

After Sales Services@Steinmüller Engineering – A developing Field

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Speakers:

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Employment Record Horst Klaka

since 2015	Steinmüller Engineering GmbH, Gummersbach, Germany Department Manager Marketing act. Product Proposal Manager After Sales Services
2012 – 2015	Steinmüller Engineering GmbH, Gummersbach, Germany Department Manager Proposals Combustion Systems Proposal Manager CFBC Boilers and Flue Gas Cleaning
2001 – 2012	Fisia Babcock Environment GmbH, Gummersbach, Germany Waste Incineration Firing Systems and Flue Gas Cleaning SCR, ESP & FGD in Coal / Oil fired Power Plants <ul style="list-style-type: none">• Sales and Proposal Manager
1999 – 2001	Babcock Borsig Power Energy GmbH, Oberhausen, Germany Thermal Power Plants / Utility Boilers <ul style="list-style-type: none">• Proposal Manager
1986 – 1999	L.&C. Steinmüller GmbH, Gummersbach, Germany Thermal Power Plants / Utility Boilers / Industrial Boilers <ul style="list-style-type: none">• Proposal Manager





Fields of Activities in Operation



Scope of Services



Development of After Sales Services

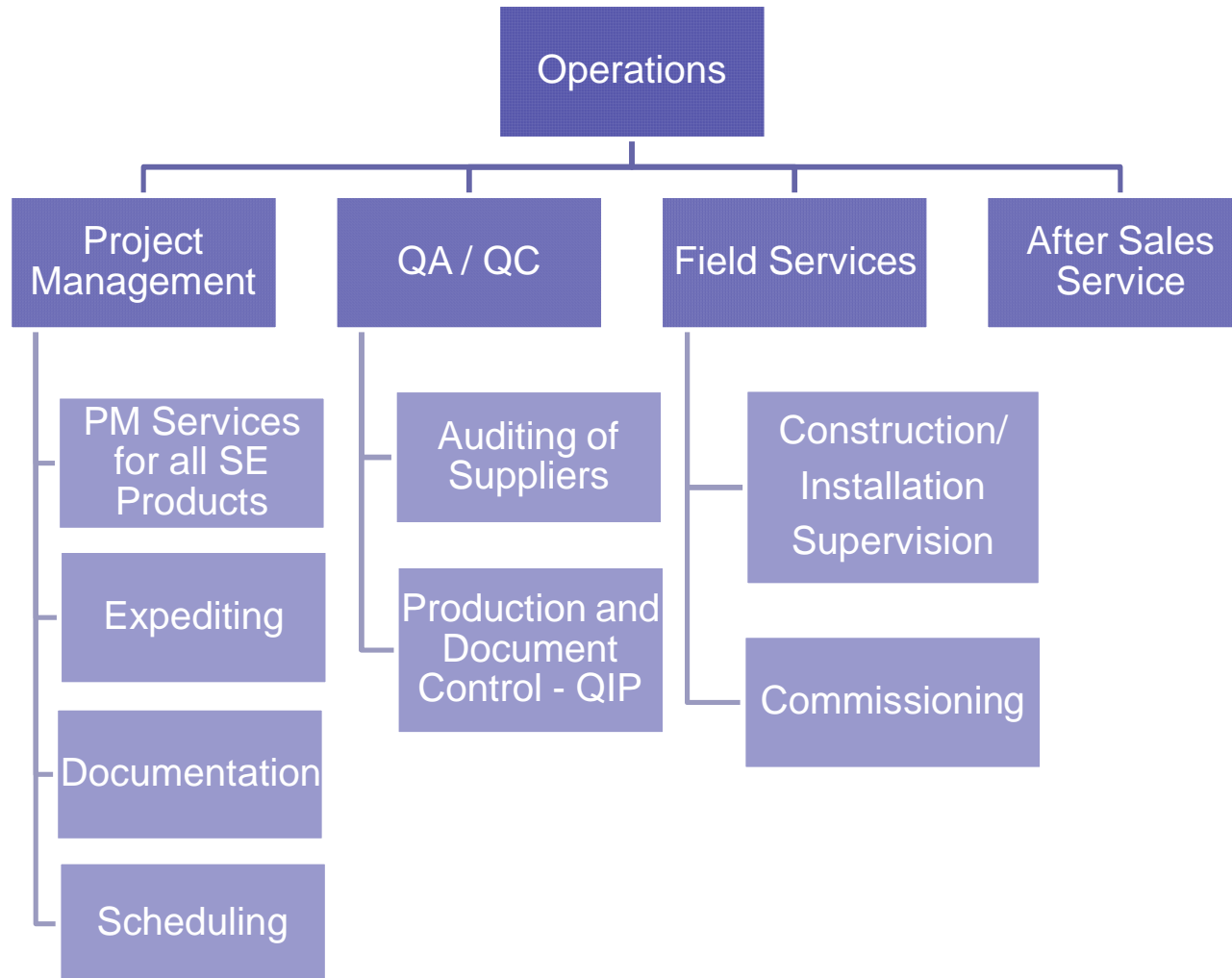


References



Customer Benefits

Fields of Activities in Operations





Fields of Activities in Operation



Scope of Services



Development of After Sales Services

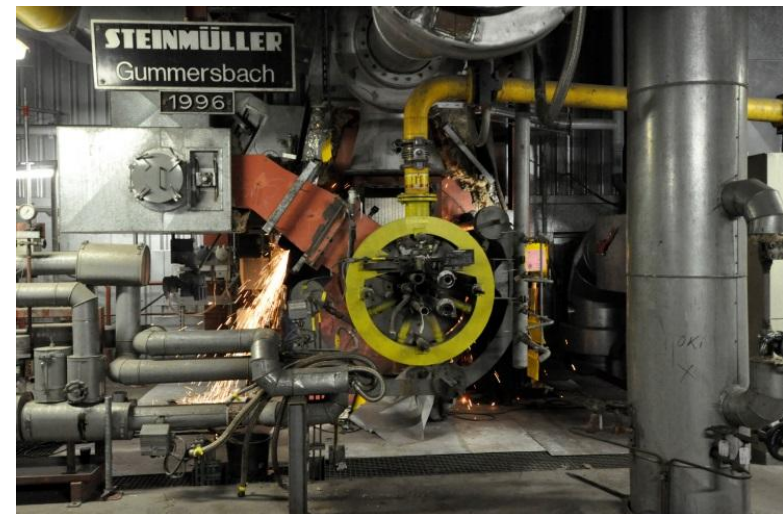


References



Customer Benefits

- Continuous support maintenance and repairs
- Management services
- Supply of spare parts
- Inspections
- Implementation of plant optimization



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Fields of Activities in Operation

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Scope of Services

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Development of After Sales Services

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Customer Benefits

Steinmüller Engineering Products Overview

After Sales Services

Power Generation

Burners, firing systems and steam generators for:

- Bituminous coal
- Lignite, raw & dried
- Oil and gas
- Refinery residues
- Steelwork waste gases

Fluidized bed boilers

Biomass power plants

Solar plants, thermal

Environmental Technology

Flue gas cleaning for

- Power plants
- Incineration plants
- Cement industry
- Paper industry

comprising of

- Particulate removal
- Denitrification
- Desulphurization
- Removal of toxic elements and heavy metals

Chemical Plant Components

Waste heat boilers for various applications

Process gas heat exchangers

Coal gasification components

Power Generation and Environmental Technology

Consulting

Concept and feasibility studies

Tender preparation and bid evaluation

Design review and professional services during project execution

Know-how transfer / licensing

Product Field: Development of After Sales Services

After Sales Services@Steinmüller Engineering:

The responsibility for After Sales Services is within Operations. Thus a seamless transition from the project execution and warranty period to the after sales period is ensured:

- Follow-up of engineering contracts by additional services during project execution by third parties
- Spare and wear part supplies
- Monitoring of operation
- Execution of overhauls (case study: Herne 4)
- Integration into IHI-Group: SE serves as the contact window for IHI utility plants in the European and North African market (case study: TKL Lünen)



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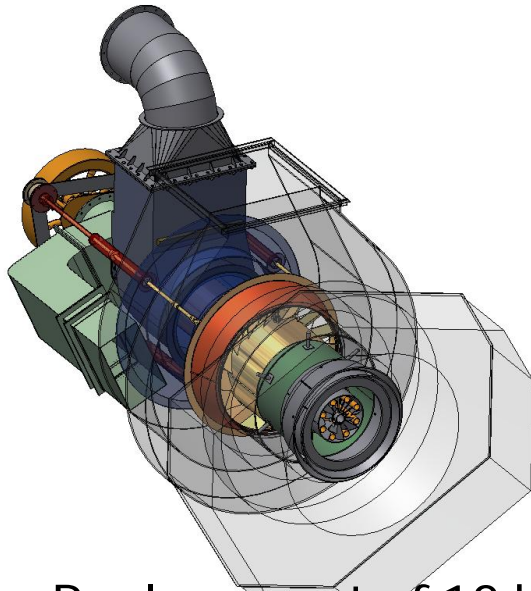
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Customer Benefits

2012 Modification and Optimization of Firing System Herne IV



- Streamlining of firing system by dismantling of fuel staging (secondary-coal-system)
 - Extension of coal range (high-volatile coal)
 - Reduction of primary NO_x -Emissions
 - Reduction of total excess air
-
- Replacement of 12 burners to SM V burners with $105 \text{ MW}_{\text{th}}$ each
 - Boiler efficiency increased by 0,36%
 - Reduction of NO_x by 50-100 mg/Nm^3
 - Savings by reducing agent for SCR: 23%



In 2015 a first overhaul of all firing components was executed:

Removal and reassembling of 12 burners
Check up - optimization – Minor repairs
Spare parts supply



- Supervising and coordination
- Occupational safety and health training and control
- Risk analysis
- Expediting
- Reporting
- Documentation/WPS

In Lünen Trianel operates a bituminous coal fired ultra low-emission power plant with one of the world's best efficiencies.
Project execution by the consortium: Siemens – IHI



Capacity: 813 MW (gross)

District heating supply: 35 MW

SH/RH outlet temperature: 600/610 deg.C

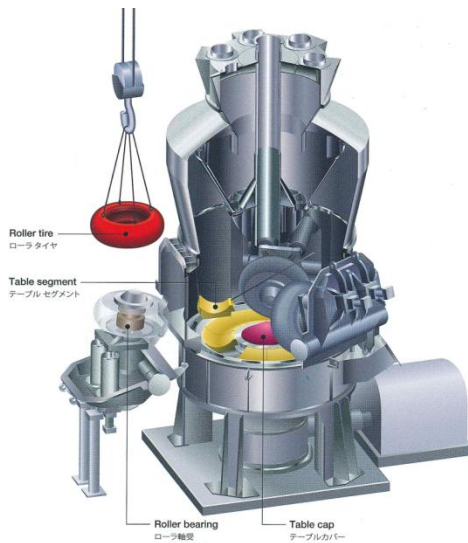
Project execution period: 2008-2013

Commercial operation PAC since July 2013

After-Sales activities for IHI's power stations in Europe / North Africa

→ Example: TKL (Trianel Kraftwerk Lünen)

- Contact point for the client → SE
- Spare parts services for TKL via SE
- Trouble shooting
- Further plant optimizations



- Full access to IHI's documentation of the plant
- Direct support from IHI Tokyo engineers
- Short distance
- Communication channel to the client

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Customer Benefits

Related to After Sales Service

- Know-how for engineering services & supply for
 - **Combustion Systems**
 - **Flue Gas Cleaning Plants**
 - **Steam Generators**
- Continuous development of processes and product designs in close contact and cooperation with plant operators
- Network of reliable sub-contractors and service providers
- Complete services: root cause analysis, studies, engineering, supply of material, expediting, quality control and installation
- Operational cost savings after optimizations
- Increase of plant availability
- Expanded flexibility (e.g. co-fired plants)

Thank you for your attention

