INP Reference

IHKW Heidenheim – Retrofitting

LOCATION: Heidenheim, Germany

SYSTEM/TECHNOLOGY: CHP units, electric boilers, heat storage, FW network, pressure maintenance

SERVICES: Commissioning, Project management, Site management, Documentation, Basic-engineering and pre-engineering, Detail engineering, Installation supervision, Operations, Maintenance, Training

INDUSTRY BRANCH/TYPE OF PLANT: Power Generation

CLIENT: EnBW

Project description

INP International Projects was primarily awarded the contract to equip the Heidenheim CHP plant on the Voith factory premises with the Siemens PCS7 control system as the superordinate main control system (2 gas boilers, 5 CHP plants and all associated auxiliary systems).
In the course of the project, extensive adjustments were made to the machine and plant technology.
INP provided the complete redesign – including the replacement of outdated components, the integration of subordinate plant areas into the new control technology and the development of the necessary control algorithms for automatic operation. The plant was recommissioned on the basis of significant process engineering changes, such as the integration of a large-volume hot water storage tank, the replacement of steam boilers with hot water boilers and significant safety improvements to increase the degree of automation.

This means that, in future, economically viable operation can be achieved without permanent monitoring of the system.
Particularly noteworthy here is the implementation of the higher-level control system and the automatic operation system, which automatically operates the boiler, CHP units and the entire hot water and steam network. With the automatic heat- or electricity-controlled operation of the CHP plant, the system makes a decisive contribution to the district heating supply of the Voith plant and several companies located in Heidenheim.

Services INP

Project management, concept work, specifications, basic engineering, detailed engineering, control room design and user interface, control cabinet construction, installation and commissioning.

The optimization of the process engineering and the control algorithms were worked out and developed together with the operator.

Further areas of responsibility of INP:

POINTS OF CONTACT

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INP Reference

- Network and digitalization concept.
- Integration into the central remote control of the EnBW fleet.
- Digital connection of the external heat meters of the district heating system.
- Recommissioning and optimization of the individual subsystems.
- Complete integration of additional measurements and drives.
- Integration of safety shutdowns including the emergency stop concept.
- Implementation of a uniform system-wide visualization for the operator.
- Optimization of the control functions of all subsystems of the auxiliary systems (hot water, water-steam, cooling water system, oil supply, other auxiliary systems).
- Automatic load-dependent overall control of the Heidenheim CHP plant for summer/winter and mixed operation in electricity- or heat-controlled operating mode.
- Integration of the required load reduction after external request by Stadtwerke Heidenheim.
- Implementation of the blackout and reconnection concept.