

Flattened

xEnergy supplies South American chipboard plant

THE COMPANIES

VSK-Technik Kübler GmbH, Worms, operates in the following business areas: project management, planning, maintenance and commissioning for all aspects of electrical engineering and drives, automation and mechanics. This ranges from medium to low-voltage technology, from complete to partial solutions for industrial electrical systems. (www.vsk.de).

Dieffenbacher GmbH + Co. KG is an internationally active group of companies based in Eppingen that develops and manufactures press systems and complete production systems for the wood panel industry, the automotive and components industries. (www.dieffenbacher.de)

The Eppingen-based international company Dieffenbacher is building a complete chipboard plant in the Bolivian Republic of Venezuela. The "Bariven" project covers the complete medium and low-voltage power distribution in addition to the machine parts and the building complex. Moeller system partner VSK-Technik Kübler, based in Worms, built it on site using xEnergy.



MOELLER

An Eaton Brand



Moeller System Partner

Moeller provides panel builders with a comprehensive range of enclosures and distribution boards for power distribution systems up to 4000 A based on type tested function modules in compliance with IEC 60439-1. xEnergy, XVTL, CS or CI are examples of a complete power distribution system solution that consists of switching and protective devices, the mounting technology, switch cabinets and the planning and calculation tools, as well as giving due consideration to local installation practices (DIN, VDE, CEI, NF, UNE*).

The Moeller system partners scheme for switchboards is an offer for panel builders that provides a range of different training courses on products and directives, as well as support for advertising measures etc.

The specifications for the South American chipboard plant are similar to those for the power supply of a small town: The power is fed via two 115 kV / 13.8 kV high voltage transformers with an output of 30 MVA each, as well as a medium-voltage distribution board and ten 13.8 kV / 0.44 kV transformers with a rating of 1.6 MVA, as well as a transformer for a 4.16 kV, 1 MVA medium voltage drive.

The low voltage power distribution system consists of 42 panels with six main distribution systems with a rated current of 2500 A, and a rated short-time withstand current I_{cw} of 50 kA. The power supply is implemented via ten open IZMB2 circuit-breakers with a rated current of 2500 A. Four coupling switches ensure emergency operation during maintenance or in the event of a transformer failure. Both the transformers and the incoming circuit-breakers are networked via Profibus, and supply all operating data to the PLC for monitoring. A touch panel is used for controlling the power supply and visualizing the system status.

Modular xEnergy concept

VSK-Technik Kübler is an original Moeller xEnergy partner. xEnergy provides the Worms-based company with a freely combinable product range for power distribution systems up to 4000 A. Operation is outstandingly simple whatever the level of complexity. The system has a modular design and can be arranged in intelligent combinations. Switching and protective devices, as well as the associated mounting system and enclosures, form a technical and economical unit. The system platform allows individual project design, maximum flexibility and fast assembly in the workshop. This saves time, space and financial resources.

The xEnergy modular system is future-proof and can be expanded exactly to growing requirements. Its product range comprises incomer and coupling sections for 4000 A circuit-breakers, individually configurable outgoing feeder sections with fixed compartment modules for switching and protective devices up to 630 A, outgoing feeder panels

up to 630 A for switch-fuse strips, fuse rails and fuse switch-disconnectors with different mounting depths, control and empty sections for optional equipment (such as with motor starters, PFC modules, frequency inverters, soft starters) as well as carrier modules for modular rail-mounted devices as service distribution boards.

xEnergy consists of exactly tailored function modules that are type tested with Form 1 to Form 4b internal separation in accordance with IEC/ EN 60439, and gives due consideration to European and local installation practices (DIN, VDE, CEI, NF, UNE*). As long as the panel builder follows the Moeller assembly manual and installation instructions, he can offer the system as a type-tested assembly (TTA) to his customers without any additional expenditure required for testing.

Panel builders are equipped with efficient tools for all stages from planning, to quotations right up to ordering. The documents and the switchboard front view are printed out with the order list. If required, Moeller can supply the entire range packed in functional flat pack units or as a pre-assembled switching cabinet. Moeller also offers technical support and training courses on the construction of xEnergy. If required, the Moeller Field Service is also available for advice and support.



CONCLUSION

“We have been official Moeller xEnergy partners since 2004 and have a very good experience with xEnergy”, Dieter Ringhof explains. He is assistant to the board of directors and has been at VSK-Technik Kübler for 11 years. “The xEnergy modular system allowed us to bid for the tender for Bariven project. Even for us, the planning, construction, testing and supply of 42 power distribution sections as TTAs within eight weeks was a real challenge. However, thanks to xEnergy we were able to handle this masterfully.”

*IEC = IEC International Electrotechnical Commission = CEI Commission Electrotechnique Internationale; UNE Una Norma Española; NF Norme française - Quality mark of the French standards institute AFNOR

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