

Press Release

Danfoss Silicon Power inspects with Viscom AOI/AXI

Hanover, September 2014 – **Danfoss Silicon Power GmbH, based in Flensburg, Germany, has supplemented its existing Viscom X8051 with additional X7056BO combo-systems for wire bond inspection. Danfoss Silicon Power is a subsidiary of the Danish Danfoss Group that delivers power modules for frequency converters to customers from the industrial, automotive and renewable energy sectors, among other products. The company's recent purchase was made due to the growing automotive business and its increasing demands.**

Currently, Danfoss Silicon Power is running four Viscom X7056BO systems that combine X-ray and AOI inspection in one system. The strengths of the combo-systems lie in reduced acquisition costs, low false alarm rates and a high productivity.

"In the manufacture of our products, X-ray and automatic optical inspections are a matter of course," says Torsten Hansen, Manager Production Equipment at Danfoss Silicon Power. "We continually check all technical processes throughout series production." The company inspects every single wire bond with AOI, and all active components with X-ray inspection. For bond processes, there is an additional 100 percent visual inspection.

Before acquiring the systems, Danfoss Silicon Power intensively analyzed the market offering for X-ray and AOI systems and tested different systems. "First we wanted to settle on two separate machines: one AOI and one X-ray inspection system," reports Torsten Hansen. "Until we determined that with Viscom, both technologies can be integrated very well."

During the course of the test phase, the company quickly recognized that the initial expectations for inspection quality and speed could be even further exceeded by minor adjustments and adaptations. "Today, the false alarm rate in many areas is better than the rate Viscom originally confirmed," reports Torsten Hansen with satisfaction.

The X7056BO inspects the path of the wire in wire bond connections with AOI. The inspection system recognizes the bond feet and uses them to analyze how the wire must lie. During the process, position, form, tail length and bond tool imprints on the bond feet are analyzed along with other features. Glossy surfaces and a straight-line wire path are the essential parameters for the wire. Danfoss Silicon Power deploys X-ray inspection on solder surfaces beneath the active components for interfering surfaces. Pores, resulting from inclusions of liquid or air, are typical defects.

"The savings gained through the Viscom X7056 are considerable", says Torsten Hansen. "For one, the acquisition costs already are significantly less in comparison to two individual machines. Additionally, productivity has distinctly increased."

Picture Caption: Viscom inspection system X7056BO at Danfoss Silicon Power in Flensburg. L.-R.: Wolfgang Herbig, Herbig Technologies; Torsten Hansen, Manager Production Equipment and Wolfgang Dreesen, Process and Applications Technician at Danfoss Silicon Power

About Viscom

Viscom AG manufactures and sells high-quality automatic optical and X-ray inspection systems. The company is one of the leading suppliers of 3-D solder paste inspection, component placement and solder joint inspection equipment in the PCB assembly market. Viscom systems ensure quality in surface mount technology production lines, where they can be interlinked to further improve productivity. The company's headquarters and manufacturing operation is located in Hanover, Germany. With a wide network of branches, applications and service centers, Viscom is represented throughout Europe, Asia and the Americas. Founded in 1984, Viscom has been listed on the Frankfurt Stock Exchange (ISIN: DE0007846867) since 2006. For more information, visit www.viscom.com.