

Lean manufacturing helps Aqualectra ...

... stay ahead of the competition

Company:
Aqualectra

Application:
Panel building

Omron products:
Control & switching components

‘I would be lying if I said the market for panel builders was booming at the moment, but we are still managing to hold our heads above water’, says Tom Stringer, general director of Aqualectra in Heerhugowaard. Stringer is a keen advocate of ‘lean manufacturing’, which enables panels to be produced as efficiently as possible. He believes this is the only way to stay ahead of the competition. For the same reason he also invests heavily in ergonomic tools and good work facilities for his personnel. ‘The margins in panel building are small, so you can only offer your clients good products at affordable prices and still stay profitable if you are constantly innovating.’

With a turnover of about 17 million euro and a staff of 145 employees, Aqualectra is one of the largest panel builders in the Benelux and probably in Europe. The company focuses on industry, offshore, the petrochemical industry, utility construction, transport and transshipment, water treatment, horticulture and machine building. These activities are subdivided into six groups: energy distribution, operating technology, industrial automation, building automation, maritime & (petro)chemicals and total solutions. The first three activities each represent about 25 to 30% of the turnover. Activities in the area of energy have shifted a little between the divisions over the last years, but otherwise the scope of activities has remained relatively stable. ‘An important change was the decision to position Aqualectra as a total supplier in the market’, explains Stringer. ‘We were obviously already involved in cross-selling between the various activities, but in 2008 we turned our focus to high voltage work as well. We can now take on total projects, which means that the client only has to deal with one supplier, a sort of one-stop-shop principle. This applies to the client’s complete demand for medium voltage and high voltage dividers, switch- and control panels, automation and other products, we supply. This enables us to provide added value to our customers.’

Evolution

According to Stringer the market for panel building is evolving dramatically. ‘There are big and small companies in installation and industrial automation, who do a little panel building on the side; there are specialist panel builders, who focus on a certain sector, and then you have the larger, independent panel builders like us. These deliver a complete programme, both in breadth and depth. Panel building is a specialism, that doesn’t always get the attention it deserves.’ Stringer also maintains that this has resulted in a gradually increasing interest in panel building. ‘There is a trend towards cooperating in order to look after joint interests as well as guarantee quality. ‘Recently there was a kick-off meeting for a joint initiative again. It is very useful to have a joint approach in areas such as the influx of young technicians, the quality of training and areas such as standards and certification, which are important for the whole sector.’



Delivery reliability and quality

Trailblazer

Stringer is regularly invited to share his vision on developments in panel building. Not just because Aqualectra is one of the largest panel-building companies, but also because the company has a clear view on the profession and is ahead of the game in multiple respects. For example, Stringer – by trade an electrical engineer – thinks it is important to put as much of your own know-how into the company as possible. “We have product specialists in the all areas such as pump technology, frequency regulators and high voltage and we are involved in various research projects in industrial automation. We have an internal quality system; we have ISO9001, CO2 level 3, UL, CSA and KEMA certificates and practically all our engineers have the VCA certificate.” Aqualectra has a very well-equipped workplace with specialised machines such as a CNC-controlled drilling/milling machine, a CNC-controlled plasma cutter and a copper work assembly line. Aqualectra also has its own ICT solution, called iSCAPE®, developed for the control, operation, changeover, monitoring and visualisation of components in installations. The hardware/software system programmes and controls the communication and information exchange between components to create a well-functioning installation; even when existing components from the client have to be integrated in the system.

Lean manufacturing

Stringer is enthusiastic about the phenomenon of lean manufacturing. He is a member of Lean Noord-Holland, a group of business owners who are interested in modern production methods. No surprise then to learn that he also applies the principles of lean manufacturing in his own business. That application ranges from the use of ICT tools for design, planning, stock control and production management to smart routing in the workplaces, so that components don't have to be needlessly moved from one section to another. Standardisation is also an excellent way of improving efficiency and reducing costs, but in panel building that's only possible to a limited extent, because the production of panels and switchboard boxes is largely bespoke. “It's often a question of very simple interventions, which are highly efficient”, explains Stringer. “Nowadays everyone has a complete tool box, in which you always have to search to find exactly the right key. In the future, however, engineers will only have the tools, that they need to do the job. In co-operation with TNO, a Dutch research institution, we developed a mobile platform, that will make an enormous contribution to ergonomics and the efficiency during the production of our panels and cabinets.” Aqualectra is also investing a lot in ergonomics. As an example, we have purchased air balancers enabling employees to lift up to 250 kilos with just one finger and without damaging their backs. Besides that the office chairs, that are present in the work shops will be replaced by adjustable stools, that are specially designed for this type of work. We want our staff to like working here. It improves quality and reduces absenteeism.

Suppliers

Aqualectra also has a clear vision about the collaboration with its suppliers. The company only selects A-suppliers and has at least two for every product group. This is mainly with a view to spreading the risk. Aqualectra started working with Omron as soon as that company became active on the Dutch market. Stringer finds the quality exceptional and Aqualectra has a significant

quantity of Omron components in stock. “It might seem contradictory that we hold stock ourselves given our interest in lean manufacturing. That often goes hand in hand with just-in-time supply, but we simply can't risk jeopardising the process flow by not having components in stock. Moreover, you don't need much space for storing electrotechnical components. Another advantage is that we can bundle orders and deliveries. In combination with EDI, link-ups with suppliers' online order systems and electronic invoicing, the handling and the administrative work can be reduced considerably.” The main requirements that Aqualectra demands of its suppliers are delivery reliability and quality. Which components end up being used in a project depends largely on the order specifications. Sometimes the specifications and brands are very precisely stipulated, but clients may also leave Aqualectra to decide which components to use. Then the company selects the components from suppliers that fit best into the project and with whom they have good pricing agreements. This will benefit the price the clients pay at the end.

Regulations

As a business director, Stringer sees various developments in the pipeline. The shortage of technical personnel, for example, but also the need to run a socially responsible business. Aqualectra is really active in this last area. “We worked hard for two and a half years to get our CO2 certificate. Not just because clients will increasingly demand such a certificate, but also because we ourselves believe that socially responsible business is important. It isn't all about turnover and profit; we are also responsible for 185 personnel and their families. As far as panel building is concerned, Stringer is primarily concerned about the rapidly increasing range of regulations and standards that businesses have to contend with. The maze of regulations makes the establishment and maintenance of a quality system a real challenge. For me that's more reason than ever to look carefully and repeatedly at your organisation and continuously optimise the work processes.”

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