Automation Systems

ePLAN electric P8

DRESSEL GmbH

Convinced by the new CAE dimension

From planning through enclosure manufacturing to on-site equipment commissioning

When electrical equipping of automated systems is required, Dressel GmbH has an excellent reputation in various mechanical and automation engineering industries – from wind energy through sheet-metal and tube forming to press. The company, founded over 20 years ago and employing a staff of more than 70, concentrates on demanding tasks in control and automation engineering. Proxy Officer Dirk Fischer: "In most cases we take over the complete added value chain from planning the entire electrical engineering and automation technology through enclosure manufacturing to commissioning the equipment on-site." They set high standards for themselves and the project planning team is capable of handling difficult tasks such as modernizing the control engineering system of existing installations – all with direct correlations to high satisfaction rate of their customers.

ePLAN your engineering

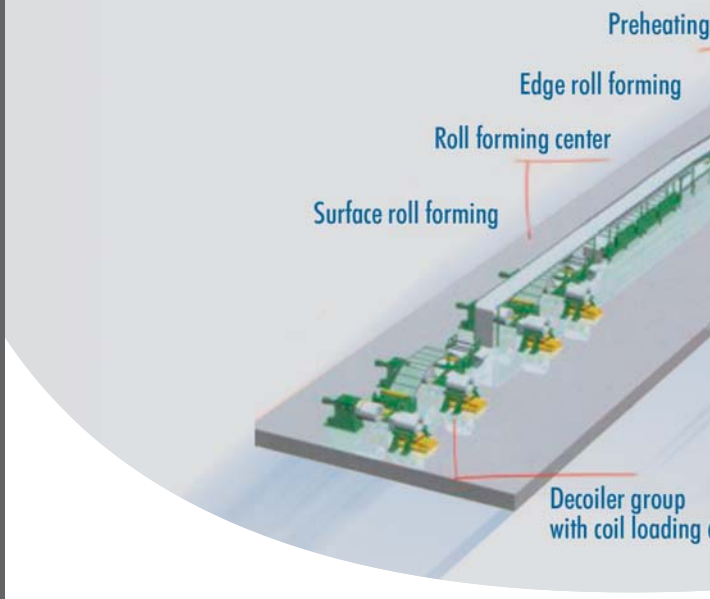
FRIEDHELM LOH GROUP

Dressel GmbH in Unna, Germany, a renowned provider of electrical engineering and automation solutions for demanding industrial applications, has been amongst the EPLAN Electric P8 users from the very beginning. The conclusion of the company's electrical engineers: "The higher the demands made by the customer, the faster EPLAN Electric P8 pays for itself and the better one can respond to customer requirements."

DRESSEL and EPLAN

working together for more than 20 years

"The documentation can be structured much more simply and precisely in accordance with the customers' requirements. For example, it is very easy to generate the bill of materials (parts list) – the planning phase has once again been streamlined even better through the new software."



Example: Manufacturing equipment for sandwich elements

A current example of a typical project is a system for manufacturing noise suppression plates with a middle layer made of polyurethane foam. These plates with a length of up to 16 meters are used to clad roofs or walls of buildings and since they are manufactured exactly to the dimensions specified by the architect, the over 200 meter long system has to be correspondingly flexible. The sheet coils are first profiled. In the next step the foam is applied to the lower sheet and then the upper sheet to the foam (whose thickness can differ depending on the insulation effect required). After the elements have hardened and cooled down, a flying saw cuts the parts to measure. At the end of the line a conveyor then stacks the cut elements sorted by the relevant order and ties them up or packs them in shrink-wrap.

Flexible automation

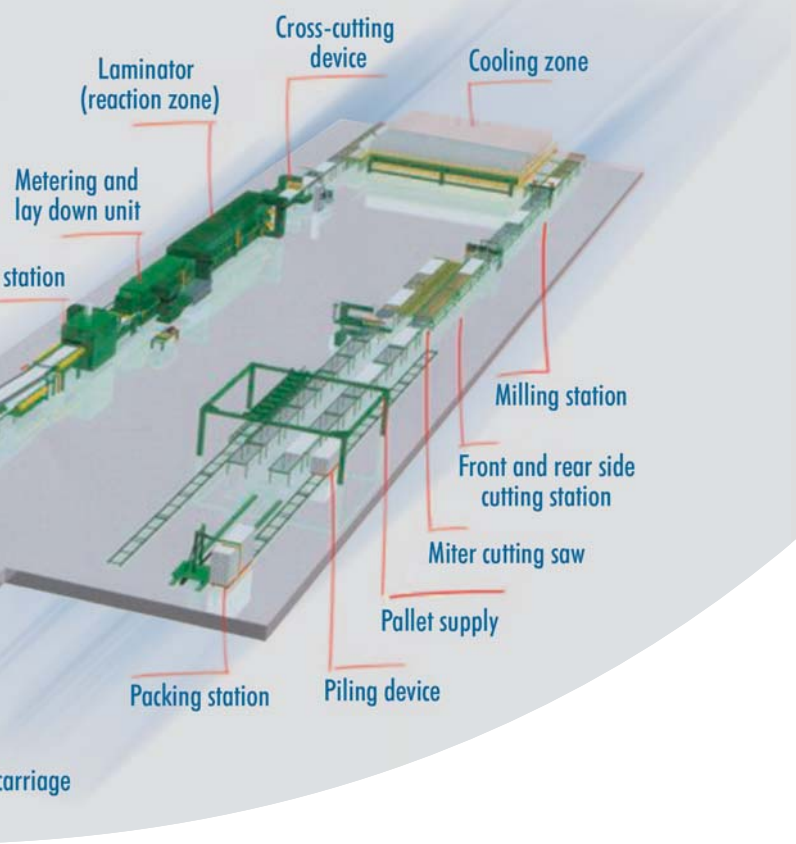
The highlight is the flexibility with which the sandwiching equipment cuts sheets and prepares them: The cutting sequence does not have to be order-specific and the stacking is also not necessarily carried out in the order of production. An ingenious control technology is required for this purpose: The master computer communicates with the individual control systems, the visualization systems on the basis of a PC control system and the client computers by Ethernet. The complexity of the process is indicated by the fact that 60 enclosures and a central control center are installed throughout the plant.

Over 20 years of EPLAN experience

Anyone who has to master such complex task requirements in a short period while setting themselves high standards requires powerful tools in addition to competent and experienced project engineers. The Dressel project engineers have been working with EPLAN for more than 20 years. After extensive experience with EPLAN 5 – still used when specified by a customer – the company was one of the first to use EPLAN Electric P8 for their electrical engineering. And there's more: Dressel was among the alpha and beta testers of the new platform and, with Bernd Gischel, has managed to win over a well-known CAD expert who not only moderates the EPLAN forum on the www.cad.de website, but has also written specialist literature on the topic.

From drawing to designing

At Dressel everyone is convinced of the new platform. Bernd Gischel: "With EPLAN 5 one primarily drew. Now one can use a completely different approach and work object-orientedly by, for example, starting from the field devices." Another advantage in his opinion is the automation of many recurrent steps which saves more than just time: "This approach also allows errors to be avoided. For example, the contact assignment of contactors can be stored as a function template."



ALPHA and beta tester

Documentation simplified tangibly

As alpha and beta testers Dressel engineers were able to familiarize themselves early and thoroughly with the new platform – considering the numerous additional functionalities, this was an advantage that can't be underestimated. Bernd Gischel: "EPLAN Electric P8 offers many functions that were not possible at all in EPLAN 5. It therefore pays off to convince customers with whom one exchanges data to change over. But the customers also notice that electrical engineering with EPLAN Electric P8 is more powerful."

Clear procedures

Dressel works with six EPLAN Electric P8 licenses and has invested a lot of time in an optimal rights management structure – it's not advisable for every designer to have access to everything. Design work is done completely in EPLAN Electric P8 until the complete bill of materials is transferred to the EPLAN PMS production planning and control system at the end. Bernd Gischel: "EPLAN PMS is actually no longer required for EPLAN Electric P8, but since some of our customers still want us to work with EPLAN 5, we will be keeping this proven system for the time being." This is also due to the fact that the electrical engineering and the ERP system are well attuned to each other at Dressel. Not only the components are recorded project-specifically in EPLAN PMS, but also the time that each employee invests in the project – an optimal foundation for realistic cost estimation.

Good coordination between hardware design and software development

The new platform also provides a good foundation for coordination between the various disciplines. Bernd Gischel: "In the initial design phase intensive discussions take place between the colleagues in electrical engineering design and the software development and programming, who are in part involved in the device selection or specify the bus system to be used."

Electrical design for demanding markets

The Dressel engineers use these procedures not only to develop equipment for metal machining with EPLAN Electric P8, but also for other demanding projects. Proxy Officer Dirk Fischer: "Another working field in which we have an extensive know-how is, for example, wheelset presses for tail technology. In this case the integration of the sensor equipment plays an important role. Just as complex are the equipment for tube forming such as those that make serpentine tubes from coils and thereby pose a high demand on welding technology. In the field of logistics we have implemented interesting projects such as modernizing high-bay warehouses in which existing hardware is equipped with a new control technology system."

Automation Systems

ePLAN® electric P8

Bernd Gischel: "We not only want to import the data, but rather virtually design the systems again in EPLAN Electric P8 in order to take full advantage of all the possibilities provided by the new software. We can then store many more data. This gives us the option to adapt the documentation flexibly to the individual requirements of our customers."

Adapting documentation flexibly

SUMMARY

Standardized systems for wind energy technology

The wind energy industry has developed to be a very important market for Dressel. Dirk Fischer: "Our automation technology is installed in almost all the large wind energy plants with outputs of several megawatts. As a rule we supply six to seven enclosures per system, including for the pitch regulation." In contrast to other markets, these systems that are produced on a separate production line at Dressel are standardized to a great extent, meaning that the amount of engineering involved is low. On the other hand, the effort required for the documentation is comparatively high so using EPLAN Electric P8 would be of great advantage. Dressel is therefore planning to also integrate the enclosures for wind energy systems in EPLAN Electric P8. This effort has to be done parallel to the day-to-day business and at Dressel all the project engineers are already working at full capacity. Nevertheless those in charge are convinced that the hard work will pay off, since EPLAN Electric P8 improves the documentation quality considerably and the customers appreciate the superior results.

Find out more about Dressel on www.dressel.de

ePLAN your Engineering

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