INP Reference

BHW Beeskow – Combined Heat and Power Plant

LOCATION: Beeskow, Germany

SYSTEM/TECHNOLOGY: Siemens STEP7 V5.5 SP3 with Distributed Safety V5.4 SP5, Sigraph ET 8.2

SERVICES: Commissioning, Project management, Site management, Basic-engineering and pre-engineering, Detail engineering

INDUSTRY BRANCH/TYPE OF PLANT: Power Generation, Power plants, Waste incineration systems

CLIENT: Glunz AG, BHW Beeskow Holzwerkstoffe GmbH, Beeskow

POINTS OF CONTACT

Jürgen Wilkening
Prokurist - Business Development Manager
INP Deutschland GmbH
Werkstraße 5
67354 Römerberg
Deutschland
Tel. +49 6232 6869-0
juergen.wilkening@inp-e.com
www.inp-e.com

TASK

- Functional one-to-one implementation of the S5-115F boiler protection control (CPU 942) acc. to S7-300 Failsafe (CPU 317F-2 PN/DP)
- Conversion of the existing SINEC L1 interface between boiler protection control and conventional boiler PLC (S5-155U)

DESCRIPTION OF DELIVERIES AND ACTIVITIES

SOFTWARE PLANNING

- Conversion of the existing S5 program to S7 and adaptation to S7-specific properties, especially the Distributed Failsafe library
- Working out the concept for exchanging the SINEC L1 interface to the conventional boiler PLC by an Ethernet connection to the new S7 boiler protection control
- Technical safety study of the existing software functions for safe and reliable operation of the plant

HARDWARE PLANNING

- Configuration and design of the S7-300 Failsafe hardware
- Conversion planning of the existing control cabinet whilst reusing the existing field cabling
- Documentation of the hardware planning in Sigraph ET

WORKS TEST

- Carrying out the works test in INP Deutschland GmbH

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- Installation and system commissioning of the S7-300 hardware to be supplied
- Testing of the new Ethernet interface of the S7 controller to the existing S5 controller (S5-155U)

INSTALLATION

- Removal of the existing S5 controller
- Installation and new wiring of the new S7 controller

COMMISSIONING

- Carrying out the loop check from the sensor/actuator to the COROS operating system
- Carrying out cold and hot commissioning under own responsibility, including all necessary technical safety and protection tests
- Improvement in the startup procedure by optimizing the existing interlocks
- Acceptance of the boiler protection control with TÜV experts