Central Fleet Management for Optimal Control of Power Plants

Today, operation and optimization of power plants are more demanding than ever before. Due to a decentralized power plant management, relevant plant data as well as other asset data are only immediately available in the individual power plant units as a rule. This severely impedes the comprehensive cooperation of expert teams as well as the prompt exchange of essential data and information. The high expectations to the efficiency and availability of power plants, a steadily rising technical complexity along with increasingly difficult market conditions therefore require new and intelligent solutions for a central fleet management.

Systematic, Consistent View of the Entire Fleet

With the Fleetwide Monitoring System (FMS), the division System Technologies of STEAG Energy Services has developed a web platform for a consistent, central and interactive monitoring of power plant performance indicators. The objective is to combine existing knowledge and information from available expert systems as well as other important data sources with an up-to-date collaboration. This enables an optimal control of the plant operation from an economic and technical point of view.

## Powerful and Flexible Data Management System

The worldwide leading PI system by the company OSIsoft is applied for a powerful and flexible data management. The PI system allows to centrally collect and store large amounts of data very fast and comfortably.
System Technologies is an official partner of OSIsoft, LLC, the provider of realtime data infrastructure solutions.

The expert systems of the SR::Suite by System Technologies, which are often applied decentralized at the power plant sites, provide all relevant information for assessing the plant condition and the mode of operation. Information on the process performance, load-independent performance factors, heat rates and availabilities describe the quality of the operation. Fouling and wear of the plant components, i.e. creeping changes, are promptly detected in order to prevent additional costs due to major damages and shutdowns.
As a central monitoring and collaboration solution, the FMS provides access to data and information of all sites and thus is the central platform for an optimal asset management from an economic and technical perspective.

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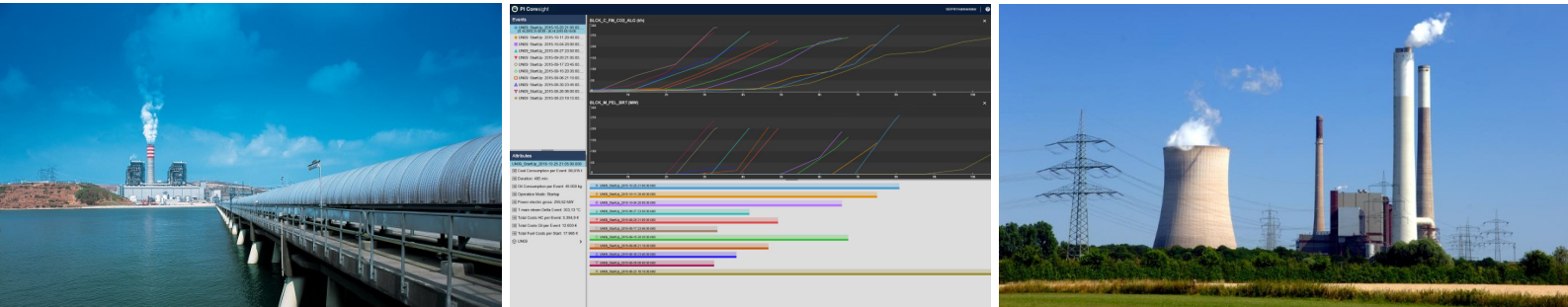
Flexible Asset Framework for Various Optimization Tasks

Organizational structures and business processes differ from company to company. With the flexible asset framework, data and information are assorted to optimally support the different perspectives and optimization tasks in the group. To do so, templates are created that make it easier to add assets or update the asset configuration at a later point in time. Thus a particular strong point of the FMS is the scalability and adaptability to current and future tasks.

Linking Technical and Economic Information

The FMS goes beyond the central monitoring of technical information. Further performance indicators regarding the fuels used, planned and unplanned shutdowns, the load regime of the individual unit and economic KPIs like sales and EBIT can be retrieved from other sources (e.g. ERP system) and displayed in the FMS.
Procedural and economic information can thus be linked in order to assess the individual plant and optimize the entire fleet.

Benefits of a Central Fleet Management via a Powerful Web Platform

- Consistent, systematic acquisition and administration of important fleet data and information on one central platform
- Optimal control of the power plant operation from an economic and technical point of view owing to the combination of an up-to-date collaboration solution with existing knowledge and information from available expert systems as well as further data sources
- Systematic grouping of data and information according to assets
- Consistent view of various sources of information
- Collaboration platform for the efficient cooperation of worldwide expert teams across companies
- Continuous setup of a "think tank" for expert know-how
- Higher availability of plants owing to the central recording of causes and possible strategies for rectifying undesired technical events
- Central platform for creating individual reports with customized views
- Scalable platform that grows flexibly with the individual requirements