



Energie AG Oberösterreich
 Caloric Powerplant Timelkam

RETROFIT OF THE PROCESS CONTROL CENTER

Energie AG Oberösterreich (Upper Austria) generates power with hydroelectric, caloric and biomass power plants as well as through photovoltaics. Its 34 hydroelectric and 7 caloric power plants act as the backbone for power generation. More than half of the provided power volume is produced at Energie AG-owned power plants.

The caloric power plant at Timelkam, which consists of a caloric plant, a biomass plant and a gas and steam plant, acts as a main pillar for power generation for the Energie AG.

Together with the planned gas and steam plant, Timelkam is going to become one of the most modern, efficient and environmentally compatible power plant in Europe.

Modern process control systems

Beside other features, modern control systems provide comprehensive functionalities and comfortable engineering and maintenance tools in consideration of ergonomic aspects.

The integrated operator control and monitoring systems (HMI) of former installed process control technology do not meet these demands anymore.

Whereas I/O hardware in process environment is still acceptable and also available at the market, hardware and software modules have a short life cycle.

Consequently, modernisations of the process control levels can mostly be achieved by replacement of the complete process control system only.

Usually, this also involves the replacement of the I/O hardware in process environment which may still be sound.

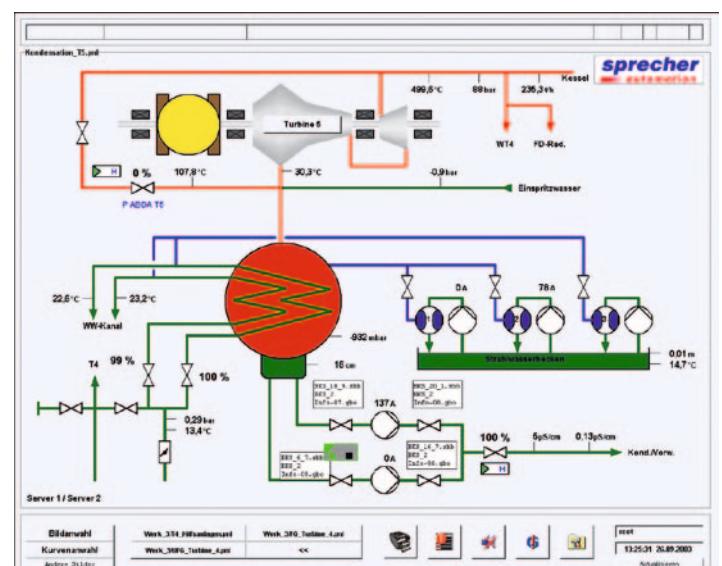
In March 2003, Sprecher Automation received the order of the renewal of the process control level at the power plant of Timelkam.

With SPRECON-V, Sprecher Automation provides a solution which allows the replacement of older process

visualisation systems by maintaining the existing control hardware.

In this particular application, the obsolete operator control and monitoring system of a caloric power plant was replaced by a modern and considerably more efficient Sprecher system (SPRECON-V). Integration of the existing control hardware is achieved through an intelligent gateway which easily integrates various proprietary data structures into the system.

Power plant control and monitoring is now carried out with 14 TFTs and a redundant "hot-standby" server/client structure. In October 2003 the new process control level was completely put into operation followed by further system extensions and upgrades until the end of 2008.



SPRECON-V: condensation

HMI server:

- 2 pairs of servers (1 active and 1 hot-standby server each)
- LINUX® Red Hat Enterprise (4 HDs each)
- 2 independent UPS supplies for each server
- 1 stand-alone auxiliaries server

Ethernet topology:

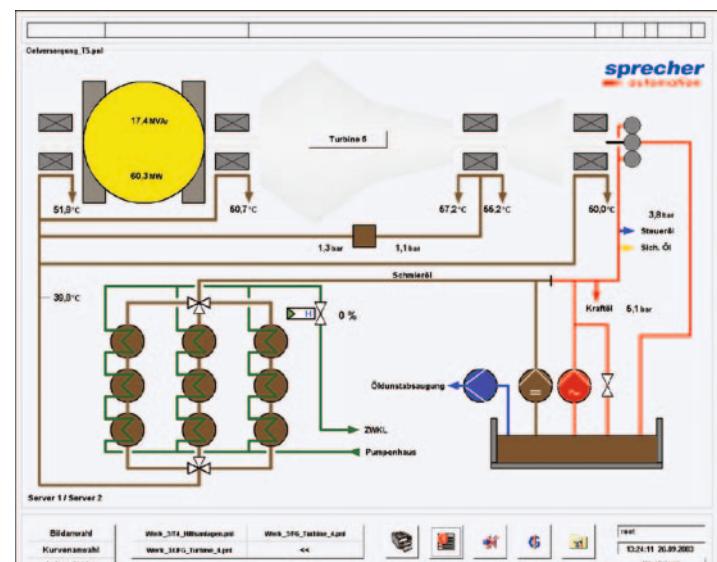
Ringtopology with dynamic load distribution

Number of data points:

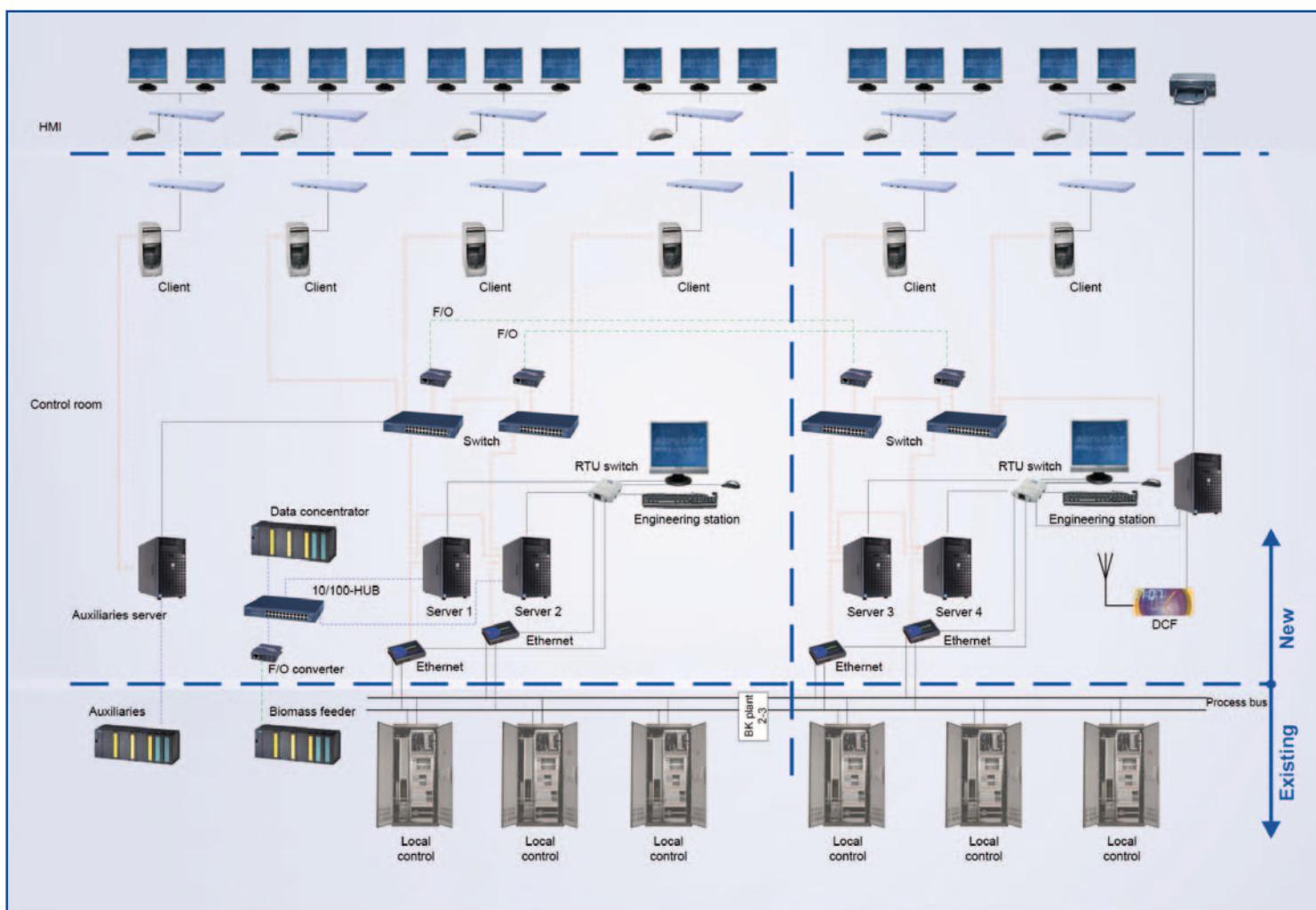
Approx. 87,000 elements (approx. 360,000 data points)

Redundancy concept:

- Hardware and software redundancy
- Applied to all levels
- Bumpless transfer
- Automatic recovery
- Automatic logging and configuration of alarms



SPRECON-V: oil supply



Schematic drawing of the process control system