

Five new factories of the future reveiled!

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During the third edition of the Factories of the Future Awards awards were granted to Daikin from Ostend, Nuscience from Drongen, Rousselot from Ghent, Valeo from Ghislenghien and Veranneman Technical Textiles from Ardooie. All are now holders of the title Factory of the Future, a prestigious label they can keep for three years.

A total of 265 Belgian manufacturing companies have already started to undergo these transformations, 65 percent are SMEs. In order to encourage and inspire even more companies, the best students of the class are awarded a Factory of the Future Award. This year the award will be granted to Daikin, Nuscience, Rousselot, Valeo and Veranneman Technical Textiles.

New corporate culture at Daikin embraces change

Daikin Europe is the regional headquarters of the Japanese multinational Daikin Industries for Europe, the Middle East and Africa. The site in Ostend has become the international headquarters for development, production and sales. The production site gradually expanded into the most advanced factory for air conditioning, heat pumps and cooling systems in Europe and now covers about 150,000 m². Every year dozens of new products are launched at the factory, with a short turnaround time because both development and production, and the supporting services are under the same roof. In the past years Daikin implemented its "Factory Reform Plan" in three large phases, with a focus on the key words stability, Kaizen (Japanese philosophy of continuous

improvement) and team work. The efforts in the factory are indeed paying off: 30 percent more productivity on the main production line and the press department, 30 percent less stock of parts, and three weeks quicker with a fixed production plan. Last but not least, the entire company is now immersed in a culture of "change is normal".

Software strongly reduces turnaround times at Nuscience

Nuscience develops and produces premixes, concentrates and mineral feed for mainly young animals (pigs, poultry and cattle); as well as additives for the animal feed industry. In 2015 a brand-new specialities plant was put into operation in Drongen, which excels in the area of reaction speed to market opportunities. By linking ERP and MES (interfacing), 5,000 messages are currently sent to and fro in the factory, while the ERP system is autonomously "learning" to plan even better. In addition, the MES system exchanges 40,000 to 80,000 messages each day with the machine PLCs, and this via an OPC connection of which the logics is in the PLC. Turnaround times for orders were reduced in past years to 3 to 5 days, also by consciously investing in and planning a certain percentage overcapacity. Fourteen European research projects with partners are currently ongoing. At Belgian level Nuscience Drongen is the project leader of, among others, Innodry (Flanders' Food in cooperation with Food Pilot) and Wet2dry (in cooperation with Feed Design Lab).

Rousselot goes for more production, less use of energy

Rousselot is a Flemish producer of gelatine and collagen. Their customers are in the pharmaceutical sector (hard caps, soft gels), the food industry (desserts, sweats, dairy, emulsifiers) and the medical sector (collagen protein for sports drinks). Within the international holding Rousselot Ghent has the status of European competence centre and reference factory, where production operators contributed to several technological breakthroughs. For example, the application of membrane filtration, the use of hyperspectral cameras for online quality control and the upgrade of canal water to be suitable for use in production. The blending process control, quality control, as well as the interaction with lab tests now takes place in two control rooms. In the past five years Rousselot also succeeded in achieving an increasing production volume, while the use of energy was reduced by 30 percent.

Valeo returns to in-house activities

Valeo Ghislenghien is one of the model plants of this French car group. The Belgian branch employs about 900 people who build multifunctional lighting systems with a high added value for the automotive industry. Supported by the strong culture of "lean" production and competitive delivery periods, Valeo set out on the path towards industry 4.0. Among other things, the very fast implementation of collaborative robots and AGVs (automated guided vehicles) on the shop floor and the introduction of electronic work instructions were a big step forward. The company invested heavily in far-reaching automation and full digitalisation of processes. The Kanban system, for instance, was recently replaced by a software that sets priorities digitally. These transformations resulted in excellent performance, not only in the factory in Ghislenghien, but also within the entire Valeo group. This also means that a number of activities which had been outsourced to suppliers will be returning in-house.

Technology reduces work pressure at Veranneman Technical Textiles

Veranneman Technical Textiles (VTT) is a weaving mill of technical textile, specialised in the production of open-structure fabrics. These fabrics go directly from the loom into a coating bath (online coating). In 2011 VTT Ardooie developed and introduced an innovative technology: the

Gelege technology. This technology lays the threads instead of crossing them (weaving), which is cheaper and faster. This allows the company to develop new products quicker and enter new markets. The VTT culture focuses on 4 Ds: Dream, Devise, Dare, Do. A lot of attention within the company went to reducing the (work) pressure put on employees by, for example, integrating automations on the supply of PVC, PLCs which check the machines and a central, digital cockpit (COQLBOX) on the shop floor. Due to the strong technological experience with specific, strongly diversified products, the company can distinguish itself from the (Asian) competition.

Daikin, Nuscience, Rousselot, Valeo and Veranneman Technical Textiles join the growing group of Factories of the Future in Belgium. In 2016 E.D.&A., JTEKT Torsen Europe, Ontex, Punch Powertrain, TE Connectivity, Biobakkerij De Trog and Van Hoecke NV won an award. They succeeded Continental, Dentsply Implants, Newtec and Provan as laureates Factory of the Future awards.



Authors



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