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CASE

**Packaging Control
 in the Electronics Industry**

CLIENT

TDK Croatia



Codel was invited to provide, through the configuration of AIDA Manufacturing Execution System (MES) and custom development, a Track and Trace system for its Client – an electronics producer for the automotive industry.



REASONS AND DRIVERS

There was no identification equipment or any element of a track and trace system on the packaging lines of the electronic components production facility at the point of project inception. Delivered goods quality control and precision of content were the key requirements for the project.

The solution system was tasked to provide/inform the:

- operators' actions on each machine;
- repro-material type loaded on each machine;
- measurement instrument setting points;
- Automated Optical Inspection (AOI) system about material and production orders, so the Automated Optical Inspection (AOI) could run appropriate inspections for each given material;
- fault tracking at the component level (to effect scrappage);
- integrate all packaging lines and packaging procedures and additional sampling quality control; and
- prevention of mixing materials and/or production batches.

Critically, the system needed to have no influence on the performance of the packaging lines in any way.



REVEAL THE HIDDEN FACTORY

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PROJECT IMPLEMENTATION



Codel installed an application server for controlling a new barcode network, with AIDA client modules on the machines and a database for data collection. The server applications handled about 100 packaging lines to provide all actions in real-time. Visualisation was provided for all production lines to ensure clear status reporting. On the industrial computers, AIDA client software was installed to handle all required operations and data collection for:

- operator log-on;
- communication with the programme for controlling each machine;
 - starting the machine subject to various conditions; and
 - stopping the machine, with respect to collected events (e.g. wrong batch, wrong material...);
- packaging material scanning;
- collecting scrap material information;
- programming measurement instrumentation according to each production order and material characteristics; and
- communication with other systems (e.g. Automated Optical Inspection (AOI) and log servers).

Additional programming modules were installed in the sample quality control division and distribution division to ensure that delivery was of the highest quality. Barcode cameras were installed on machines with automatic packaging element exchangers to provide fully automatic operations.

 THE PROJECT ACHIEVED ALL TARGETS SET BY THE CLIENT



RESULTS



**JUST IN
TIME
PRODUCTION**



**REDUCED
ERRORS**



**SYNCHRONISATION
BETWEEN
OPERATIONS**



**INTEGRATION
WITH
MACHINES**

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