INP Reference

ABB Mainova HKW Mitte (AHS)

LOCATION: Frankfurt a.M., Germany

SYSTEM/TECHNOLOGY: ABB Symphony Melody with S+ Operations

SERVICES: Commissioning, Documentation, Basic-engineering and pre-engineering, Detail engineering

INDUSTRY BRANCH/TYPE OF PLANT: Power Generation

CLIENT: ABB

ACTIVITY PERIOD: 2023-2025

Tasks

Mainova AG‘s Allerheiligenstraße (AHS) CHP plant is to be converted to 72-hour operation without constant supervision (BOB 72 h) and will in future be operated remotely from the Messe CHP plant, the West CHP plant or the Niederrad CHP plant, monitored and supervised.
During the summer months, the AHS CHP plant is operated almost exclusively in heat retention mode and is only switched to heating mode remotely if necessary. This is used to generate HP and LP steam to support the district heating network.
In order to implement this functionality in a future-proof manner, various upgrades were carried out on the system (measurements, drives, fire steam pipe, etc.) in addition to upgrading the control system.
Instead of Siemens S7, the control system used was Symphony Melody from ABB, which is already in use at other Mainova AG sites in Frankfurt.
In a second phase, three heating condensers were to the AHS CHP plant between 2023 and 2025. The main task of the Heikos is to extract heat from the LP steam network into the district heating network in order to provide additional support if required.

Project description

INP Deutschland GmbH was awarded the contract for the software and hardware planning of the complete scope of delivery.
The basis for this was the old software versions of the S7 control system, as well as the process engineering templates in the form of a functional description/operating instructions.
In close cooperation with the customer, the old functions were optimized during the detail engineering phase with the aim of making optimum use of the new functions of the ABB control system used.
During the subsequent cold and hot IBS, further optimizations were carried out independently after consultation.
The second phase involved the IBS of the new heating systems with the connection to the municipal district heating network. The subsequent control technology optimization took place in several stages due to the required heat consumption.

POINTS OF CONTACT



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INP Services

Software planning:

- Software programming
- Support with planning changes
- Development and maintenance for software and system optimization
- OPC coupling of various outstations (Siemens S7)

Hardware planning:

- Hardware planning of the new circuit diagrams (EPLAN Electric P8)
- Circuit planning from the cabinet to the field
- Melody wardrobe documentation
- Elaboration Melody channel assignment
- Support for planning changes

Commissioning:

- Cold and hot commissioning
- Creation and adaptation of operating screens
- Control and software optimization
- Ongoing support via remote access
- Optimization of temperature and pressuriser control in the district heating system