When it comes to quality control in the plastic packaging production, requirements have emerged during the last few years due to automation and digitalisation. Since one single operator has to be in charge of more production lines, the tool to control quality statistic has to become more powerful.

It has to show several production lines at a glance and give early alarms and indicate an upcoming defect before it develops into a problem for the production plant. Moreover, it needs to be transportable and therefore has to be integrated in a portable device. At the same time a comprehensive quality management tool is a basis to document the production quality over a long period of time.

Visualising error statistics

The German company Intravis has developed the IntraVisualizer inspection system. To use it, the producer needs to connect a SQL server to his inspection system. It is a strong software that edits and visualises the performance data of the entire production. This is designed for a self-explanatory use. An intensive development phase has resulted in an easy-to-use software interface. The tool turns all relevant characteristic production numbers into significant visual diagrams.

The IntraVisualizer is usable with a touchscreen as interface and a standard internet-browser, it can be used on a portable tablet device. By clicking the operator can choose the value he liked to be monitored such as ovality, surface, diameter and others. It is also possible to track single measurement readings. The user can set up the display according to his needs by adding or changing systems. It is also possible to add certain defects like cavity faults.

The IntraVisualizer receives all needed data of several systems that are part of one production facility from the server. When the software accesses the data base, it can visualise different time periods like shifts, days, free date ranges and also batches.

Trend statistics

The software comprises a trend statistic that prevents the production of too many waste objects. To activate the trend statistic the user has to determine values for certain production parameters. These values may not deviate too much from the reference value. During production the software observes production parameters and analyses trends. As soon as a trend stabilises and may lead to a non-acceptable deviation within a certain period of time, it shows the trend on the screen or even sends an e-mail to the operator automatically.

The operator has now the opportunity to correct the parameters. For this reason production errors are corrected before they really occur. The result is avoiding defects, saving material and high productivity.

Mould diagrams

The IntraVisualizer is able to generate mould diagrams to inform the operator about the current error rate of the cavities of a single mould. When using this mould diagram the user can choose a product, time period, product run and moulds on the interface and shortly afterwards he receives a diagram that tells him which production moulds will deliver a reliable performance. It shows the entire cavity or the single moulds as a 2D or even 3D diagram and it displays the statistics of the total number of objects, the incomplete evaluations and the defective objects. With this comprehensive knowledge about the actual performance of the production line, the production quality improves automatically.