Siat Braun, France

Getting the most out of raw materials

Together with optimally organized preliminary planning, the performance and modularity of PCS 7 have ensured trouble-free project implementation at a new pellet production plant with an adjacent biomass power station.

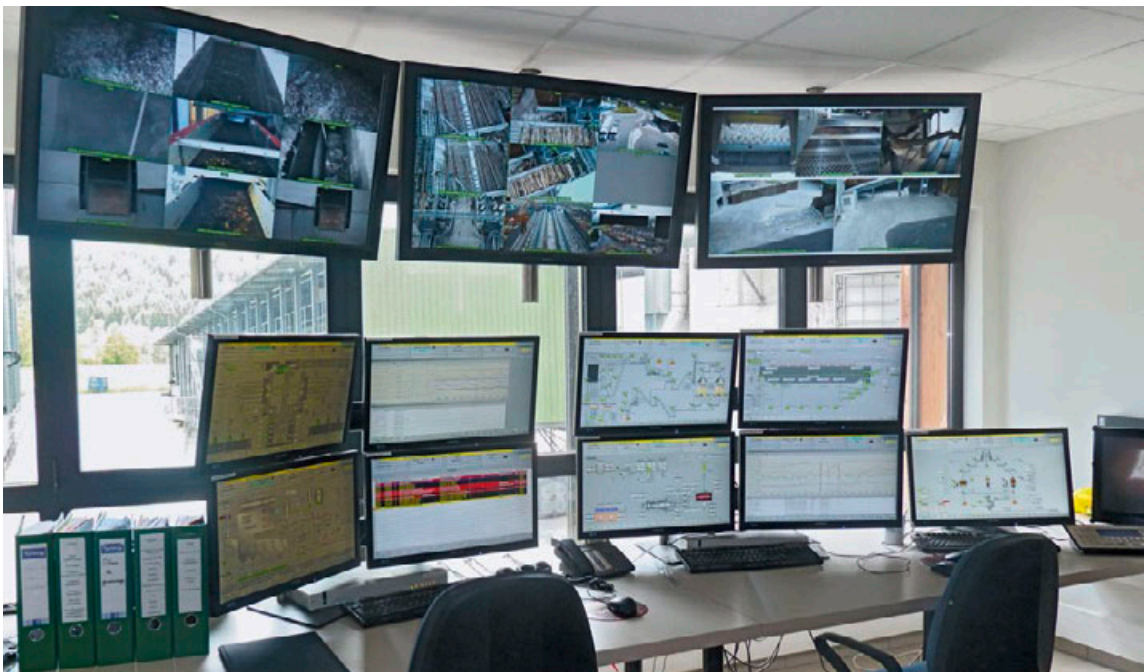
The Siat Braun sawmill is one of the largest of its kind in northeastern France. Recycling and disposing of the bark and sawdust produced during timber processing used to be time and cost intensive. New, modern heating technologies now enable making good use of these materials. Sawdust is pressed into pellets without any further additives and is then made available as a natural product for the heating of homes and for further use in industrial plants. The bark produces enough energy in a boiler to power a steam turbine. The electricity produced by a generator is fed directly into the public power supply. In addition, the steam energy remaining after the turbine is utilized in a condenser to heat water. This recycled process heat is used to dry the sawdust for pellet production through a heat exchanger.

Multisupplier coordination

Siat Braun chose to use Simatic PCS 7, in its current 8.0 version, very early in the planning phase. The challenge lay in the drafting of a concept to unify several technical disciplines (or subsections) and different suppliers so that all areas could be operated by means of a single system. To help achieve this, Evias GmbH drafted an engineering guide – a comprehensive document that specifies the requirements for the project design in a multiproject framework: all packages had to use the Advanced Process Library and defined address spaces and naming conventions. Thanks to these comprehensive specifications, each package unit provider could carry out programming and partial commissioning with a temporary engineering station independently of other packages.

Individual components result in a multiproject

Evias GmbH supported the individual suppliers throughout the complete project. In this way, minor problems could be solved immediately, without affecting the project schedule. Apart from central coordination, Evias handed over the entire electrotechnical design, as-



SIAT Braun

The nw PCS 7 control center: the operators can access all relevant process information via nine screens

sembly, and installation of a belt dryer, necessary for the drying of sawdust, to the Swiss company Swiss Combi – W. Kunz dryTec AG. The project was also created as a module of the later PCS 7 multiproject. Further subprojects from Evias GmbH include the complete raw material feed system for the boiler, the supply and installation of the Simatic PCS 7 network structure (including the complete operating and monitoring system), a control system for the plant's central emergency stop circuit, and the control for the energy supply connection.

Optimal utilization of Simatic PCS 7

Many of the functions and options that PCS 7 offers were used of throughout the project. Special mention must be made of the seamless integration of more than 50 Sinamics G120 drives and all the emergency stop technology using Simatic F engineering, which was built into seven S7-400 controllers and four additional S7-300 controllers. Almost the entire signal exchange between the subsections was realized using a communication bus in a ring topology, which saved considerable effort in terms of additional cabling. Optimal operation of the plant is enabled by a redundant WinCC server, which is connected to four clients. A total of nine new monitors have been made available to the operating personnel in the control room. The extensive range of functions is rounded off with the Alarm Control Center, which sends operators important fault messages directly to their cell phones. The operating manager and on-call duty personnel are automatically informed of more major incidents by means of the cell phone network.

Around-the-clock operability achieved

Under the coordination of Evias it was possible to integrate not only the most varied system components but also the individual subsections of the different suppliers into one great multiproject. The time-consuming preliminary planning paid off with the smooth integration of the subsections. A total of six individual projects have been integrated, which enabled a uniform library and uniform operating concept to be used and inventory management reduced. "We were able to achieve optimal operability around the clock by integrating all subsections," said Jérôme Sittler, project and operations manager at Siat Braun. "In addition, we have now housed all relevant archive data in one system, with the result that we can, at any time and without any further effort, produce cross-process analyses and reports." ■

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The EVIAS GmbH was founded in 2006 in Bad Bergzabern, Germany. Since then, the company has evolved into a product- and system-independent engineering firm for automation technology and serves process automation customers at home and abroad. EVIAS can rely on expert staff and a high level of automation expertise to provide tailored solutions to international customers, from process and factory automation solutions to power supply design, custom migrations, and MES, solutions as well as service, infrastructure, validation, training, and project execution.

Solution Partner Automation

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INFO AND CONTACT

siemens.com/solutionpartner
thomas.leidner@evias.de

The SIAT Braun sawmill utilizes waste sawdust as pellets for heating. The pellets are pressed without additived in an eco-friendly process