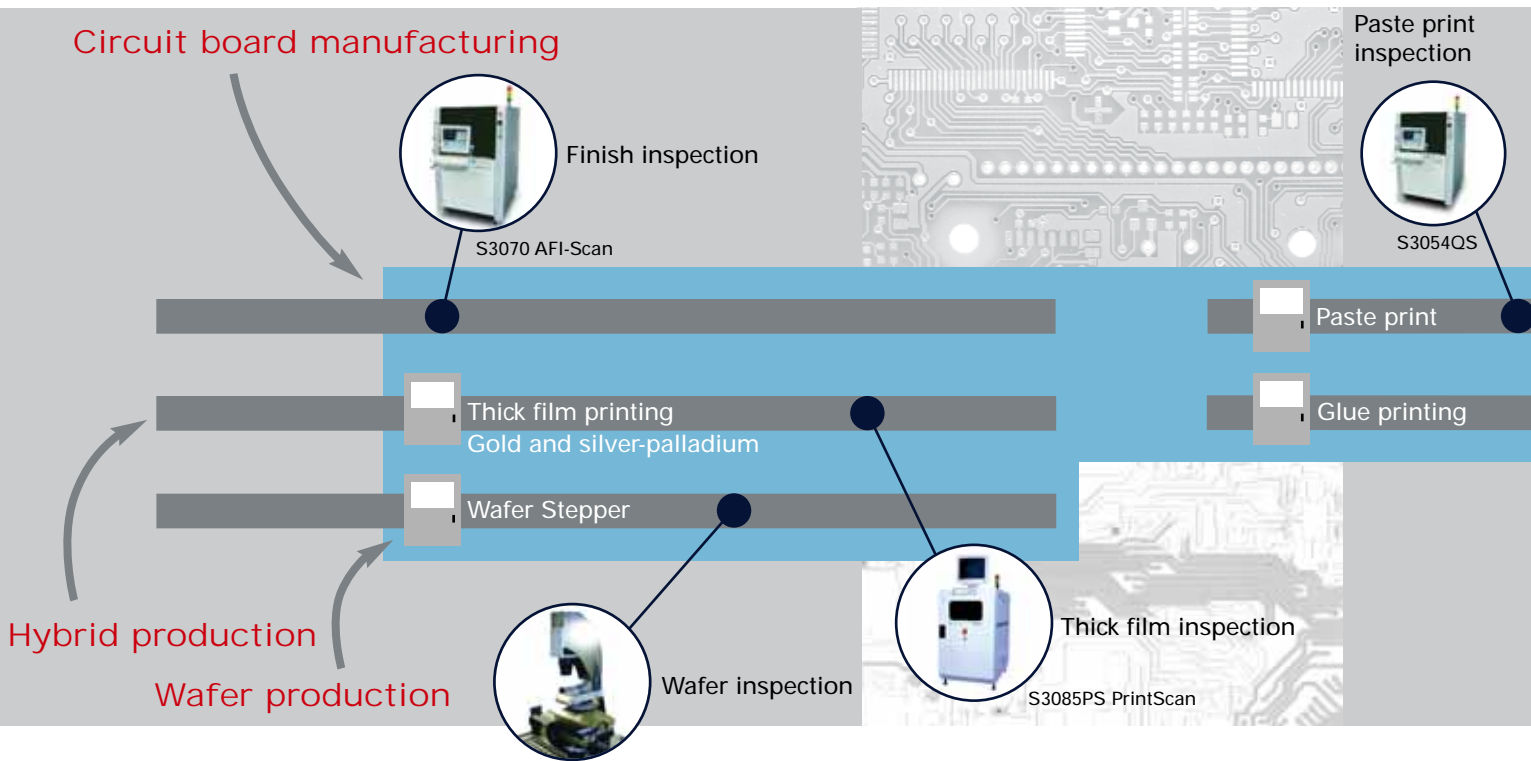


Quality in
Electronic Production
has a Name:
Viscom

System Overview

Successful along the Whole Line

with Viscom Inspection



Wafer Inspection

All customer specific inspection systems are based on the proven Viscom standard solutions and check semiconductors at the wafer level. Typical image processing tasks include optical final inspection of the chips in the wafer as well as the surface test. During surface testing, inspection of 6" silicon wafers is possible at a resolution down to 1 $\mu\text{m}/\text{pixel}$. This inspection also includes an examination for foreign material and structural analysis of micromechanical elements. This system version is suitable for operation in clean rooms.



Finish Inspection

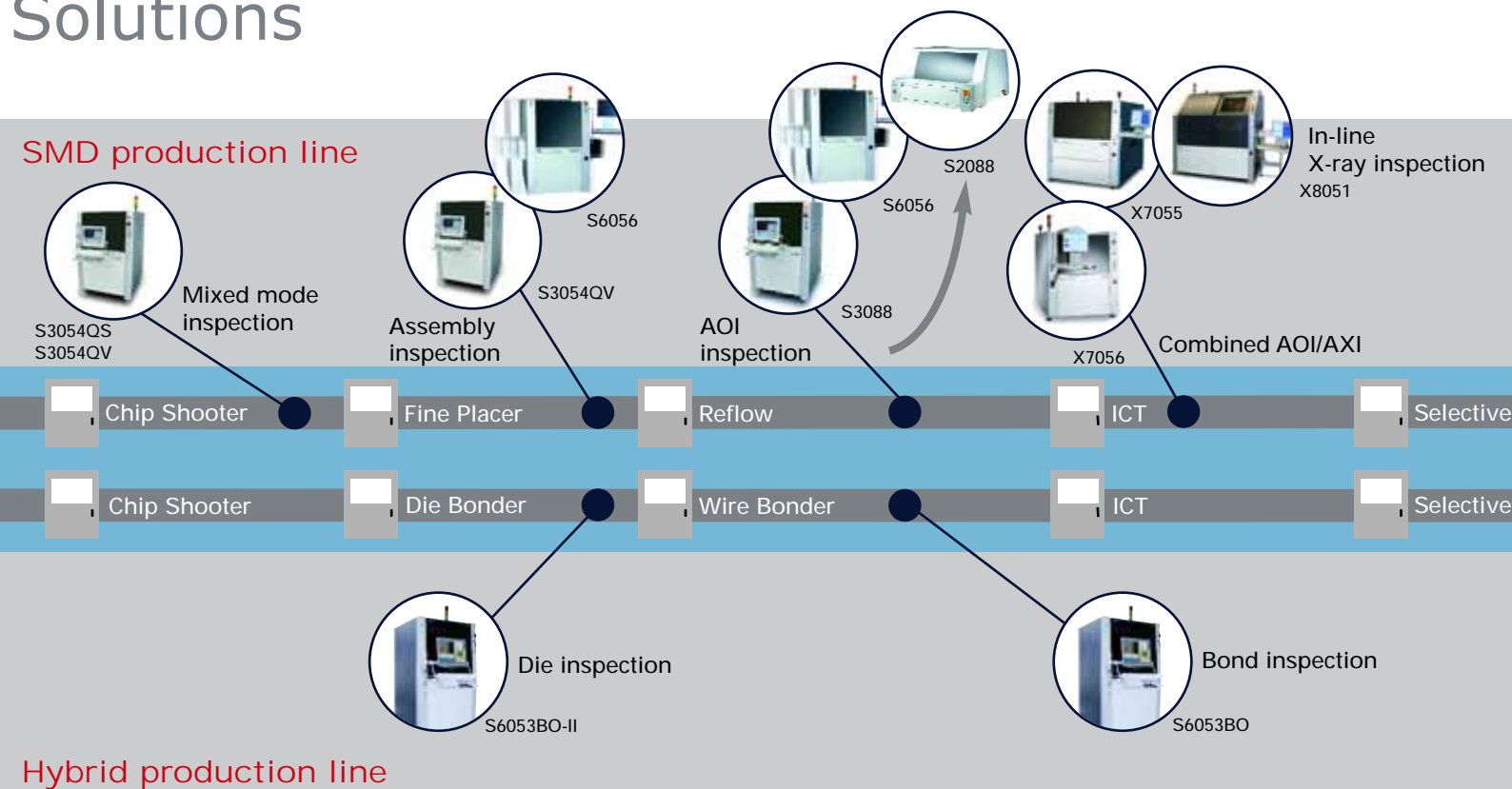
The fully automatic S3070 AFI-Scan system recognizes faults of the surface of bare boards. The inspection systems work with an extremely high resolution line camera. With the help of a special LED-lighting the faults are recognized. An automatic classification of erroneous boards is possible. The system detects mechanical damage, scratches, absence of solder resist and residues on the pads on different final surfaces. Moreover, the offset of the reference hole, contact pads and fiducial marks is checked and measured and contour errors and missing vias are recognized.



Thick Film Inspection

The advantages of thick film circuits on ceramic substrates are the favorable mechanical and thermal characteristics. Particularly in security relevant areas 100% inspection of the printed circuit pattern is required. The S3085PS system inspects the layers quickly and reliably following each printing operation and then accomplishes final inspection of the cured ceramic substrate. Interruptions, absence of material, printed image offset, short circuits, vias, etc. are detected with reliability.

Solutions



Paste and Component Inspection

The systems of the S3054 family are optimized for the standard requirements of assembly inspection and offer sturdy error recognition following paste printing and component placement. They are distinguished by their compact layout, high speed and particularly simple and efficient programming. Depending on the application the system can also be installed between the chip shooter and fine placer for the inspection of chip placement and paste print for fine pitch components in one inspection operation (Mixed mode inspection).



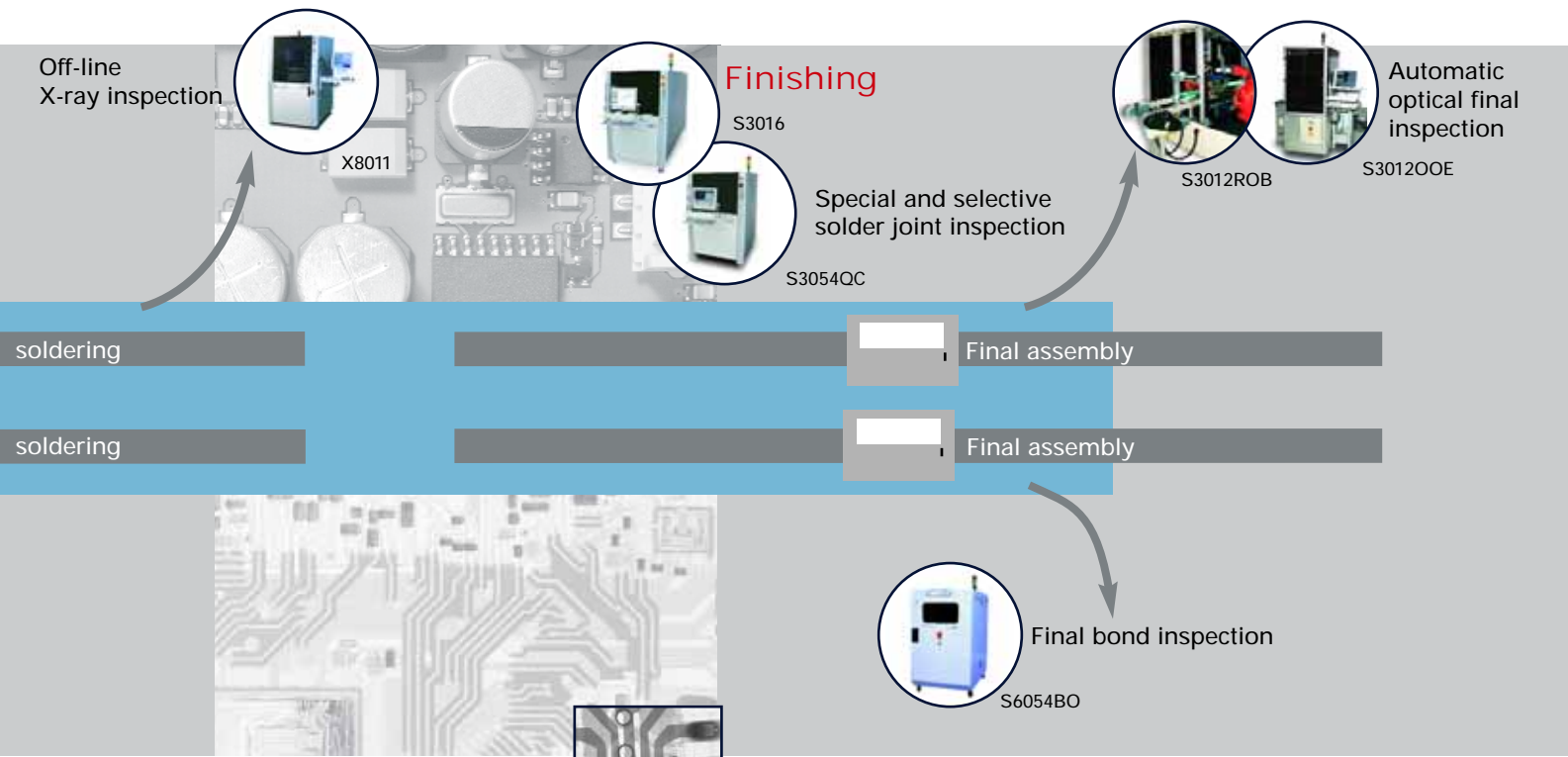
Bond Inspection

Wire bonding processes are frequently used in security-relevant or thermal high stress areas. For this reason, the requirements for the quality of this connection technology are particularly high. The system for wire bond inspection, S6053BO, guarantees high precision inspection of wire bonds, ball-wedge, wedge-wedge and security bonds — in-line and fully automatically. Aluminum thick wire connections as well as aluminum and gold thin wire connections can be inspected completely and reliably with the S6053BO-II.



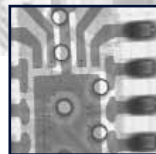
Post Reflow Inspection

With an error detection rate of 99.5%, post-reflow AOI with the S6056, S3088 and S2088 systems takes a key position in the production process. Defects during paste print, component placement or soldering are detected with highest reliability. High performance sensor technology includes angled cameras to guarantee maximum inspection depth and extremely fast cycle times, while ensuring positive recognition of critical defects. The S6056, in addition to single inspection on single- or dual-tracks, also offers parallel inspection to meet the most demanding throughput rates. The S3088 provides robust inspection depth at an attractive cost/performance ratio, and the Desktop S2088 rounds up the product palette as the perfect entry system to automatic optical inspection.



Selective and Special Solder Joint Inspection

Following SMD production, special or selective soldering of special components or connectors is accomplished in a separate process step. The S3054QC system checks these connections even in the partially assembled production state. In addition to selective and special solder joint inspection, the presence, positioning and orientation of components are checked. Inspection of the polarity, clear printing and color codes are also included in the application spectrum. The S3016 makes it possible to inspect selective solder joints, THT and SMD components on PCBs populated on both sides. It is qualified for the inspection on the bottom side.



X-ray Inspection and Combined AOI/AXI

With their small footprint, the systems of the X8011 series are suited for manual, semi-automatic as well as fully automatic X-ray inspection, and optional computed tomography (CT) provides 3-D display for the inspection of smaller objects. The in-line capable X8051 series is designed for fully automatic inspection, including larger-format flat objects such as PCBs; in addition to 2-D X-ray inspection, optical sensors, CT or tomosynthesis can be included to add flexibility for various inspection tasks. The combi system X7055 integrates X-ray and optical capability to enhance inspection of electronic assemblies at fast cycle times. With simultaneous optical and 3-D X-ray inspection of both sides, the X7056 provides the most comprehensive inspection performance worldwide.



Automatic Optical Final Inspection

S3012OOE and S3012ROB are the intelligent platform for a complete final inspection whether for stand-alone or for automated production line operations. The modular layout of the individual components allows direct integration into any production line configuration. Additional modules to inspect new component types can easily be added at any time. The optional repair station, in-line or stand alone, will assist the operator in further handling defective components. The comprehensive inspection pattern library with its flexible setup for measuring and inspection procedures covers nearly all eventualities. If desired, additional custom inspections can be quickly and efficiently integrated.

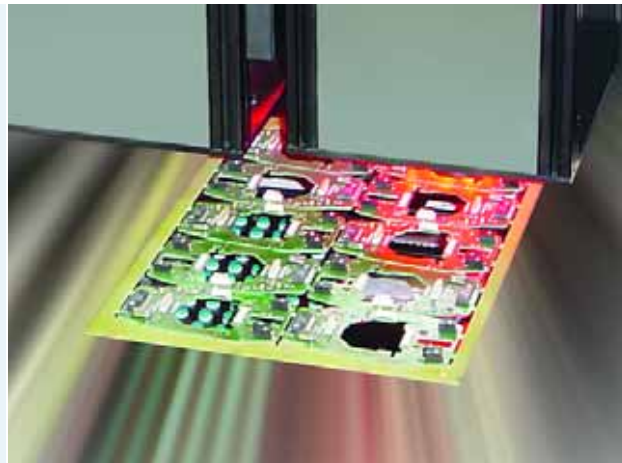


Technology at the Highest Level for Maximum Throughput, Flexible and Reliable

As a pioneer in automatic optical inspection, Viscom has developed inspection systems for quality control since 1984. The electronic industry, particularly the automotive branch, has always been an important and demanding partner. In close cooperation with our customers, our highly qualified team of engineers has created inspection solutions optimally adapted to the requirements of electronic production. The result is a comprehensive line of models for quality control and process optimization using optical and X-ray inspection.

With high performance camera technologies, Viscom has set new standards in image processing. Innovative handling concepts ensure that these advantages also provide higher throughput. The 6M sensor technology and the use of inclined camera views also guarantee maximum inspection depth at extreme cycling time requirements and ensure reliable recognition of critical errors. Our simple and intuitive EasyPro user interface allows quick and easy product change. Additional modules for repair and re-classification, off-line programming and VPC evaluation form the basis for comprehensive process management. The inspection systems can be configured on a custom basis, thereby offering the flexibility required in modern production — regardless of whether in high-mix-low-volume manufacturing or mass production.

With Viscom X-ray inspection, even concealed faults can be detected. The inspection solutions range from an off-line inspection island to fully automatic in-line inspection or combined AOI/AXI. All systems are completely compatible in terms of hardware and software ensuring simple product transfer. A variety of filter features and intelligent analysis tools simplify evaluation and support efficient and simple operation.



User consultation and service with hotline, on site service and remote diagnosis offer efficient and individual support worldwide. In addition, our internet customer forum provides inspection pattern downloads and current information at no cost.

— from automatic
inspection of bare boards
to assembly inspection
and optical final inspection

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