

ROBOT VISION AT



At Kongsberg Automotive Åmotfors *the LM15 line* is a major step towards full automation of the SINUS wire production line.

A roof mounted robot performs the task of applying adhesives on the product. The coordinates of the adhesive placements are fed into the system as CAD coordinates needing only a tuple (X,Y,A) coordinates as a single starting point for the procedure.

A ScorpionVision system from Tordivel as is deployed, capable of finding the starting point SINUS signature in a large number of product variants. The coordinates are reported directly in pure robot reference system coordinates over a TCP/IP connection.

The vision system is also capable of performing a large number of user configurable inspection tasks such as wire inspection, CC measure and silicon paper placement verification.

The system operates in-line and in realtime allowing 100% inspection.

"Our robot approach is depending on a stable and easy-to use vision system. ScorpionVision is best-practice at KA and this system proves why".

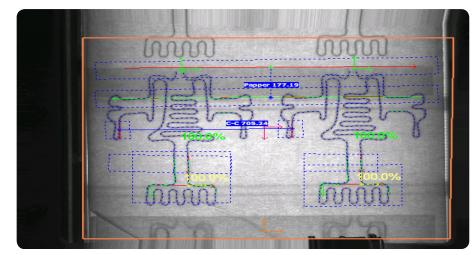
- Tom Ervik, senior process developer at KA.

For more information:

Tordivel AS Phone +47 2315 8700 Fax +47 2315 8701 office@tordivel.com www.scorpionvision.com TORDIVEL

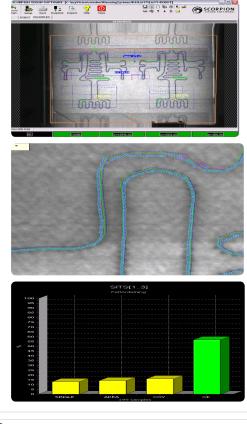


Tordivel as Storgata 20, N-0184 Oslo, Norway www.scorpionvision.com



WHY IT WORKS

Lens calibration, image resampling and robot calibration minimizes optical distortion and ensures that all pixels in the image is positioned and aligned with the robot coordinate system. Position detection accuracy for objects is ensured with our PolygonMatch Tool.



Robot guiding fundamentals:

- lens calibration
- image resampling
- robot calibration
- coordinate system xformations
- accurate alignment
- unlimited product variants

Robot inspection:

- wire verification PolygonMatch
- dimensions verification
- feature presence
- open architecure
- pass/fail

Statistics:

- pareto graphs
- trend graphs
- reports

Logging:

- log any image to disk
- jpeg compression
- jpeg compressio

SPECIFICATION OVERVIEW

Parameter	
Resolution	1300 μm
Processing time	<1000ms pr product
Number of product variants	Unlimited (configurable)

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