During the modernization of the stage control system of the Silesian Theater in Opava, the persons responsible made sure that the automation would meet the most current standards. They placed particular emphasis on a comprehensive safety concept.

The Silesian Theater in the Czech town of Opava has a long tradition. The first theater performances took place there already in 1630. Today it houses a theater and an opera company as well as a drama studio and an opera studio. In order to be able to continue providing the discriminating audience with a sophisticated theater experience, the Silesian Theater decided to carry out a general modernization of the stage control system. Elvac Automation s.r.o. from Ostrava took over the realization of the automation and, based on its experience with such projects, decided on Siemens components for the entire stage machinery.

Individual performances always ready to be retrieved

An MP377 Multi Panel with a 19" touch-screen is available for monitoring the entire technology. An additional CompactFlash memory card, on which all performances are recorded as CSV files, enables the archiving of individual performances. Moreover, performances that have concluded can be saved on a USB flash disk, from where they can be read and saved in the Mobile Panel as required. In this process, it is possible to operate individual flies as well as multiple flies at the same time. Simotion D has proven to be the best solution for these requirements.

Control of up to 48 axes at the same time

The flies in the Silesian Theater are controlled with two Simotion D445-1 motion controllers with extension for the Profinet IRT bus. The D-series Simotion system controls up to 48 electrical and hydraulic flies, each of which is equipped with two measuring devices. The Simatic S7-300 controller with CPU 319F-3PN/DP ensures operational safety in this process. Sinamics S120 frequency converters with integrated SS1 safety functions and the fail-safe TM54F module control the electric drives.

The Profisafe profile guarantees safe communication between the Simatic S7-300 and the drives. The entire control system is designed locally with Simatic ET 200M peripherals and safety modules.

Modern stage technology

Both at Elvac Automation and at the Silesian Theater the responsible persons are happy with the result. Libor Chromcák, PLC programmer at Elvac Automation, confirms: “By using the most up-to-date Siemens automation components for the control system, we were able to create a modern control system for the stage technology that combines electromechanical and linear hydraulic flies.”

The Silesian Theater in Opava has modernized its stage control system with state-of-the-art Siemens technology.

More on this topic:

www.siemens.com/safety-integrated

Contact:

Contact person:
František Šabata, Motion Control Production Machines

E-mail:
frantisek.sabata@siemens.com