

Fact Sheet

# Digitalization of Thermal Waste Treatment Plants

A higher plant availability essentially contributes to lastingly increasing the throughput and thus the profitability of a thermal waste treatment plant. The established IT solutions of STEAG Energy Services (SES) rely on machine learning and Big Data technologies for optimizing the operation and the maintenance strategy.

## **Lastingly higher profits**

In Germany, approximately 52 million megagrams of waste are energetically exploited per year, mainly thermally (ca. 27 million megagrams). Due to the good current economic situation, thermal waste treatment plants are operated at a very good capacity utilization nowadays.

After most existing thermal waste treatment plants have been technically optimized in recent years, a further increase in the throughput can only be achieved by increasing the plant availability in most cases.

Possible starting points for an increase in profits consist in:

- further process optimization
- continuous condition and process quality monitoring
- improved combustion control
- a predictive maintenance strategy
- cutting-edge, data-based operation management

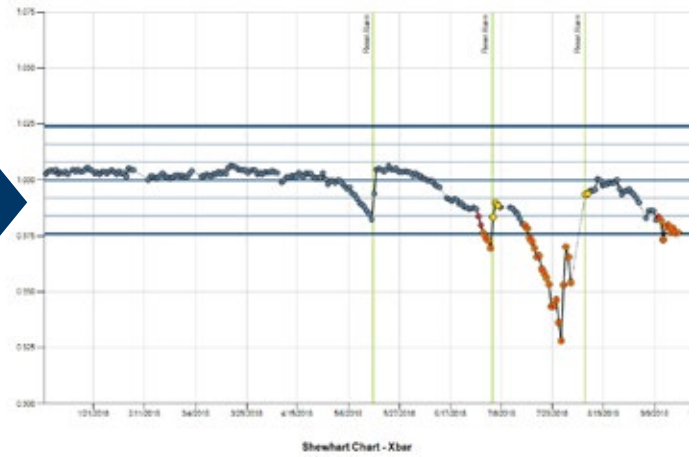
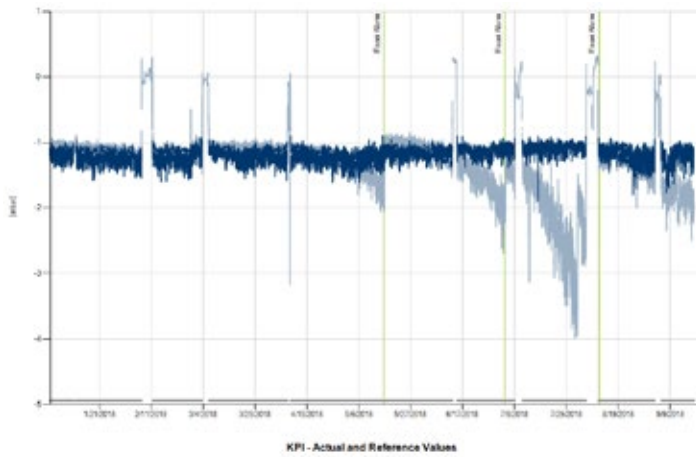
## **Our services**

Your success is our motivation as a professional partner. We have decades of experience as developers, operators, and IT service providers of waste incineration plants.

We support you in planning and designing the thermal waste treatment plant, right up to the lasting optimization of operating and maintenance processes.

With our IT systems, we monitor, analyze, and optimize the operation of your thermal waste treatment plant and provide valuable advice on the mode of operation and maintenance.

The investment in our IT solutions is safe as we offer a comprehensive service and continuous software updates to ensure a successful and long-term application.



Timely scheduling of cleaning measures in the waste boiler on the basis of SR::SPC

You benefit from the comprehensive know-how of our experienced power plant engineers and IT experts that support you in the digitalization of your plant process – know-how and IIoT solutions from STEAG.

#### Our IT solutions for an optimal operation:

- Universal simulation tool for the calculation of thermodynamic cycle processes – **EBSILON®Professional**
- Continuous, AI-based process quality and condition monitoring – **SR::SPC (ML)**
- Powerful, flexible maintenance planning and control – **SI®/PAM, SI®/PAM Mobile**
- Complete temperature profile of the combustion chamber – **PiT Indicator**
- Optimized furnace capacity control by means of AI – **PiT Navigator**

#### Our references

Numerous thermal waste treatment plants already benefit from our IT systems and services:

- Waste-fueled CHP plant Kassel
- Waste-fueled CHP plant Rosenheim
- Waste-fueled CHP plant Mannheim
- Wien Energy – Simmeringer Haide
- Waste-fueled CHP plant Ruhleben
- EGK (disposal company) Krefeld
- AEZ (waste disposal center) Asdonkshof
- Waste incineration plant Bonn
- Waste incineration plant Vestforbrænding (Denmark)
- AVR Rozenborg (the Netherlands)

as well as the STEAG-owned thermal waste treatment plants: T.A. (thermal waste treatment) Lauta and IKW (industrial power plant) Rüdersdorf.

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Continuous monitoring of the combustion zone (PiT Indicator)