

Production Line User Story:

Bread Factory Loss Prevention intuVision® / IntellModus



“By counting and comparing the numbers of dough balls, baked and packaged bread from conveyor belt cameras in real-time, the factory can pinpoint the problems during each production run.”

Emil Filipovski, *Managing Director, IntellModus*



One of IntellModus' customers, a large bread factory needed an automated and reliable loss-prevention solution to count the dough balls, baked loaves and packaged bread along each production line to increase the efficiency of their operations.

IntellModus Based in Sofia, Bulgaria designs and deploys video security, access control, fire safety systems and custom solutions for manufacturing plants. Using state-of-the-art technologies and products IntellModus delivers turn-key systems.

Equipment-at-a-Glance

Hardware: 90 Dahua IP cameras and NVR, COTS servers for video analytics.

Software: intuVision VA Power v6.0, Custom Reports



Counting Items on a Production Line with intuVision VA

IntellModus came to intuVision for streamlining real-time product counts from conveyor belt cameras to generate reports for each production cycle. The reports show the sources of loss for each production cycle in a timely fashion so that needed actions can be taken to improve efficiency.

Benefits

- Video based reliable loss-prevention
- Improved factory operations and production efficiency
- Precise monitoring of the process
- Custom reports for production cycles

intuVision User Story: Production Line

"Due to the asynchronous nature of the bread making process and the high speed of product moving on the conveyor belts, other counting solutions did not work well. We choose intuVision video analytics system to accurately count each phase of the product and associate cycles for each production line in reporting. Our camera system with intuVision Video Analytics detects where the production losses are to prevent them."

E. Filipovski

Solution Details

IntellModus analyzed the factory operations and established the solution requirements. Throughout the bread factory they installed over 90 cameras, three cameras per production line to monitor the conveyor belts for the dough balls, baked loaves and packaged bread. IntellModus worked with intuVision to determine the optimal positions for the cameras over the conveyor belts to reach accurate counts using video analytics.



The system feeds live video from the cameras into intuVision Video Analytics to be analyzed in real-time to:

- Detect dough balls starting on the conveyor belt and count them,
- Count the baked loaves and the packaged bread on the second and the third conveyor belts of that production line,
- Associate the baked and packaged loaves with the corresponding dough production taking into account the rising times and generate report for the production cycle

The production cycle item counts and losses at each step are detailed for every run, the reports are automatically e-mailed to responsible operations personnel for each shift. Being able to see these reports immediately helps operations managers to address the production problems and losses in a timely manner.

Results

Using intuVision video analytics IntellModus delivered an automated loss-prevention solution for the bread factory. intuVision VA provides accurate counts of product at each stage of manufacturing process and provides custom reports summarizing production cycle's throughput.

Monitoring and automatically detecting sources of loss during production significantly increased the operational efficiency of the factory.