



Open communication crucial in reassembly and automation of process installation for Laboratoria Smeets

Large scale projects don't always have to exceed the deadline, the budget and the stress limitations of the people involved. No, there is another way. Egemin Automation and Laboratoria Smeets proved it in their joint project to build a new production plant, reassemble an existing process installation and increase its level of automation. Open communication and creative troubleshooting were the keys to success. "No doubt we would do this kind of projects together again."

NEW PRODUCT, 30% GROWTH

Laboratoria Smeets, located close to Antwerp, is an innovational and ambitious contract manufacturer and packer of (para)pharmaceutical products, thereby focusing on powders. Until recently, the company had two production plants in Belgium. Intelligent market analysis and the demand for a specific high quality product by the market, inspired the company to buy an existing process installation of a large pharmaceutical company and 'blend' it into their own plant. Jef Verplaetse, Managing Director of Laboratoria Smeets, explains the impact of the project: "This expansion of our product offering was quite a challenge for our company. Just to explain the size of the project: the new installation increased our production with a third and was comparable to the opening of our second plant. An extra difficulty was the internal complexity of the new production unit, which was clearly higher than that of our other plants. All things together, it was going to be quite a challenge to integrate the installation into a building that needed to be refurbished completely."

EPCM APPROACH

Seeing that the project would have quite an impact on the staff and the overall day to day organization of the company, Laboratoria Smeets decided to work with an EPCM contractor (taking care of Engineering, Procurement, Construction and Management). Jef Verplaetse: "I felt it was important to limit the pressure on our internal resources and therefore decided to hire a party that could take care of every aspect involved. I needed a partner company that I could trust and that was able to manage the entire project. It seems to me that one person had to have a clear overview of where we were standing and what was up ahead. The project manager had to have all the necessary information at any given time in the project. I must say the Egemin team led by Ronald Adriaenssens (overall project lead) and Maarten De Coninck (site coordinator and process engineer) has done this in a hyperprofessional manner. In the course of the project, Bruno Van den Branden, who is responsible for operations within Laboratoria Smeets, got involved and made sure that the entire operational organisation knew what was coming up and what to do. This way, we kept control in every phase of the building process."

Jef explains what other factors influenced his choice for Egemin: "The common sense mentality and pragmatic approach of Egemin appealed to me very much. Despite the fact that we had drawn up a detailed and well thought contract, to avoid discussions along the way, I knew that in projects like these, you need a flexible team that is capable of solving unforeseen problems in quick and reliable manner. In the course of the project, many decisions have to be made. Because of the limited amount of people in the joint project team, decisions were made quickly and we were able to proceed continuously. The hands on Egemin approach when facing problems, is very similar to the way I work myself."

OPEN COMMUNICATION CRUCIAL FOR SUCCESS

Egemin being the one to manage the project, made trust and open communication of extra importance. Maarten De Coninck explains: "There were several challenges in this project: the limited space available in the existing building, the deadline we had to respect and the small team. Luckily, the collaboration with Jef has been very open and straightforward." "That is very true," continues Jef, "both parties have handled this challenge very open and honest. We developed a very professional relationship in which we kept no hidden agendas, which has contributed to the success of our collaboration. Us getting along very well on a personal level led to compromises more easily. We kept each other informed on a regular basis to brief one another. We even set up an office for the Egemin team close to mine, just so we could find each other easily when necessary."

CREATIVE TROUBLESHOOTING

Project teams are flexible, budgets are not. Jef Verplaetse: "In the proposal phase, we have discussed the Egemin proposal thoroughly. The team knew the available budget very well, if extra expenses would have to be made, the solutions provided would have to be creative and low cost."

Ronald agrees: "There are many examples of times when we had to come up with an out of the box solution. Those solutions came by discussing them with one another. Jef isn't only a good businessman, he is also technically very skilled. Both parties brought possible solutions, sometimes it was Egemin, on other occasions it was Jef himself. A very constructive way to proceed." Indeed," says Jef, "A good example are the HVAC offers we received from our subcontractors. They were double the price we had foreseen. Our subcontractors weren't able to work it out and we couldn't find a compromise right away. We got stuck for a while. After a lot of thinking and discussing, we finally agreed upon a way to handle things and got it solved for less than the budget provided. Once again, open communication and joint brainstorming helped us through these kind of challenges. This is what I like about Egemin. I would immediately start these kinds of projects with Egemin again. The people are hardworking and ethically correct. Which are both crucial factors, if you put this kind of large scale projects in the hands of an EPCM contractor."





ADDING VALUE TO THE PROCESS

The installation bought by Laboratoria Smeets included a chemical reactor, a vacuum blender and a packaging line. Egemin assembled it in practically the same configuration and provided the engineering, purchasing, construction and automation, management and qualification.

"Egemin automated the plant as much as possible and made sure that our employees can work under the best ergonomic conditions. The team, with Geert Roggeman as lead process engineer, has also provided quite a number of innovations and improvements. To name a few: our heating capacity has increased. Smart engineering allows us to vacuumize during the regeneration of the solvent, and this without the solvent ending up in the vacuum pump, which is extraordinary. We don't need to enter the production rooms with the solvent because the process takes place in a closed circuit. We have immediate access to the information for batch documentation and traceability through a central data monitoring system (SCADA). The maintenance cost is limited and includes preventive measures, such as additional differential pressure measurements on the filters, to avoid downtime as much as possible. And finally, we can also measure and log key process parameters such as the concentration of oxygen/reagents, the doses of liquids and powders. All these improvements make us more competitive," says Jef.

CHALLENGING TECHNICAL SCOPE

Danny Van Helvert, Business Development Manager at Egemin Automation explains that Egemin does more than automation: "Egemin is best known for its automation projects in warehouses and production environments, fewer people know that we also offer EPCM services. It is our ambition to carry out more projects of this kind. Our added value lies in the fact that we can take the basic and detailed engineering, automation and qualification together and integrate them from the front row." Ronald continuous: "Next to the process installation itself, we literally took care of every construction task involved: civil construction, the storage and transportation system, HV and LV electrical installations, HVAC, central heating, fire protection, etc. But I think we've succeeded in keeping everything under control."

The plant consists of six large parts: a storage silo of 100m³ for the (bulk) storage of Polysoy, a weighing unit to dose the exact amount of Polysoy required for the premix production, a reactor to prepare the API-solution (Active Pharmaceutical Ingredient), a mixer-dryer to apply the API to the Polysoy and to dry the final product, a solvent regeneration system with cooling equipment and finally a packaging line for packaging from 1kg up to 25 kg. Pharmaceutical companies use the produced powders to manufacture all kinds of medicines and dietary supplements for both humans and animals. Some examples of APIs include certain antibiotics, piracetam, glucosamine, undecylenic acid, acetylcysteine, vitamins, etc.

QUALIFICATION CHALLENGES

Next to the technical challenges, the qualification brought along several challenges as well. Jef Verplaetse: "We have done the construction of the plant in an 'iterative' way, by which I mean that we have tried to prevent problems, but weren't afraid of solving them only when they came along during the construction. Seeing that Egemin and Laboratoria Smeets both had lots of technical knowledge, this way of working allows to take decisions fast and thus has the advantage of proceeding quickly. The difficulty is to keep the documentation right. The client that is buying our product was constantly involved in the project. We kept them informed about the evolution of the construction and had to provide them with right validation documents. The role of Louis Van Dyck, Qualified person for Laboratoria Smeets, was crucial in this phase. He made sure all parties were informed and aligned with regards to the risks to be assessed and the qualification methods to be used."

Ronald Adriaenssens: "Egemin uses a LEAN validation approach, as common within large pharmaceutical companies as well. Since in this case the client of Laboratoria Smeets uses a very strict approach, we had to be flexible again by adapting our validation methods, thus fulfilling the wishes and needs of Laboratoria Smeets and its client." Jef: "But also in this case, we will discuss it until we find a solution. Danny Van Helvert has played a vital part in these discussions. Danny has detailed knowledge of the contracts and is technically very skilled as well. Due to this combination he has helped us to find contractual correct compromises that were technically possible. He kept the team together, so to speak." Ronald agrees: "this project is a real tour de force of all the parties involved. Congratulations to all."

THE FUTURE

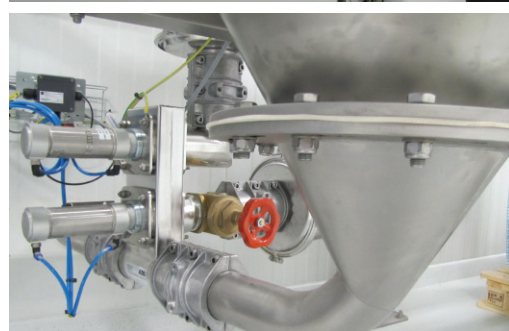
The project has strengthened the competitive position of Laboratoria Smeets. "But this isn't the end of our expansion. Within three years, we want to be doubled in size. Some recent commercial successes can guarantee us this scenario of growth," says Jef. "Perhaps we'll be working together in the future."

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SCOPE

Egemin took charge of the entire refurbishment of the building in which the new plant was to be situated (including HVAC, fire protection, HV and LV electrical installations, plumbing, etc). Next to that, Egemin moved and reinstalled the process installation, while at the same time increasing its automation level significantly.

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- weighing unit to dose the exact amount of Polysoy required for the premix production
- reactor to prepare the API solution (Active Pharmaceutical Ingredient)
- mixer-dryer to apply the API to the Polysoy and to dry the final product
- solvent regeneration system with cooling equipment
- packaging line for packaging from 1 kg up to 25kg

Services delivered:

- Basic and detailed engineering
- Purchasing
- Construction
- Automation
- Electrical engineering and Instrumentation
- Project management
- Commissioning
- Qualification & validation

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