

Aftermarket & Services

Global leader in the delivery of project, engineering, equipment and technical services to the energy and industrial markets. We strive to be the best original equipment manufactured to work with, work for and invest in.





Aftermarket & Services

With more than a century of designing, fabricating, erecting and starting our own equipment, we have the experience and capability to assess your boiler, recommend improvements, and predict the impact on performance, reliability and operation before any fieldwork is started.

Service is an integral part of our business. Preventive condition monitoring, expert maintenance, rapid response repair work, and replacement part deliveries are key factors in achieving maximum plant reliability and cost effective performance year after year.

Through service agreements, we provide comprehensive and cost effective maintenance programs, ranging from boiler inspections to outage equipment supply and construction services, resulting in minimum unplanned repair work.

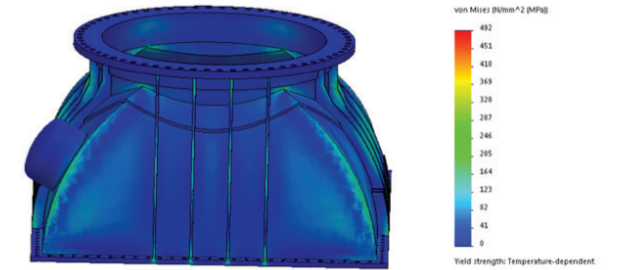


Engineering, Solutions and Studies

Highly experienced multidisciplinary team to provide comprehensive solutions.

Thermal Performance Modeling

- To identify causes of performance shortfalls
- To evaluate benefit of design improvements
- Modeling is done using Wood expert performance design software which is continually updated and validated with field data



Feasibility and Engineering Studies to Evaluate the Thermal and Mechanical Impact of

- Addition of in-duct burners
- Turbine changes
- Capacity increases
- SCR additions

Metallurgical Analysis

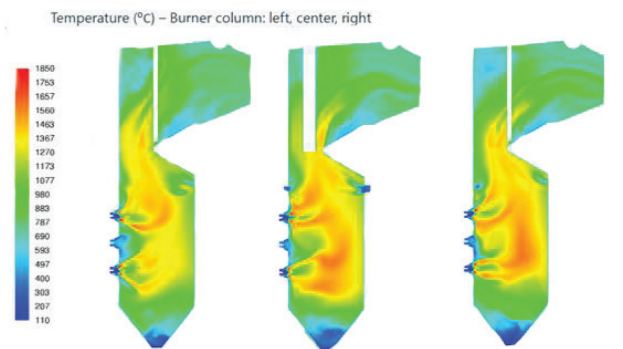
- UT testing to determine cracking and tube wall thinning
- To determine causes of tube failures and develop solutions

Vibration Analysis

- To address vibration-related failures in tube assemblies, baffle plates, liner plates

Dynamic Analysis

- To investigate tube, header, nozzle temperature differentials and flexibility during start-up, shut-down, and steady-state operation





Upgrading Engineering and Retrofits

We have a long track of successful retrofit project both acting as OEM and also working on other suppliers equipment.

Life Extension

- Steam Generators: utility boilers and industrial boilers
- Power and Industrial plants components as pressure parts or burners
- Complete power plants cycles

Solutions for Efficiency Improvement

Conversion to new fuels

- Fuel Oil to Natural Gas or other Opportunity Fuels

Redesign for New Operating Conditions

- Upgrading and De-rating
- HRSG, Utility and Industrial Boilers

Reduction of Emission

- Combustion system modification and primary measures



Spare parts

We have satisfied many customers with a full line of high quality replacement boiler parts for our own units as well as for units manufactured by others. In fact, about half of our deliveries have been for non-Foster Wheeler units. Our replacement parts are known for their world class quality, competitive pricing and short delivery schedules.

We continually improve the design and materials of our replacement parts to consistently outperform original OEM parts.

All our parts are backed by a comprehensive warranty and customer service second to none.

Capability to provide fast and reliable answer to custome needs

- Direct and Detailed Knowledge of Equipment
- Continuous Communication with Suppliers
- Manufacturing Shops

Some areas

- Pressure Parts
- Drum Internals
- Auxiliary Equipment
- Valves & Instrumentation
- Burner's Components

Emissions Abatement

We provide services with a leading-edge approach and knowledge base to improve performance, reliability and operating costs.

Emissions Reductions

The solutions we provide can reduce the following pollutants in your gas stream:

- NOx
- CO
- SOx
- Particulate matter & metals
- Hg
- HCl
- HF
- Dioxins & Furans

Compliance and Feasibility Studies

We provide consulting and services to help customers make the right choice for their enviromental needs.

- Technology Evaluation and Feasibility Studies
- Preliminary Engineering and Cost Analyses

View our brochure to learn how we are structured to deliver utility customers a single turnkey solutions for ELG Compliance.

Process Analysis and Design

Experience and resources to provide engineered solutions.

- Mass and Energy Balances
- Process Simulations and Modeling
- CFD Flow Models and Analysis
- Full Engineering staff in Structural, mechanical, Process, Electrical and Controls

Instalation Support and Start Up

From construction through start-up compliance testing, we offer technical solutions. Highest performance and seamless plant integration is our goal.

- Onsite advisement
- Installation & drawing verification
- Mechanical checkouts
- Functional testing
- Operator training
- Start-up and Procedures
- Tuning & Optimization



Process Assessment

We evaluate current air pollution control systems and provide recommendations for improved performance, reliability and operating costs.

- Onsite Evaluations
- Process Optimization
- Reagent Utilization Studies
- Root Cause Analysis
- Research and Development
- Lab Consulting

Equipment Inspections

Services that focus on extending the life of your emissions control systems and enhancing their performance to improve your plant's operation.

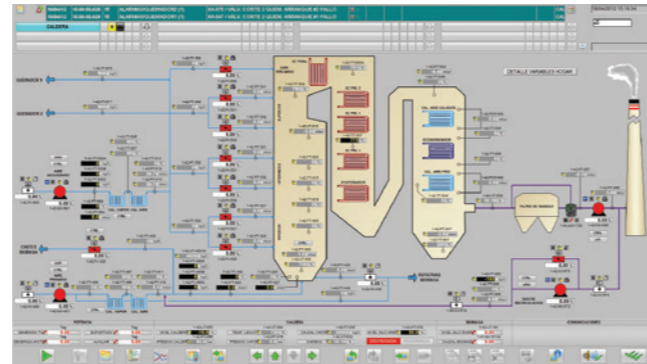
- Fabric Filters
- Cartridge Collectros & Bin vents
- Electrostatic precipitators
- Spray dryers
- WFGD's
- SCRs
- DSI



Instrumentation and Control

Improving reliability and safety while lowering operational cost.

- I&C Engineering, including mainly the detailed design of Control Loops, Binary Diagrams Electrical Diagrams and Field Instrumentation
- Systems Integrator, including mainly the design of System Architecture, Development of Software and Commissioning
- Electrical Engineering, including mainly the detailed design of Control Cabinets, Power Cabinets and Cable Routings



Typical I&C Scopes

- Basic and detailed engineering
- I&C and electrical engineering
- Application software development
- Development of Software Simulators for PC
- Fabrication of Control Cabinets, MCC and Power Cabinets
- Supply of field instrumentation
- Training and Commissioning

Improving reliability while lowering operational costs

- Burner Management Systems (BMS) and Boiler Protection Systems (BPS)
 - Safety Systems up to SIL3
 - According to NFPA 85 and IEC 61508
- Systems Upgrades
 - Flame Detection Systems
 - Instrumentation
 - New Control Strategies
 - Migrations
- DCS and Control Systems
 - Optimization of the process designing new control loops
 - Tuning new or existing control loops
 - Remote connections for advisory services or remote engineering analysis
 - Capability to work with Several Manufacturers Platforms:(HIMA, Rockwell, Siemens, Honeywell, etc..)

I&C Systems

- Boiler Protection and Burner Management (BPS-BMS)
- Boiler Control and Auxiliary equipment
- Plant DCS System
- Sootblowers Control
- Emissions control System

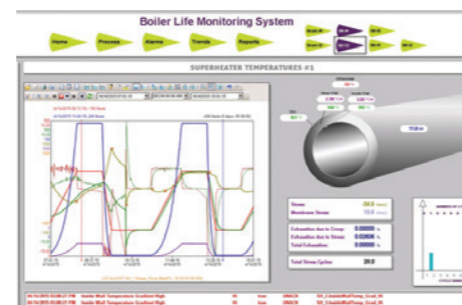
Remote access and Live Monitoring System

The life monitor system runs on a PC external to the plant Digital Control System (DCS).

The system obtains operational data of critical components within the Boiler from the plant's DCS.

Results are clear and easy to use

- Process data, alarms, trends and reports available
- Complete and individual detail of lifetime data calculations available
- Reports for each component monitored available
- User-friendly graphical interface for each boiler component
- Easy access to monitored data showing variable trends versus time
- High capacity data storage and easy access to historical data and reports



Consulting Services

Performance Service Agreement

Service is an integral part of our business. Preventive condition monitoring, expert maintenance, rapid response repair work, and replacement part deliveries are key factors in achieving maximum plant reliability and cost effective performance year after year.

Long Term Advisory Services

Through our service agreements, we provide comprehensive and cost effective maintenance programs, ranging from boiler inspections to the supply of parts, equipment and construction services.

Services at Site

Our service is backed by a global network of manufacturing, engineering and customer service centers that can meet tight schedules while achieving the most competitive pricing.

Typical Sopes

- Performance, efficiency benchmarking
- Assessment of water quality issues
- Investigation of casing issues, hot spots, leaks
- Burner tuning
- Investigation of tube corrosion issues
- Condition, remaining life assessments

