

Advanced Enhance the Inspection Process through Innovative AOI Equipment



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BACKGROUND

Advanced’s market-leading fire protection solutions are installed in buildings around the world, as well as in a wide variety of complex and high-risk sites. The company is known and trusted by customers for its quality, performance and ease of use.

As a global leader in the development and manufacture of commercial fire alarm and detection systems, it is critical for North Tyneside based Advanced to invest in capital equipment to enhance production.

Reliability and high standards are essential when manufacturing intelligent fire systems. It calls for innovative processes and state-of-the-art equipment. To guarantee their place as leaders in the field, Advanced continually enhance their capital equipment investment to ensure production runs effectively. To ensure it continuously uses the most-advanced technology and systems, Advanced recently invested in new equipment having consulted with Altus Group.

Following the research of Advanced and its production requirements, Altus recommended Koh Young 3D AOI inspection systems, together with YJ Link link conveyors.

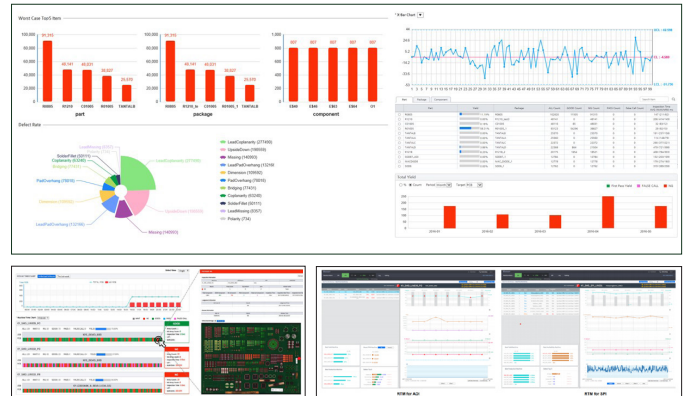
ADVANCED INSPECTION IS CRITICAL

The use of 3D AOI systems are an important method of inspection. Measurement accuracy is increasingly fundamental. As the components used in modern electronic assemblies become smaller, the need to offer reliable and traceable processes for critical applications like those used within Advanced’s fire systems become even more important.

3D AOI provides repeatable results with false calls, which frequently led to escapes, mitigated substantially by basing the inspection process on measurement.

“Implementing the most reliable and accurate inspection processes is of the utmost important to us because our products are safety critical and can be lifesaving if called into action,” said Steve Gee, Engineering Manager from Advanced.

“It is vital during production that we have zero escapes. We must also not compromise on false calls for our operators. Through our evaluation, we saw that the Koh Young AOI, which uses fully 3D light metrology, would create that peace of mind that we could achieve no escapes whilst also delivering very low false calls. This contrasted to optical 2D (AOI) where the inspection result is subjective and returns higher false calls.”



KOH YOUNG SMART INSPECTION

Koh Young's 3D AOI solutions intelligently combine technologies with superior hardware to provide true 3D optical inspection solutions and ultimately improve manufacturer's processes.

Koh Young's systems ensure inspection tolerances are precise, providing meaningful insights about the process and eliminating the root causes of a defect through measurement data generated from 3D AOIs. Importantly the system also incorporates KSMART a measurement-based process analysis solution which allows manufacturers to implement Industry 4.0 with reliable full 3D measurement data.

Steve continued; "Aside from the support and known reputation of Koh Young and Altus, what was also significant in our decision making was how the Koh Young platform unlocks the data the AOI collects. We use KSMART SPC which is a module that allows us to aggregate our production data and use live data to make process improvement decisions. Using real data allows you to quickly identify the components even if still 'Good' have the largest variation, adjust the build process and drive yields up even further."

KSMART smart factory solution is entirely modular and offers maximum production efficiency and control for advanced electronics manufacturing. With miniaturisation on the increase, and more complex products being designed, flexibility and increased standards for equipment that must communicate in real time are important. KSMART comprises an easy-to-use toolbox designed to meet these challenges. It enables real-time analysis of defects, beginning with simply providing true 3D inspection data obtained from Koh Young's 3D inspection

systems. This data is essential for finding root causes of defects and achieving process optimisation.

The combination of Koh Young's world leading SPI, AOI and KSMART software provides optimum performance in production, traceability and process control.



THE FUTURE

"The Advanced team were ideal to work with and are a customer that quickly understood the differences between full 3D measurement and the other offerings on the market using legacy technology," said Tony Sweetman, Altus Sales Manager.

"Certainly, we had to prove out our capabilities and show them how the system could add value, but it was great to support a new knowledgeable company. We are looking forward to working on more projects with Advanced in the future and building on this new relationship."

