

WELD QUALITY

DEFECT DETECTION CASE STUDY

PROBLEM

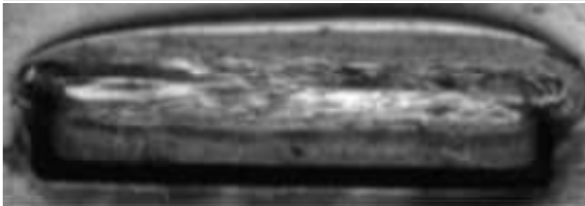
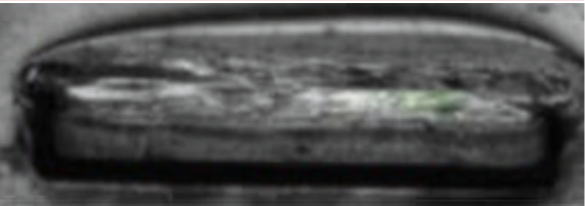

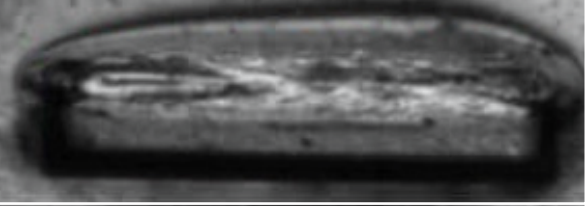

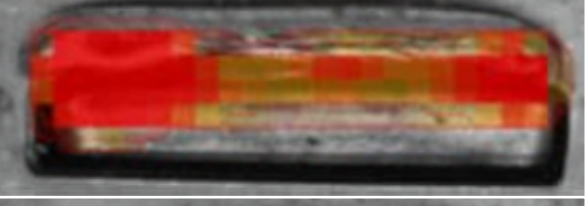
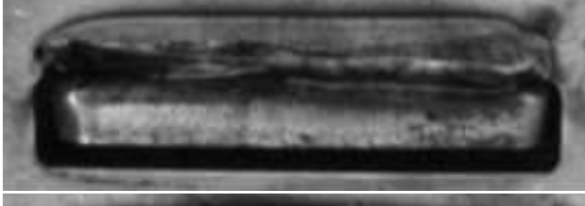
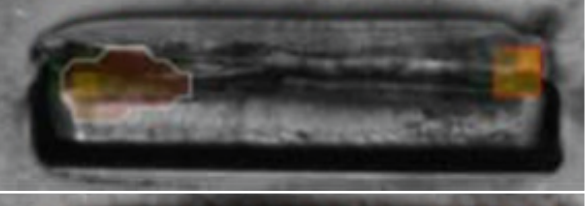
BOS was contacted by a customer to come up with a method of inspecting laser weld quality on automotive parts. The parts had a cycle time of 7 seconds and were currently being 100% inspected manually. The customer desired to complete an on-the-line study of the solution prior to implementing.

SOLUTION

BOS installed a 5MP camera on the customer's line to capture 40,000 images over a 3-week production period. Using the BOS I-DV deep learning machine vision system, a deep learning model was built for determining laser weld quality.

RESULT

During the 3-week production period, 23 defective welds were produced. The customer's trained operators successfully identified 21 defective welds while the BOS I-DV successfully caught all 23 defective welds.

	Before Image	BOS I-DV Result
Good		
Good		
Defective		
Defective		
Defective	