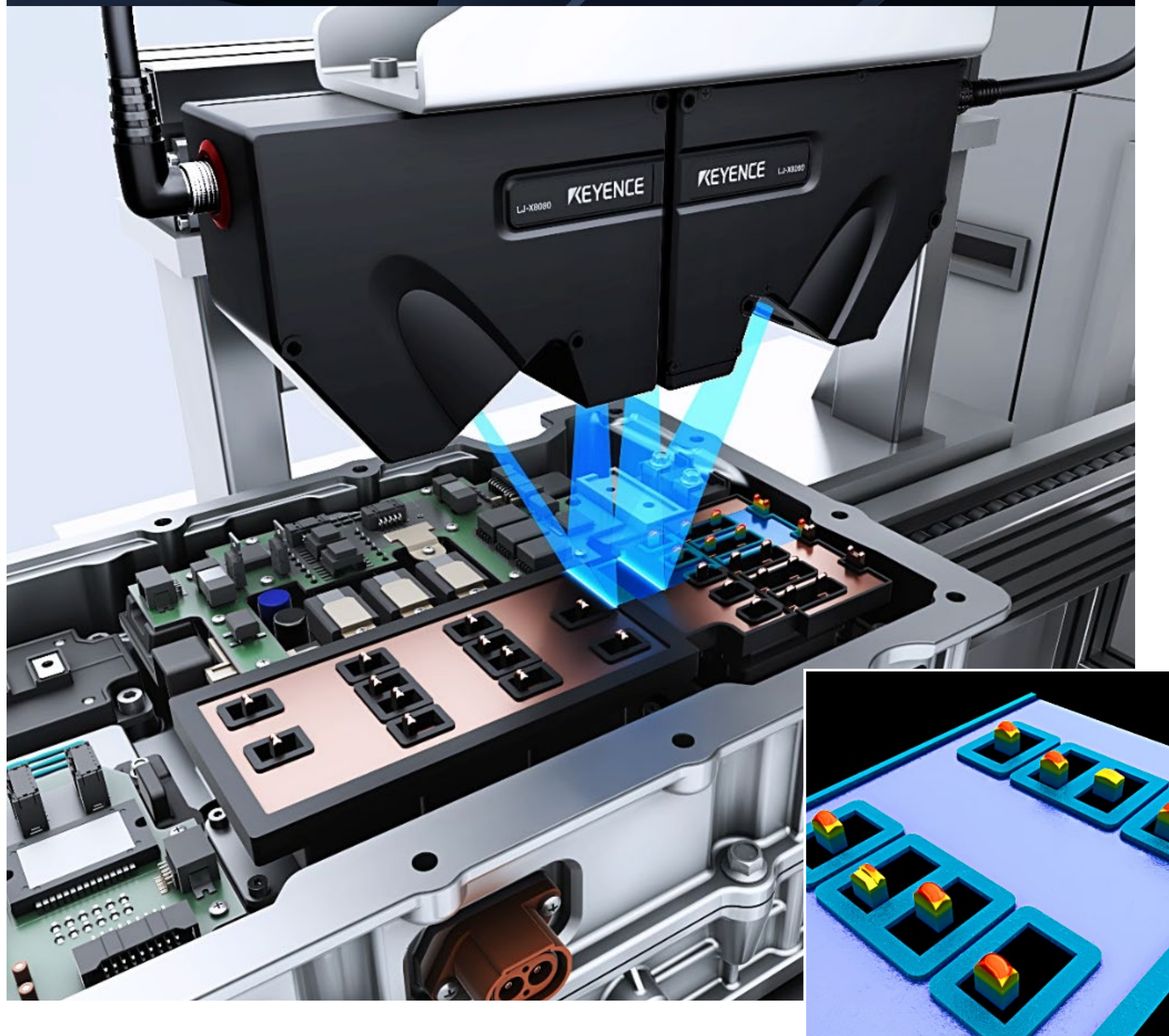
Welding inspection after insertion into outer can



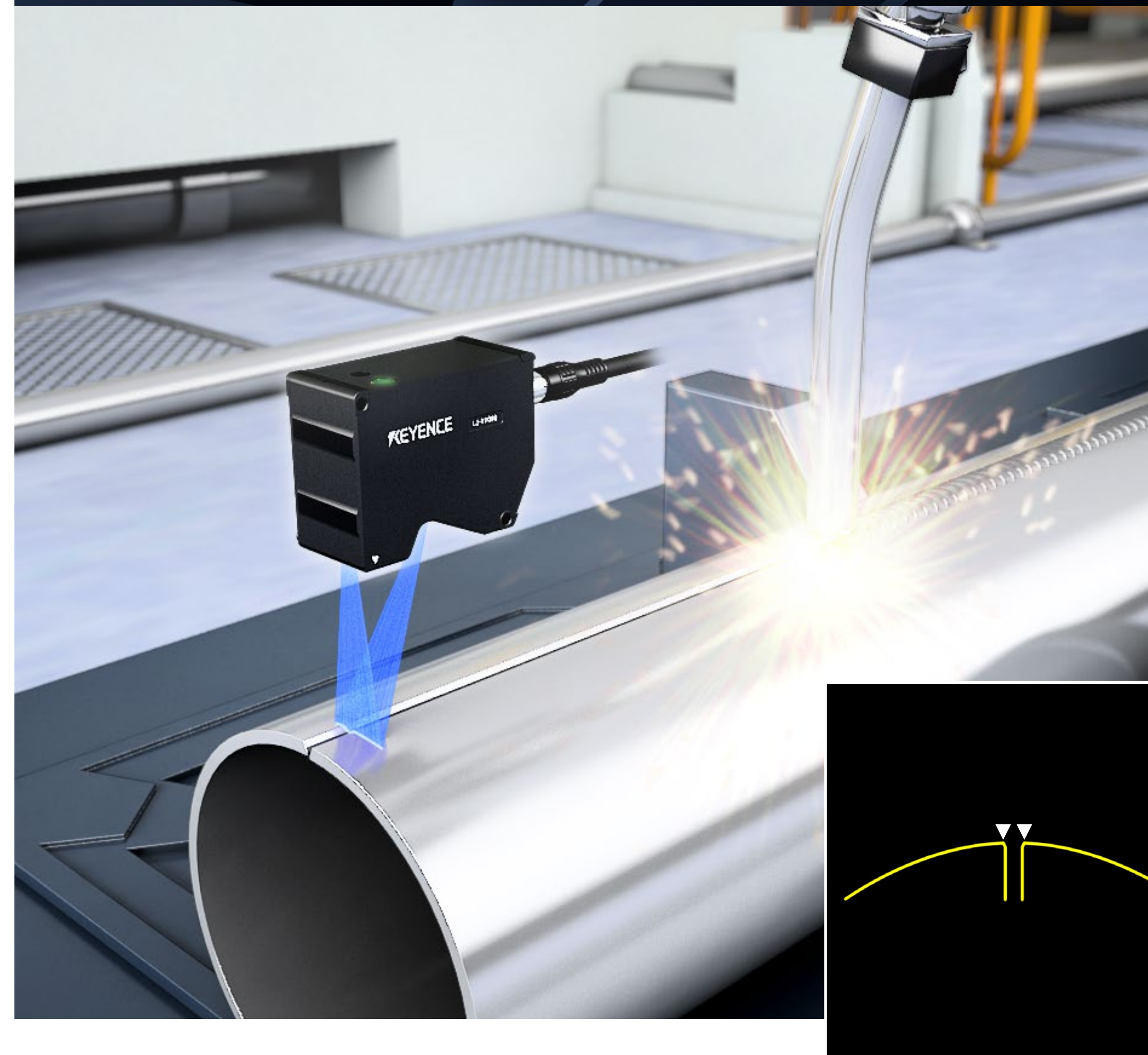
Welding defect inspection of electrodes and tabs



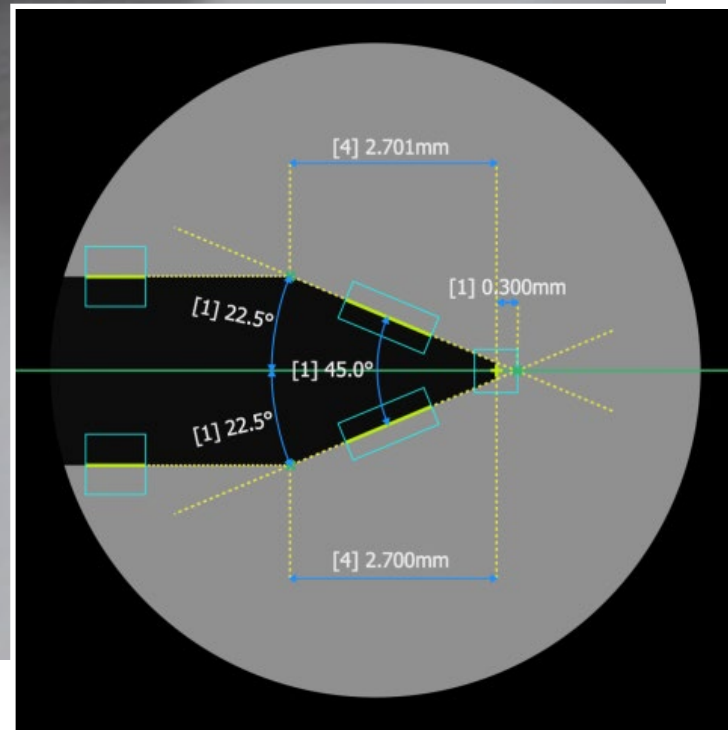
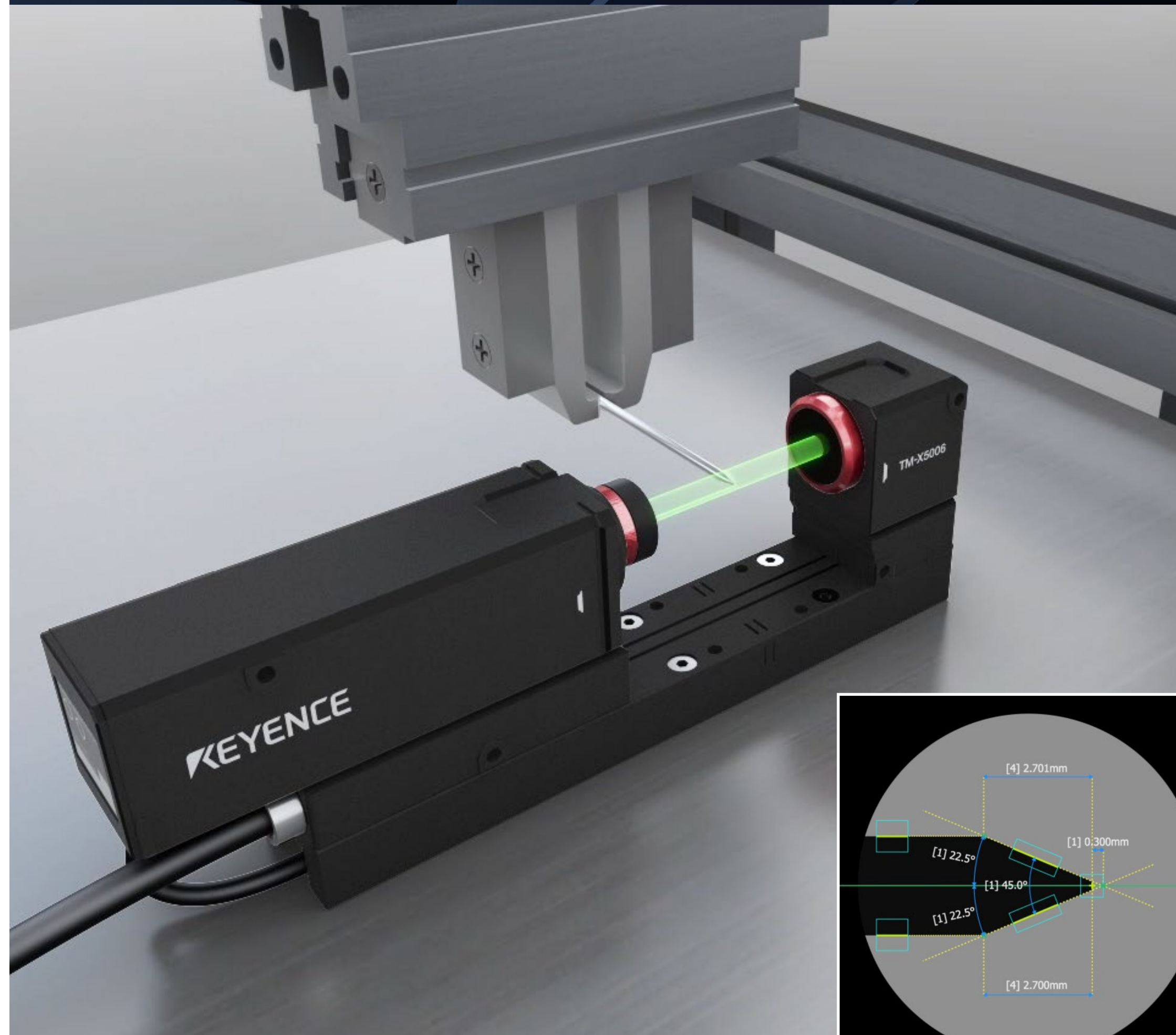
Weld appearance inspection after welding (LJ-X8080)



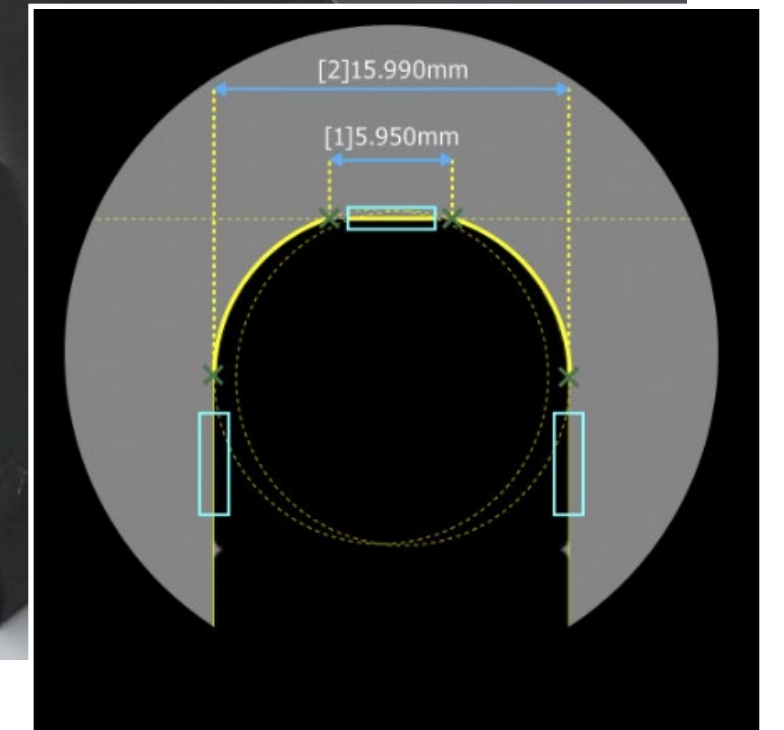
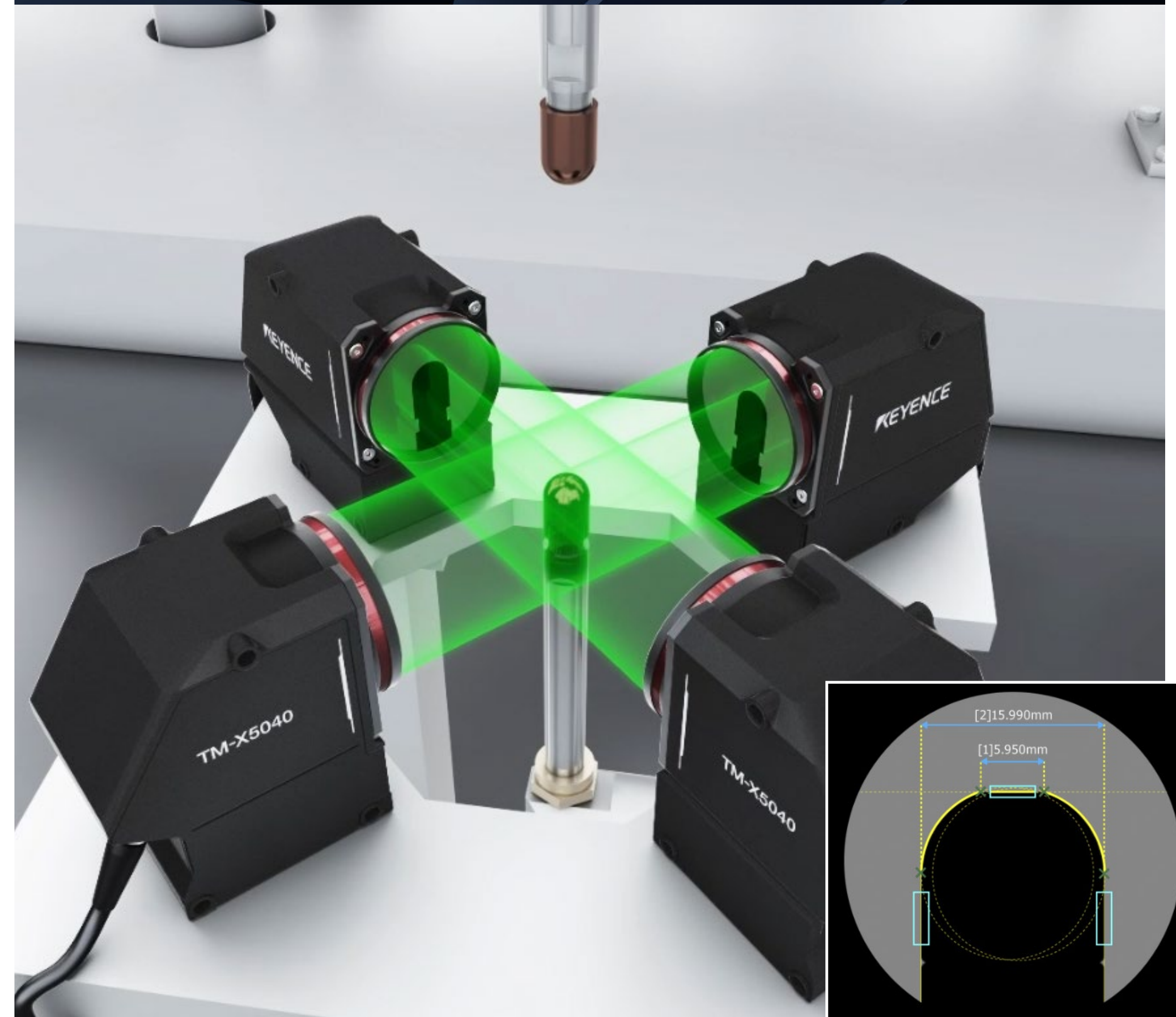
Steel pipe pre-welding groove position measurement



TIG welding machine electrode wear inspection (TM-X5006)



Spot welding electrode wear inspection (TM-X5040)

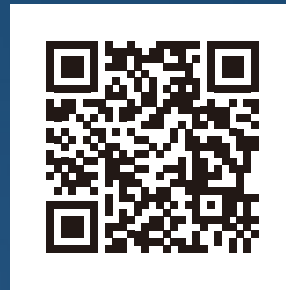


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2D/3D Laser Profiler

NEW LJ-X8000 Series

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Telecentric Measurement System

NEW TM-X5000 Series

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