Environmentally friendly optimal control

Monitoring and control system for waste treatment plants

Optimal temperature control during waste combustion enables stable boiler control and efficient power generation control. Contributes to stable operation of facilities through effective utilization of management data.

We provide optimal total solutions for waste incineration facilities, including such electrical equipment as Top Runner motors and motor control centers (MCCs), high reliability distributed control systems (DCSs) and programmable logic controllers (PLCs), as well as measuring equipment.

[Benefits]

☑ Extensive product lineup enables total facility solutions
☑ Highly reliable electrical and measurement integrated controller for stable operation
☑ Analysis support tools predict equipment abnormalities and prevent failures

[System features]

- Fuji Electric’s extensive expertise enables optimal total solutions
- Selling electricity to power companies by means of stable boiler control and efficient power generation control contributes to local power demand
- Effective use of facility data contributes to stable operation of facilities and reduced maintenance costs
【Functional overview】

- **Waste incineration equipment**
  - Safe and reliable treatment of waste
- **Utility equipment**
  - Safe operation of power and drainage facilities
- **Pollution prevention equipment**
  - Safe and reliable treatment of emissions (exhaust gas, ash, etc.)
- **Waste heat utilization equipment**
  - Use of generated steam to operate high-efficiency power generation facility
- **Other equipment**
  - Efficient utilization of internal data for facility operation

【Introduction examples】

- **Waste incineration equipment**
  - Incineration forecasting
  - Automatic combustion control (ACC)
  - Heat generation calculation
  - Incinerator startup and shutdown control and guidance
  - Automated operation
- **Pollution prevention equipment**
  - Weather observation
  - Atmospheric dispersion modeling
  - Automated smoke cleaning and drainage operations
- **Waste heat utilization equipment**
  - Boiler startup and shutdown control and guidance
  - Automated turbine starting and stopping
- **Utility equipment**
  - Power demand
  - Power factor control
  - Load selection cutoff
  - Power recovery processing
  - Automated water supply operation
- **Other equipment**
  - Load-in and load-out weighing
  - Preventive maintenance, equipment diagnostic operation support (Al)
  - Inventory management, equipment ledger
  - Inspection data processing
  - Remote monitoring functions
  - Database functions

【System configuration】

- **Computer system**
  - Tablet PCs
  - Site inspection PCs
  - Analysis support PCs
  - Operator consoles
  - Database stations
  - Engineering stations (Also used as remote monitoring servers)
  - Trend collection PCs
  - Form processing PCs
  - Data terminals for visitors
  - Remote monitoring devices
  - Large projectors
  - Operator consoles (for monitoring only)

- **Distributed control system (DCS)**
  - Routers
  - Internet (VPN)
  - Remote monitoring devices
  - Configuration boards

- **PLC NET**
  - PLC
  - Control panel
  - RIO panel
  - PLC NET
  - On-site PLCs
  - On-site control panels

- **Exhaust gas data**
  - Hydrogen chloride
  - Carbon monoxide
  - Nitrogen oxide
  - Sulfur oxide
  - Dust
  - ppm
  - g/m3N
  - [X]

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