

Effective labelling at Akzo Nobel Decorative Paints Sp. z o.o.



OBJECTIVES OF THE IMPLEMENTATION:

- Optimised product labelling system
- Automated labelling process inspection

BENEFITS OF THE IMPLEMENTATION:



Improved control of
the labelling process



Increased label
application accuracy



Minimised errors



Significant waste
reduction



Effective course of
tasks carried out



Higher packaging
quality



Financial savings



Improved company
image

Akzo Nobel is a leading global manufacturer of paints, varnishes and specialist chemicals. The company headquartered in Amsterdam employs close to 50 thousand people in around 80 countries. Its portfolio includes brands such as Dulux, Sikkens, International, Interpon or Eka.

Akzo Nobel has been operated on the Polish market for more than 20 years, having an expanded network of distributors and paint mixing facilities, and a manufacturing plant in Pilawa. The company has also a professional technical service for each of its businesses.

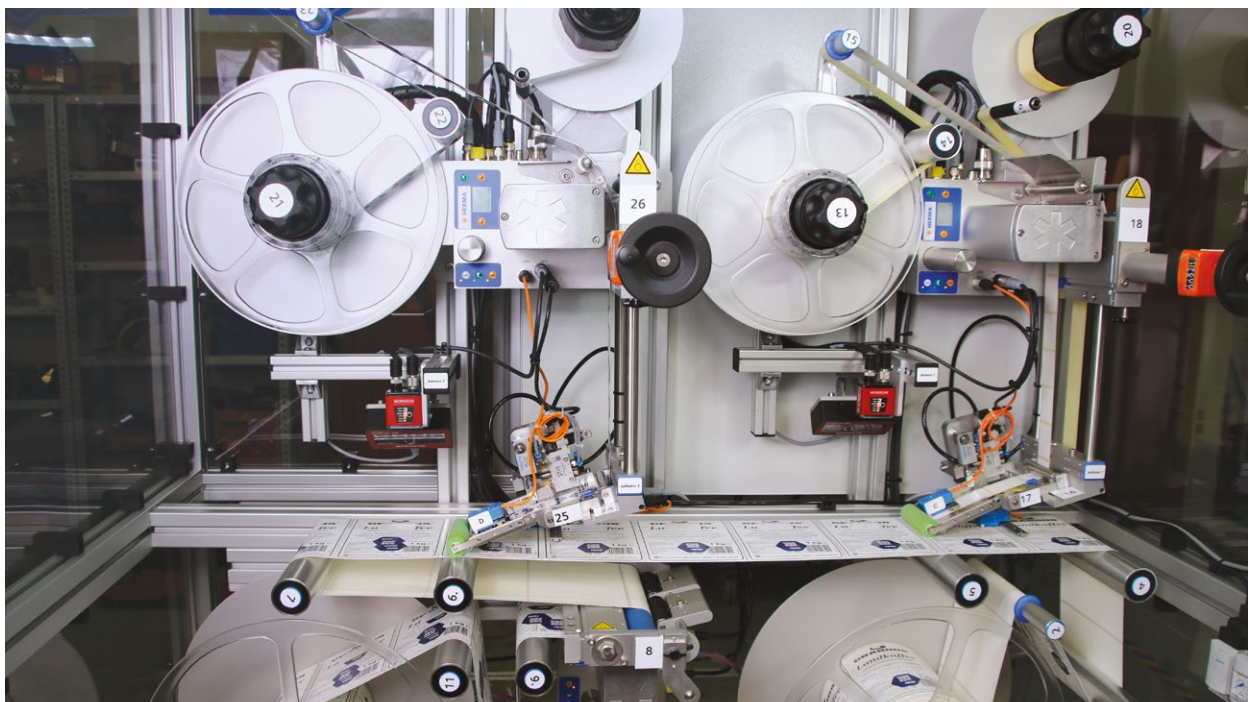
The sustainable development idea is an inseparable part of all the processes implemented by Akzo Nobel. In 2017, the company once more took the leading position in the group of companies from the chemical sector in Dow Jones Sustainability Index ranking, assessing the operations of the largest companies worldwide.

The high quality of products is largely attributed to the effective and cutting-edge method of their manufacturing. Taking care of the above aspects, in 2017 Akzo Nobel decided to improve a part of the production process called product labelling. The company needed a labelling system to stick two labels simultaneously on a base label. The second,, parallel requirement was the verification of the correct label applying. Before, the company used labellers which allowed either to apply all the above mentioned labels or just a single label. However, none of the machines were equipped with an automatic vision control component.

Proceeding to execution the assumed objective, the company requested the SKK S.A. to propose a solution. Taking into consideration the custo-

mer's needs as well as the economic reasons, SKK experts designed and created an "off-line" solution – an independent station for label prefabrication, not mounted on production lines. The device is used for preparing all necessary labels so that the products may be labelled directly. Product labelling (tins and buckets with paint) takes place at the labelling machines the plant had already been equipped with. Importantly, the prefabricated labels work out and they are used mostly at lines that labelling the short production series. They are lines of lower efficiency, where the change of products is quite frequent.

The major components of the solution include a re-winding system, two labellers, two cameras, a control system and an operator panel. It is a semi-automatic device the operator put three label rolls on.



The first of them includes base labels, the second are bar code labels and the third are labels with a colour chip (with a sample of a given paint colour). The operator selects the recipe containing the relevant process parameters on the panel. The process of prefabrication and labels vision check is started. The end result is a roll containing labels which will be used for labelling a given product batch (base labels with two smaller labels stuck to them – one with a bar code and the other with a colour chip). For some product batches, it is necessary to prefabricate two, and not three, label types.

The device for label prefabrication reduced the number of errors significantly. The visual quality control results in applying the pre-set number of labels (verifying their presence) in the correct place (increasing the application accuracy). The bar code legibility is also being checked. Another advantage of the implemented solution is the reduction of waste and high stock maintenance. All of this results in higher quality of packaging and in financial savings.

Thanks to the favourable results brought by the “of-line” solution, Akzo Nobel decided to implement another device of that type in another department of their plant. The second machine additionally prints bar codes on one label type (they used to be ordered). Moreover, a hand-held scanner was added which is used by the operator to read a pre-applied code from the order what results in automatic selection of the recipe in the machine.

The second implemented solution ensures even higher manufacturing process optimisation, e.g. it reduces the quantity of errors, waste and warehouse stock, increases financial and time resources (reducing the number of retooling).

Both label prefabrication stations are fully designed and built by SKK. They are based on Herma, Microscan, Siemens, Honeywell, and Markem components. They offer unique parameters, precisely tailored to the customer's needs and requirements. The devices have been covered by a 12-month guarantees and SKK has run proper trainings for operators.

Jacek Wielgosz

Senior Investment Specialist at
Akzo Nobel Decorative Paints
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SKK specialists listened to the needs of our plant carefully and they have shown high levels of competence and creativity. The delivered devices solved our problems, they brought and constantly bring measurable benefits for our company.

