Energy ON

EA-SAS BOILER DIGITAL TWIN

Energy ON helps to stabilize biomass power plant efficiency through real-time control optimization with **Digital Twin**, which was created by Energy Advice.

EA-SAS Boiler

Energy ON official supplier of EA-SAS Boiler. Digital Twin of a biomass power plant monitors, analyses, estimates efficiency and controls power plant 24/7 most efficiently by evaluating real-time data.

RESULTS

1. **EXTEND TIME BETWEEN MAINTENANCE**
2. **REDUCE FUEL CONSUMPTION UP TO 9%**
3. **OPTIMAL CONTROL 24/7**
4. **CHANGE OPERATION MODE WITHOUT LOSSES**

Digital Twin setup: 6-month timeline, no extra hardware costs, compatible with multiple hardware types, ROI achievable within a year, user-friendly implemenation and maintenance.

CHALLENGES

Biomass power plants typically operate 2-9% below their design efficiency limits. Human behavior and the limited capabilities of programmable logic controllers (PLCs) are the main reasons why biomass power plants operate at lower efficiency than designed. Operators may not follow correct procedures or may lack sufficient knowledge, while the PLC logic cannot adapt to changing fuel moisture content, fuel quality, and real energy demand.

PROCESS

COLLECT DATA

All process data from control systems, SCADA, IoT being collected in the unified database

MONITOR

Understand power plant status in real-time

ESTIMATE

Advanced algorithms estimate power plant operation and provide set-point corrections

SMART CONTROL

Optimal power plant control 24/7

MAIN FEATURES

1. ACCURATE BIOMASS POWER PLANT STATUS EVALUATION
2. FUEL ACCOUNTING AND FUEL QUALITY ESTIMATION
3. ADVANCED PROCESS CONTROL
4. PREDICTIVE MAINTENANCE

CASE STUDIES

INDUSTRY: PAPER MANUFACTURING
TECHNOLOGY: STEAM BOILER PLANT

| Reduced biomass consumption - 2.9% (2700MWh) in the first year
| EA-SAS Boiler allows tracking performance of each shift and maintains control quality
| Data-driven maintenance decisions prolonged duration between maintenance stops

INDUSTRY: ENERGY PRODUCTION
TECHNOLOGY: BIOMASS CHP PLANT

| Helped to achieve fuel-saving targets previously agreed upon with the plant owner
| Optimized control of supplied fuel according to the fuel layer in the boiler for efficient combustion
| Maintenance planning and recommendations for further improvement and CAPEX optimization

CONTACT US

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