



Proactive Engineering Solutions (Pvt) Limited

ENGINEERING | INNOVATION | EXCELLENCE



ENGINEERING



INNOVATION



INTEGRITY



EXCELLENCE



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Proactive Engineering
Solutions (Pvt) Limited

OUR STORY

ENGINEERING EXCELLENCE BUILT ON EXPERIENCE

PES was established in **2016** by a team of highly experienced engineering professionals with more than **30+ years** of combined expertise in the Boiler, Power Plant, Systems, and Industrial Process Engineering sector.



Established in **2016** by expert engineers with **30+ years** of combined experience in the Boiler & Power Plant industry.



Built on a foundation of technical excellence, integrity, and a passion for delivering reliable engineering solutions.



Focused on customer satisfaction through innovation, quality, and a commitment to meeting industry challenges.



Over the years, we have grown into a trusted engineering partner for clients across multiple sectors and geographies.

OUR FOUNDATION

2016

Year of Establishment

30+ YEARS

Combined Experience
of Our Expert Team

EXPERTISE IN KEY SECTORS



Boilers



Power Plants



HRSG



Biomass



OTSG



Industrial
Process Systems



“

Established by experienced minds, driven by innovation, committed to engineering a sustainable future.

”





Proactive Engineering
Solutions (Pvt) Limited

COMPANY OVERVIEW

ENGINEERING | INNOVATION | EXCELLENCE

Proactive Engineering Solutions (Pvt) Limited (PES) is a trusted engineering company providing comprehensive design, engineering and project services for Boiler, Power Plant and Process Industries. We deliver innovative, efficient and sustainable solutions that empower our clients to achieve operational excellence.

With a team of experienced professionals and a commitment to quality, safety and reliability, we transform challenges into opportunities and build long-term partnerships based on trust and performance.



EXPERIENCED PROFESSIONALS

Skilled team with diverse engineering expertise.



QUALITY & SAFETY

Committed to the highest standards in everything we do.



INNOVATIVE SOLUTIONS

Leveraging technology and creativity to deliver optimal results.



CLIENT FOCUS

Building lasting relationships through reliability, integrity and performance.

WHY PES?

We combine engineering excellence with a proactive approach to deliver projects that are safe, reliable and built for a sustainable future.

- ✓ End-to-end engineering and project services
- ✓ Customized solutions to meet client needs
- ✓ Focus on efficiency, sustainability and innovation
- ✓ Commitment to quality, safety and timely delivery

OUR CORE VALUES



INTEGRITY

We act with honesty and transparency.



INNOVATION

We embrace new ideas and better ways.



COLLABORATION

We believe in teamwork and respect.



EXCELLENCE

We are committed to delivering the best.



SUSTAINABILITY

We build solutions for a better tomorrow.



MESSAGE FROM CEO

“

Our strength lies in our people.
Their expertise, passion and
ownership drive everything
we do.

At PES, we are committed to
delivering world-class engineering
excellence through innovation,
collaboration and a relentless
continuous improvement.

Let's keep challenging
ourselves, supporting each
other and creating a better,
sustainable future.

Together, we engineer
possibilities.

”

FRANS BALTUSSEN
Chief Executive Officer





Proactive Engineering
Solutions (Pvt) Limited

MESSAGE FROM MANAGING DIRECTOR

“

At PES, we believe dreams
don't come true by wishing –

**DON'T WISH FOR IT,
WORK FOR IT.**

Success is the result of hard work,
dedication, teamwork and the will
to keep moving forward.

Together, let us keep building
solutions for a smarter value,
built to last and make a
positive impact.

Stay committed. Stay focused.

The best is yet to come.

”

MUHAMMAD ASGHAR

Managing Director





Proactive Engineering
Solutions (Pvt) Limited

HUMAN RESOURCES

**We don't just offer jobs,
we build careers.**

At PES, Human Resources is more than a department – it is a strategic partner in building a motivated, skilled and future-ready workforce. We focus on attracting the right talent, nurturing potential and empowering every individual to achieve their full potential.



WE OFFER CAREERS, NOT JUST JOBS

We create opportunities for long-term growth, continuous learning and professional development.



CAREER GROWTH & DEVELOPMENT

We believe in growing together. Through training, mentorship and diverse projects, we help our people reach their goals.



WE ARE ONE FAMILY

At PES, we treat every employee as a part of our family. Respect, trust and care are at the heart of our culture.



WE STAND BY YOU

In good times and tough times, PES stands with its people. Your well-being and success are always our priority.



**People join PES for a better future,
and stay with us because we care.**

We are committed to providing a supportive environment, meaningful opportunities and a culture where everyone can thrive.

Together
**WE GROW
WE SUCCEED**

At PES, your journey is important to us.
Join us. Grow with us. Succeed with us.



Proactive Engineering
Solutions (Pvt) Limited

WHAT WE DO



BOILERS



HRSG



OTSG



BAG HOUSE SYSTEMS



BIOMASS BOILERS



POWER PLANTS



STEAM & PROCESS PIPING



PRESSURE PARTS



PLANT COMMISSIONING



WHAT WE DO



BOILERS

We provide complete engineering solutions for industrial boilers including design, analysis, manufacturing support and commissioning. Our boiler systems are efficient, reliable and compliant with international codes and standards.

- Capacity : 1 TPH to 120 TPH
- Pressure : Up to 150 Bar(g)
- Temperature : Up to 540 °C
- Fuel Type : Biomass, Coal, Natural Gas, LNG, HFO
- Types : Fire Tube, Water Tube, Single Drum, Multi Drum
- Design Codes : ASME, TEMA, API, ISO
- Efficiency : Up to 92%
- Applications : Power Generation, Process Heating, Steam Supply
- Services : Engineering, Detail Design, Vendor Support, Erection & Commissioning



HRSG

Our Heat Recovery Steam Generators (HRSG) capture waste heat from gas turbines to produce high-quality steam for power generation and industrial use. Designed for maximum efficiency and reliability.

- Capacity : Up to 300 TPH
- Pressure : Up to 150 Bar(g)
- Temperature : Up to 565 °C
- Configuration : Horizontal, Vertical, Multi-Pressure
- GT Exhaust Temp. : Up to 650 °C
- Steam Drum Type : Single / Triple Pressure
- Design Codes : ASME, CSD-1, EN 12952, ISO
- Efficiency : Up to 95%
- Applications : Combined Cycle Power Plants, Cogeneration, Industrial
- Services : Thermal Design, Mechanical Design, 3D Modeling, Erection Support & Commissioning



OTSG

Our Once Through Steam Generators (OTSG) are designed for high efficiency and fast start-up operation. Ideal for simple cycle power plants and industrial steam applications.

- Capacity : Up to 800 TPH
- Pressure : Up to 150 Bar(g)
- Temperature : Up to 540 °C
- Configuration : Vertical, Once Through
- Fuel Type : Natural Gas, LFO, HFO, Diesel
- GT Exhaust Temp. : Up to 650 °C
- Design Codes : ASME, EN 12952, ISO, TEMA
- Efficiency : Up to 90%
- Applications : Simple Cycle Power Plants, Industrial Steam Generation
- Services : Conceptual & Detail Design, Stress Analysis, Vendor Support, Erection & Commissioning



WHAT WE DO



BAG HOUSE SYSTEMS

Our Baghouse systems are designed to provide high-efficiency particulate removal for industrial processes. Built for reliable performance, low emission and easy maintenance.

- Filtration Efficiency : > 99%
- Inlet Dust Load : Up to 50 g/Nm³
- Outlet Dust Emission : < 50 mg/Nm³
- Operating Temperature : Up to 250 °C
- Design Pressure : -5 kPa to +5 kPa (Gauge)
- Cleaning System : Pulse Jet
- Filter Media : Polyester / PTFE
- Applications : Boilers, Power Plants, Cement, Sugar, Chemical, Biomass & Process Industries
- Services : Engineering, Detailed Design, Supply, Erection Supervision, Testing & Commissioning



BIOMASS BOILERS

We deliver efficient and reliable biomass boiler solutions that utilize renewable fuels to generate steam for industrial processes and power generation.

- Capacity : 1 TPH to 120 TPH
- Pressure : Up to 150 Bar(g)
- Steam Temperature : Up to 540 °C
- Fuel Type : Biomass (Wood, Rice Husk, Bagasse, Agro Waste, Saw Dust, etc.)
- Type : Water Tube, Fire Tube, Single Drum, Multi Drum
- Combustion System : Stoker, Fluidized Bed, Grate Type
- Efficiency : Up to 90%
- Applications : Process Steam, Power Generation, District Heating, Industrial Heating
- Services : Engineering, Design, Manufacturing Support, Erection & Commissioning



POWER PLANTS

We provide end-to-end engineering solutions for power plants including design, equipment selection, integration and commissioning to ensure safe, efficient and sustainable power generation.

- Capacity : 5 MW to 100+ MW
- Plant Type : Biomass, Coal, Natural Gas, Waste Heat Recovery, Hybrid
- Cycle Type : Rankine Cycle, Combined Cycle
- Steam Conditions : Up to 150 Bar(g) & 540 °C
- Efficiency : Up to 40% (depending on fuel & cycle)
- Major Systems : Boiler, Turbine, Generator, Condenser, BOP
- Applications : Captive Power, Co-generation, Independent Power Production (IPP)
- Services : Feasibility Study, Basic & Detailed Engineering, Procurement Support, Project Management, Erection & Commissioning

WHAT WE DO



STEAM & PROCESS PIPING

We provide complete engineering solutions for steam and process piping systems for industrial plants. Our designs ensure safety, efficiency, and reliability with adherence to international standards.

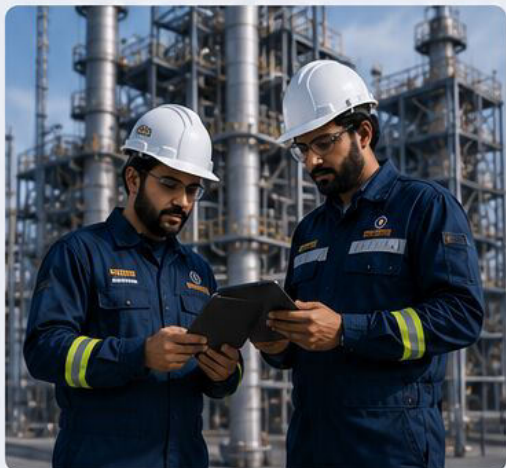
- **Scope of Services :**
Engineering, 3D Modeling, Stress Analysis, Material Take-off, Isometrics & GA Drawings, Support during Fabrication & Erection
- **Piping Systems :**
Steam, Process, Utility, Condensate, Fuel, Instrument Air, Cooling Water, Chemical Lines
- **Design Codes & Standards :**
ASME B31.1, B31.3, B31.8, ASME Section VIII, TEMA, ASTM, ANSI, MSS, ISO
- **Materials :** Carbon Steel, Stainless Steel, Alloy Steel, Duplex & Super Duplex, etc.
- **Design Pressure :**
Up to 250 Bar(g) (as per client requirement)
- **Design Temperature :**
-29 °C to 650 °C
- **Deliverables :**
PFD, P&ID, 3D Model, Isometric Drawings, Support Documents & Data Sheets



PRESSURE PARTS

We engineer pressure parts and equipment to ensure safe and reliable operation under high pressure and temperature conditions. All designs comply with international codes and client specifications.

- **Equipment Types :**
Pressure Vessels, Heat Exchangers, Drums, Columns, Tanks, Surge Drums, Silencers, etc.
- **Design Codes & Standards :**
ASME Section VIII Div. 1, ASME B31.3, TEMA, API 660, API 650, ISO, AD-Merkblatt
- **Design Pressure :**
Up to 250 Bar(g) (as per equipment type)
- **Design Temperature :**
Up to 650 °C (as per equipment type)
- **Analysis Services :**
Stress Analysis, Thickness Calculation, Nozzle Loads, FEA (if required)
- **Deliverables :**
Calculation Sheets, GA Drawings, Data Sheets, Vendor Data Packages, MDR



PLANT COMMISSIONING

Our commissioning services ensure that your plant and equipment perform safely, efficiently, and in accordance with design intent. We support clients from pre-commissioning to performance testing and handover.

- **Commissioning Services :**
Pre-commissioning, Mechanical Completion, System Commissioning, Start-up, Performance Testing, Reliability Run, Handover Support
- **System Covered :**
Boilers, HRSG, Power Plants, Piping Systems, Auxiliaries, Bag House, Utilities
- **Testing & Checks :**
Hydro Testing, Pneumatic Testing, Leak Testing, Flushing, Function Testing, Loop Checks
- **Performance Testing :**
Capacity Test, Efficiency Test, Steam Quality Test, Emission Monitoring
- **Documentation :**
Commissioning Procedures, Checklists, Test Reports, Punch Lists, As-built Updates
- **Our Approach :**
Safety First, Quality Focus, On-time Delivery, Client Satisfaction



Proactive Engineering
Solutions (Pvt) Limited

PRODUCTS & SERVICES

We offer a comprehensive range of engineering products and services for power, process and industrial applications with a commitment to quality, reliability and performance.

01



Boilers

- High efficiency steam generation solutions for various fuels.

02



HRSG

- Waste heat recovery solutions for power generation.

03



OTSG

- Once-through steam generators for simple cycle power plants.

04



Bag House Systems

- Efficient dust collection systems for clean and compliant operations.

05



Skids

- Pre-fabricated & tested skids for quick installation and reliability.

06



Pressure Parts

- ASME / API compliant pressure parts and fabricated components.

07



Heat Exchangers

- Custom designed heat exchangers for efficient heat transfer.

08



Pumps

- Reliable pumping solutions for industrial and process applications.

09



Valves

- Wide range of industrial valves for every critical application.

10



Conveyors

- Robust conveying systems for bulk material handling.

11



Bearings

- High quality bearings for maximum performance and durability.

12



Automation

- Advanced automation solutions for process control and monitoring.

13



Electrical & Instrumentation

- Complete E&I solutions from design to commissioning.

14



Fabrication

- In-house fabrication facility with strict quality standards.

15



Shutdown & Turnaround

- Planned shutdown and turnaround services to minimize downtime.

16



Maintenance & Support

- Ongoing maintenance and support for reliable plant performance.

17



Commissioning

- Professional commissioning services ensuring safe start-up and operation.



PRODUCTS & SERVICES

We offer a comprehensive range of engineering products and services for power, process and industrial applications with a commitment to quality, reliability and performance.

01 BOILERS



We design and supply high efficiency boilers for a wide range of industrial applications ensuring safe, reliable and economical steam generation.

- Capacity : 1 TPH to 120 TPH
- Pressure : Up to 150 Bar(g)
- Steam Temperature : Up to 540 °C
- Fuel Type : Biomass, Coal, Natural Gas, LFO, HFO, Diesel
- Types : Fire Tube, Water Tube, Single Drum, Multi Drum
- Design Codes : ASME, TEMA, API, ISO
- Scope : Design, Engineering, Supply Support, Erection & Commissioning

02 HRSG



We deliver high performance Heat Recovery Steam Generators that maximize waste heat recovery and improve overall plant efficiency.

- Capacity : Up to 300 TPH
- Pressure : Up to 150 Bar(g)
- Steam Temperature : Up to 565 °C
- Configuration : Horizontal, Vertical, Multi-Pressure
- GT Exhaust Temp. : Up to 650 °C
- Steam Drum : Single / Triple Pressure
- Design Codes : ASME, CSD-1, EN 12952, ISO
- Applications : Combined Cycle Power Plants, Cogeneration, Industrial

03 OTSG



Our Once Through Steam Generators are designed for high efficiency and fast start-up operation for simple cycle power plants and industrial steam applications.

- Capacity : Up to 800 TPH
- Pressure : Up to 150 Bar(g)
- Steam Temperature : Up to 540 °C
- Configuration : Vertical, Once Through
- Fuel Type : Natural Gas, LFO, HFO, Diesel
- GT Exhaust Temp. : Up to 650 °C
- Design Codes : ASME, EN 12952, TEMA, ISO
- Applications : Simple Cycle Power Plants, Industrial Steam Generation

04 BAG HOUSE SYSTEMS



We provide efficient Bag House Systems for effective dust collection, low emission and clean air compliance.

- Filtration Efficiency : > 99%
- Inlet Dust Load : Up to 50 g/Nm³
- Outlet Dust Emission : < 50 mg/Nm³
- Operating Temperature : Up to 250 °C
- Design Pressure : -5 kPa to +5 kPa (Gauge)
- Cleaning System : Pulse Jet
- Filter Media : Polyester / PTFE
- Applications : Boilers, Power Plants, Cement, Sugar, Chemical, Biomass & Process Industries

05 SKIDS



We design and fabricate pre-engineered skids for quick installation, reduced site work and enhanced project execution.

- Types : Process Skids, Utility Skids, Dosing Skids, Package Units
- Design Codes : ASME, API, ISO
- Features : Compact Design, Plug & Play, Easy Installation, Factory Tested
- Materials : Carbon Steel, Stainless Steel, Duplex, Super Duplex
- Scope : Design, Engineering, Fabrication, Testing & Documentation
- Applications : Oil & Gas, Power, Chemical, Petrochemical, Water Treatment

06 PRESSURE PARTS



We manufacture high quality pressure parts and components in compliance with international codes and strict quality standards.

- Equipment Types : Pressure Vessels, Heat Exchangers, Drums, Columns, Tanks, Surge Drums, Silencers, etc.
- Design Pressure : Up to 250 Bar(g)
- Design Temperature : Up to 650 °C
- Design Codes : ASME Section VIII Div. 1, ASME B31.3, TEMA, API 660, API 650, ISO, AD-Merkblatt
- Materials : Carbon Steel, Stainless Steel, Alloy Steel, Duplex & Super Duplex
- Services : Design, Material Take-off, Fabrication, NDT, Testing & Certification



PRODUCTS & SERVICES

We offer a comprehensive range of engineering products and services for power, process and industrial applications with a commitment to quality, reliability and performance.

07 HEAT EXCHANGERS



We engineer and supply a wide range of heat exchangers designed for efficient thermal performance and long service life.

- **Types** : Shell & Tube, Air Cooled, Plate, Spiral, Fin Fan, Double Pipe
- **Design Codes** : ASME Section VIII, TEMA, API 660
- **Materials** : Carbon Steel, Stainless Steel, Cu-Ni, Duplex, Titanium, etc.
- **Applications** : Power Plants, Refineries, Petrochemical, Chemical, HVAC, Process Industries
- **Services** : Design, Thermal Analysis, Fabrication, Testing, Inspection & Supply

08 PUMPS



Reliable and efficient pumping solutions for a wide range of industrial and process applications.

- **Types** : Centrifugal, Multistage, Vertical, Submersible, Positive Displacement
- **Capacity** : Up to 5000 m³/hr
- **Head** : Up to 1500 m
- **Materials** : CI, CS, SS 304/316, Duplex, Bronze, Alloy
- **Applications** : Water Supply, Boiler Feed, Cooling Water, Process, Chemical, Oil & Gas
- **Services** : Selection, Sizing, Supply, Installation Support, Testing & Commissioning

09 VALVES



High quality valves for safe isolation, regulation and control of fluids in industrial piping systems.

- **Types** : Gate, Globe, Ball, Butterfly, Check, Control, Safety, Plug, Diaphragm
- **Size Range** : 15 NB to 1200 NB
- **Pressure Class** : Up to 2500#
- **Materials** : Carbon Steel, Stainless Steel, Alloy Steel, Duplex, Bronze
- **Standards** : API, ASME, ANSI, MSS, BS, DIN
- **Services** : Supply, Testing, Automation, Installation Support

10 CONVEYORS



We design and supply reliable conveyor systems for efficient material handling and bulk transportation.

- **Types** : Belt Conveyors, Screw Conveyors, Chain Conveyors, Bucket Elevators, Roller Conveyors
- **Capacity** : Up to 2000 TPH
- **Belt Width** : Up to 2400 mm
- **Material Handling** : Bulk Solids, Powders, Granules, Aggregates
- **Applications** : Power Plants, Cement, Mining, Sugar, Ports, Fertilizer, Biomass
- **Services** : Design, Manufacturing, Supply, Erection Supervision & Commissioning

11 BEARINGS



High performance bearings ensuring smooth operation, reduced friction and extended equipment life.

- **Types** : Ball Bearings, Roller Bearings, Spherical Bearings, Thrust Bearings, Pillow Block Units
- **Brands** : SKF, FAG, NSK, NTN, TIMKEN, KOYO, etc.
- **Size Range** : 10 mm to 1000 mm (ID)
- **Features** : High Load Capacity, Low Friction, High Speed, Long Life
- **Applications** : Motors, Pumps, Gearboxes, Turbines, Conveyors, Fans, Industrial Machinery
- **Services** : Supply, Genuine Products, Technical Support

12 AUTOMATION



Advanced automation solutions to improve process efficiency, safety, reliability and operational performance.

- **Solutions** : PLC, DCS, SCADA, HMI, VFD, MCC, Control Panels
- **Brands** : Siemens, Allen-Bradley, Schneider, ABB, Mitsubishi, Delta, Omron
- **Services** : System Design, Programming, Panel Fabrication, Testing, Integration
- **Applications** : Power Plants, Process Industries, Water Treatment, HVAC, Chemical, Oil & Gas
- **Support** : Installation, Commissioning, Training, After Sales Support

PRODUCTS & SERVICES

We offer a comprehensive range of engineering products and services for power, process and industrial applications with a commitment to quality, reliability and performance.

13

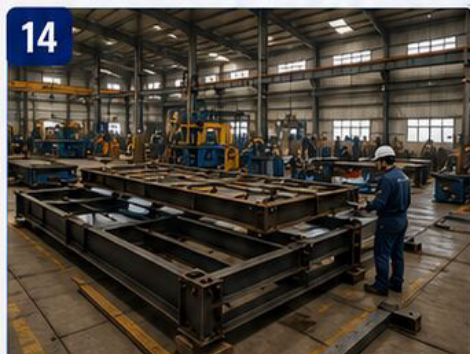


ELECTRICAL & INSTRUMENTATION

We deliver complete E&I solutions from concept to commissioning ensuring safety, reliability and optimal plant performance.

- **Scope of Services**
System Design, Engineering, Panel Design & Manufacturing, Field Instrumentation, Cable Management, Installation, Testing & Commissioning
- **Systems**
Power Distribution, MCC, Lighting, Earthing & Lightning Protection, Control & Instrumentation Systems
- **Standards**
IEC, IEEE, ISA, ASME, NFPA, BS, Client Specifications
- **Deliverables**
Single Line Diagrams, Loop Diagrams, Hook-up Drawings, Cable Schedules, Instrument Datasheets, I/O Lists, Test Reports
- **Applications**
Power Plants, Process Plants, Boilers, Utilities, Water Treatment, Oil & Gas, Chemical & Petrochemical Plants
- **Services**
Supply, Installation, Testing, Pre-commissioning & Commissioning Support

14



FABRICATION

Our state-of-the-art fabrication facility ensures precision manufacturing with strict adherence to quality standards.

- **Capabilities**
Structural Steel, Piping Spools, Pressure Parts, Skids, Tanks, Ducts, Modules and Custom Fabricated Equipment
- **Facilities**
Fabrication Shop, CNC Cutting, Bending, Rolling, Welding (SMAW, GTAW, GMAW, SAW), Shot Blasting & Painting
- **Standards**
ASME, AWS, ISO 9001, EN, BS, Client Specifications
- **Quality Assurance**
WPS, PQR, Welders Qualification, NDT (UT, RT, MT, PT), Dimensional Inspection
- **Surface Protection**
Shot Blasting, Industrial Painting, Coating as per Client Requirement
- **Deliverables**
Fabricated & Tested to Code, Ready for Site Installation

15



SHUTDOWN & TURNAROUND

We provide planned shutdown and turnaround services to maximize reliability, safety and minimize production loss.

- **Scope**
Planning, Scheduling, Resource Management, Mechanical & Electrical Works, Inspection, Testing, Start-up Assistance
- **Activities**
Equipment Overhauling, Maintenance, Replacement, Modification, Cleaning, Alignment & Recommissioning
- **Key Focus**
Safety, Quality, Timely Completion, Cost Control, Minimal Downtime
- **Industries**
Power Plants, Oil & Gas, Petrochemical, Cement, Fertilizer, Sugar, Textiles and Other Process Industries

16



MAINTENANCE & SUPPORT

Reliable maintenance and technical support services to ensure continuous and efficient plant operation.

- **Services**
Preventive, Predictive & Corrective Maintenance, Condition Monitoring, Troubleshooting, Equipment Refurbishment, Reliability Improvement
- **Support**
Breakdown Support, Spares Management, Field Assistance, Technical Consultation
- **Expertise**
Mechanical, Electrical, Instrumentation, Rotating Equipment, Boilers, Piping Systems
- **Objective**
Maximize Uptime, Extend Equipment Life, Improve Efficiency & Reduce Cost

17



COMMISSIONING

We provide end-to-end commissioning services to ensure safe startup and reliable operation of your plant.

- **Commissioning Services**
Pre-commissioning, Mechanical Completion, System Commissioning, Start-up, Performance Testing, Reliability Run, Handover
- **Systems Covered**
Boilers, HRSG, Power Plants, Process Units, Piping Systems, Rotating Equipment, E&I Systems
- **Testing & Verification**
Functional Testing, Loop Checks, System Performance, Emission Testing, Efficiency Testing
- **Deliverables**
Commissioning Procedures, Test Reports, Punch Lists, As-built Documentation, Operation & Maintenance Manuals



PES MANUFACTURING BAG HOUSE FOR INDUSTRIES

**CLEANER AIR. GREENER FUTURE.
SAFER OPERATIONS.**

PES designs and manufactures high performance **Bag House** systems for a wide range of industries to effectively control smoke, dust and particulate emissions.

Our Bag House solutions improve air quality, protect the environment, ensure regulatory compliance and make boilers and industrial processes more efficient and environmentally friendly.

KEY BENEFITS



Effective Smoke & Dust Control
Captures fine particulate matter and ensures cleaner emissions.



Environment Friendly
Helps industries meet environmental regulations and sustainability goals.



Improved Boiler Efficiency
Maintains heat transfer efficiency and reduces operational losses.



Compliance & Safety
Ensures compliance with local and international emission standards.



Low Maintenance & Reliability
Robust design for long life, minimal downtime and easy maintenance.



Dust Collection & Reuse
Collected dust can be recycled or reused, contributing to cost savings.



WE MANUFACTURE BAG HOUSES FOR



Power Plants



Cement Plants



Sugar Mills



Rice Mills



Chemical Plants



Steel & Foundries



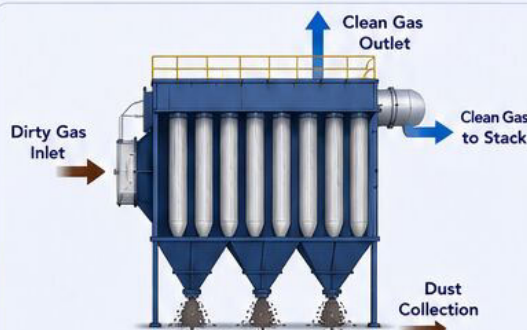
Fertilizer Plants



Other Industries

OUR BAG HOUSE FEATURES

- ✓ High filtration efficiency
- ✓ Low pressure drop design
- ✓ Modular & compact construction
- ✓ Robust structure for long life
- ✓ Pulse jet cleaning system
- ✓ Easy access for inspection & maintenance
- ✓ Customized design to meet process needs
- ✓ Safe, reliable & energy efficient operation



HOW IT WORKS

Dirty gas enters the Bag House through the inlet and passes through filter bags. Dust particles are trapped on the surface of the bags while clean air passes out through the outlet to the stack.

The collected dust is periodically removed from the bags by pulse jet cleaning system and falls into the hopper for safe collection and disposal.



PES Bag House Systems help industries control emissions, protect the environment and build a cleaner, healthier and sustainable future.



WATER BATH HEATER FOR OIL REFINERY

**ENGINEERED HEAT. RELIABLE PERFORMANCE.
BUILT FOR REFINING EXCELLENCE.**

PES designs and manufactures high efficiency **Water Bath Heaters** for Oil Refineries and Petrochemical Plants. These heaters are used to heat process fluids uniformly and safely in a water bath, ensuring precise temperature control, energy efficiency and long-term operational reliability in the most demanding conditions.

KEY BENEFITS

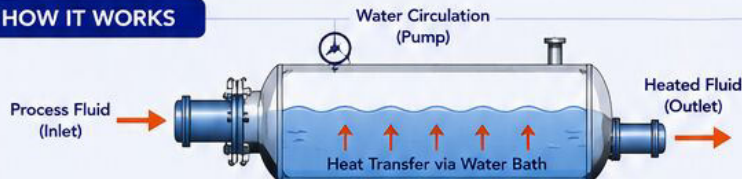
-  **Uniform & Efficient Heating**
Ensures consistent outlet temperature with high thermal efficiency
-  **Safe & Reliable Operation**
Water bath design prevents local overheating and ensures safe heat transfer
-  **Energy Efficient**
Optimized design reduces fuel consumption and operating costs
-  **Corrosion Resistant Construction**
Built with quality materials for long life in harsh refinery environments
-  **Low Maintenance**
Robust design for minimal downtime and easy maintenance
-  **Custom Engineered Solutions**
Designed to meet specific process, capacity and space requirements



DESIGN FEATURES

- Horizontal, skid-mounted design 
- High efficiency finned tube bundle 
- Uniform water circulation for effective heat transfer 
- Fully insulated with high quality insulation 
- Temperature control with control valve & sensors 
- Safety relief valve, high level alarm & temperature protection 
- Designed as per ASME Sec. VIII, Div. 1 & TEMA standards 
- Suitable for high pressure & high temperature applications 

HOW IT WORKS



The process fluid flows through the tube bundle immersed in a water bath. Heat from the burner is transferred to the water and then uniformly to the process fluid, ensuring precise and safe temperature control.

TYPICAL APPLICATIONS



WE OFFER

-  Conceptual & Detail Engineering
-  Design Calculations & Process Sizing
-  Manufacturing & Quality Assurance
-  Inspection & Testing
-  Installation Support & Commissioning
-  After Sales Service & Technical Support



PES Water Bath Heaters deliver reliable, efficient and safe heating solutions for Oil Refineries and Petrochemical Industries.

ENGINEERED FOR PERFORMANCE. BUILT FOR RELIABILITY.



CONVEYOR SYSTEMS BUILT TO MOVE MORE.

PES designs, manufactures and supplies a wide range of high performance conveyors for various industries.

Our conveyor systems are engineered for reliability, efficiency and long service life to handle bulk materials safely and continuously in the most demanding environments.



WHY CHOOSE PES CONVEYORS?



Robust & Reliable Design
Built for continuous operation in harsh industrial conditions



High Efficiency
Optimized design for maximum performance and low maintenance



Customized Solutions
Tailored to meet specific process and site requirements



Quality Manufacturing
Built with high quality materials and strict quality control



Safety First
Designed with advanced safety features for worry free operation



Global Standards
Designed & manufactured as per international standards

TYPES OF CONVEYORS WE MANUFACTURE



BELT CONVEYOR

Ideal for long distance material handling with high capacity.



SCREW CONVEYOR

Suitable for conveying powders, granules and semi-solid materials.



BUCKET ELEVATOR

Designed for vertical lifting of bulk materials efficiently.



CHAIN CONVEYOR

Heavy duty solution for hot, abrasive and bulky materials.



ROLLER CONVEYOR

Ideal for unit handling and movement of boxes, bags and finished goods.



APRON CONVEYOR

Suitable for heavier and lumpier materials in heavy duty applications.

INDUSTRIES WE SERVE



Power Plants



Cement Plants



Sugar Mills



Fertilizer Plants



Oil & Gas



Mining & Minerals



Steel Plants



Other Industries

KEY FEATURES

- ✓ High load carrying capacity
- ✓ Smooth & reliable operation
- ✓ Low maintenance & long life
- ✓ Corrosion & wear resistant materials
- ✓ Customizable length, width & capacity
- ✓ Energy efficient design
- ✓ Easy installation & maintenance
- ✓ Safety guards & protection
- ✓ Compliance with international standards



PES Conveyor Systems are built to deliver performance, reliability and safety—keeping your operations moving, always.

STRONGER CONVEYORS. SMOOTHER OPERATIONS. BETTER RESULTS.

MAJOR PROJECTS



MUGHAL ENERGY LIMITED



Project Type
Thermal Power Plant



Plant Capacity
36.5 MW

BOILER SPECIFICATIONS

- Boiler Capacity : 120 TPH
- Steam Pressure : 150 Bar
- Steam Temperature : 535°C

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



AZGARD NINE LIMITED



Project Type
Biomass Power Plant



Plant Capacity
7 MW

BOILER SPECIFICATIONS

- Boiler Capacity : 45 TPH
- Steam Pressure : 66 Bar
- Steam Temperature : 485°C

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



ICL PROJECT



Project Type
Thermal Power Plant



Plant Capacity
37.2 MW

BOILER SPECIFICATIONS

- Boiler Capacity : 190 TPH
- Steam Pressure : 100 Bar
- Steam Temperature : 540°C

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



IST PROJECT



Project Type
OTSG Boiler



OTSG Capacity
535 TPH

OTSG SPECIFICATIONS

- OTSG Capacity : 535 TPH
- Steam Pressure : 120 Bar

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned

MAJOR PROJECTS



PEPSICO INTERNATIONAL



Project Type
Bag House System



Air Flow (ID Fan)
350,000 CMH

SYSTEM SPECIFICATIONS

- Bag Filters : 264 Nos.
- Collection Efficiency : >99%
- Inlet Dust Concentration : $\leq 80 \text{ mg/Nm}^3$
- Outlet Dust Concentration : $\leq 5 \text{ mg/Nm}^3$
- Operating Temperature : $< 150^\circ\text{C}$
- Design Pressure : -2500 Pa
- Material : Mild Steel

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



LAYYAH SUGAR MILLS



Project Type
Sugar Mill



165 TPH Boiler
65 Bar
485°C

BOILER SPECIFICATIONS

- Boiler Capacity : 165 TPH
- Steam Pressure : 65 Bar
- Steam Temperature : 485°C
- Firing : Bagasse Fired
- Type : Water Tube Boiler

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



AL-MOIZ SUGAR MILLS



Project Type
Sugar Mill



DESIGN CALCULATIONS OF
120TPH 65BARG 480°C SINGLE
DRUM WATER TUBE BAGASSE
FIRED BOILER

BOILER SPECIFICATIONS

- Boiler Capacity : 120 TPH
- Steam Pressure : 65 Bar
- Steam Temperature : 480°C
- Firing : Bagasse Fired
- Type : Single Drum Water Tube Boiler

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



LAYYAH SUGAR MILLS



Project Type
Sugar Mill



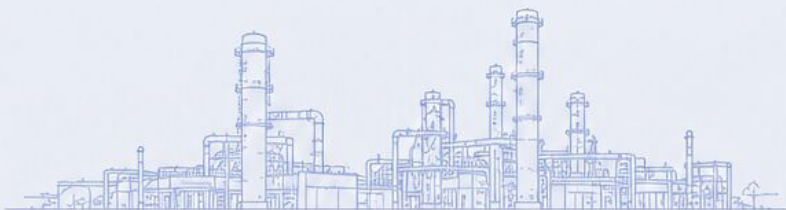
65 TPH Boiler
65 Bar
485°C

BOILER SPECIFICATIONS

- Boiler Capacity : 65 TPH
- Steam Pressure : 65 Bar
- Steam Temperature : 485°C
- Firing : Bagasse Fired
- Type : Water Tube Boiler

PES SCOPE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned by PES



MUGHAL ENERGY LIMITED

PES successfully designed, supplied, supervised the execution and commissioned the steam generation system for Mughal Energy Limited. The project was executed under PES supervision to ensure quality, safety and compliance with international standards. The plant is operating successfully and meeting the client's expectations for reliable power generation.



CLIENT

Mughal Energy Limited



PROJECT TYPE

Thermal Power Plant



PLANT CAPACITY

36.5 MW



PROJECT STATUS

Successfully Commissioned



OUR ROLE

- Designed by PES
- Executed under PES Supervision
- Successfully Commissioned



PROJECT SPECIFICATIONS

	Project Type	: Thermal Power Plant
	Plant Capacity	: 36.5 MW
	Boiler Capacity	: 120 TPH
	Steam Pressure	: 150 Bar
	Steam Temperature	: 535°C
	Fuel	: Coal Fired
	Application	: Captive Power Generation

PES ENGINEERING SCOPE

- Complete Engineering & Design
- Process Flow Diagram (PFD)
- Piping & Instrumentation Diagram (P&ID)
- Boiler & Auxiliaries Design
- Steam & Water Cycle Design
- Equipment Selection & Data Sheets
- Mechanical & Structural Design
- Electrical & Instrumentation Design
- Engineering Documentation
- Execution Supervision
- Commissioning & Start-up Support



KEY ENGINEERING FEATURES

-  High Efficiency & Reliable Operation
-  Robust Design for Continuous Operation
-  Optimized Heat Transfer Performance
-  Designed in accordance with International Standards
-  Execution under PES Supervision ensuring Quality & Safety
-  Successfully Commissioned



ICL PROJECT

190 TPH BOILER THERMAL POWER PLANT

PES is responsible for the Design Engineering of 190 TPH Boiler for Ittehad Chemical Limited. Our scope also includes supervision during execution and commissioning support to ensure safe, reliable and efficient operation of the boiler system.



CLIENT

Ittehad Chemical Limited



PROJECT TYPE

Thermal Power Plant



BOILER CAPACITY

190 TPH



PLANT CAPACITY

37.2 MW

OUR SCOPE



DESIGN ENGINEERING

- Process Design
- Mechanical Design
- Piping Design
- Structural Design
- Instrumentation & Control (E&I)
- P&ID Development
- GA Drawings
- Technical Specifications



EXECUTION SUPERVISION

- Site Supervision
- Quality Assurance
- Construction Monitoring
- Compliance with Drawings & Specifications
- Coordination with Contractors & Vendors



COMMISSIONING

- Pre-Commissioning Support
- Commissioning & Start-up
- Performance Testing
- Safety & System Checks
- Operator Training
- Final Handover

TECHNICAL DATA – BOILER



Boiler Capacity : 190 TPH



Steam Pressure : 100 Bar



Steam Temperature : 540°C



Plant Capacity : 37.2 MW



Boiler Type : Water Tube



Fuel : As per Design



Application : Process Steam Generation



Design Codes : ASME



Quality Standards : ISO 9001, ISO 14001, ISO 45001



Inspection & Testing : ASME, NDT, Hydro Test



Instrument Class : As per Project Standards



Control System : DCS / PLC Based



End Use : Process Steam for Plant Utilities



KEY FEATURES

- High efficiency boiler with reliable steam generation
- Designed for optimum performance & low specific fuel consumption
- Safe operation with advanced safety interlocks
- Compact, space optimized design
- Easy operation & maintenance



BENEFITS TO CLIENT

- Reliable & continuous steam supply
- Improved operational efficiency
- Reduced downtime
- Lower maintenance cost
- Compliance with international codes & standards
- Safe, stable & efficient operation



OUR COMMITMENT

- Quality Design Engineering
- Timely Execution Supervision
- Safe & Compliant Implementation
- Successful Commissioning
- Client Satisfaction
- Long-term Support & Service



BOILER CAPACITY
190 TPH



STEAM PRESSURE
100 Bar



STEAM TEMPERATURE
540°C



PLANT CAPACITY
37.2 MW

PTC BOILER

PES successfully completed the Design Engineering of a Biomass Fired Boiler for Pakistan Tobacco Company (PTC).

Our design ensures efficient, reliable and safe steam generation to support their production operations.



CLIENT

Pakistan Tobacco Company (PTC)



PROJECT TYPE

Boiler – Design Engineering



COMPLETION

Design Engineering Completed

OUR SCOPE OF WORK



DESIGN ENGINEERING

- Basic & Detail Engineering
- Process & Heat Balance
- Boiler Design & Calculations
- P&ID, GA Drawings & Layouts
- Equipment Specifications
- Data Sheets & BOQ Preparation



VENDOR SELECTION

- Vendor Identification
- Technical Evaluation
- Commercial Evaluation
- Vendor Comparison
- Recommendation for Approval



COMMISSIONING

- Supervision of Erection
- Pre-Commissioning Checks
- Commissioning & Start-up
- Performance Testing
- Client Training & Handover

BOILER TECHNICAL DATA

	Boiler Type	: Biomass Fired, Water Tube
	Steam Capacity	: 6 TPH
	Steam Pressure	: 10 Bar (G)
	Steam Temperature	: Saturated Steam
	Fuel Type	: Biomass (Agricultural Waste)
	Design Codes	: ASME, IBR, TEMA
	Efficiency	: Up to 87%

	Circulation Type	: Natural Circulation
	Economizer	: Included
	Air Preheater	: Included
	Feed Water Temperature	: 105 °C
	Design Basis	: Customer Provided
	Application	: Process Steam for Tobacco Manufacturing Plant



DESIGN DELIVERABLES

- Design Basis & Calculations
- P&ID, Process Flow Diagram
- GA Drawings & Layouts
- Equipment Data Sheets
- Line List, Valve List, Instrument List
- Material Requisition & BOQ
- Technical Specifications
- Design Review Comments
- Final Design Package



KEY FEATURES

- Efficient Biomass Fired Boiler Design
- Reliable & Safe Steam Generation
- Optimized Combustion & Heat Transfer
- Compliance with International Codes & Standards
- Easy Operation & Maintenance
- Environment Friendly Solution



OUR ROLE

- Complete Design Engineering
- Vendor Selection & Evaluation
- Engineering Coordination
- On-Time Deliverables
- Commissioning Support
- Quality & Accuracy Assurance



STEAM CAPACITY
6 TPH



STEAM PRESSURE
10 Bar (G)



STEAM TEMPERATURE
Saturated Steam



FUEL TYPE
Biomass

IST PROJECT

OTSG 535 TPH | 120 Bar



The IST Project involves the supply of an Once Through Steam Generator (OTSG) with a capacity of 535 TPH and design pressure of 120 Bar. The system is designed to deliver high efficiency, reliability and operational flexibility for power generation applications. PES carried out the engineering, design, and technical support for successful project execution in compliance with international standards and client requirements.



Client
Innovative Steam Technology



Location
OMAN



Completion
Successfully Completed



End Use
Power Generation

TECHNICAL SPECIFICATIONS

	Type	Once Through Steam Generator (OTSG)
	Capacity	535 TPH
	Design Pressure	120 Bar
	Steam Temperature	540 °C
	Feed Water Temperature	220 °C
	Fuel	Natural Gas
	Efficiency	High Efficiency Design

	Steam Condition	Superheated Steam
	Flow Arrangement	Once Through
	Circulation	Natural Circulation (OTSG)
	Design Code	ASME, Section I
	Quality Standards	ISO 9001, ISO 14001, ISO 45001
	Inspection & Testing	EN 12952, ASME, NDT, Hydro Test
	Applications	Power Plant – Combined Cycle

SCOPE OF PROJECT

- Engineering and Design of OTSG
- Process Flow Diagram (PFD) & Piping & Instrumentation Diagram (P&ID)
- Mechanical, Thermal & Stress Analysis
- Equipment Sizing and Datasheets
- Material Requisition & BOQ
- Technical Bid Evaluation Support
- Erection Supervision & Commissioning Support

KEY HIGHLIGHTS

- High efficiency OTSG for maximum power output
- Robust design for high pressure & temperature operation
- Compliance with international standards and client specifications
- Optimized thermal performance and low pressure drop
- Reliable and safe operation with minimal maintenance

OUR SCOPE

- Basic & Detail Engineering
- 3D Modeling & Layout
- Mechanical & Thermal Design
- Stress Analysis
- Procurement Support
- Inspection & Quality Assurance
- Site Support during Erection & Commissioning

PEPSICO INTERNATIONAL SUNDER ESTATE

BAG HOUSE SYSTEM (COMPLETE EPC PROJECT)

PES successfully executed the complete EPC (Engineering, Procurement & Construction) of Bag House System for PepsiCo International at Sunder Estate, Lahore. The project included Design Engineering, Procurement, Supply, Installation, Testing and Commissioning to ensure efficient flue gas dust collection and environmentally compliant operation.



CLIENT

PepsiCo International
Sunder Estate, Lahore



PROJECT TYPE

Bag House System
(Complete EPC Project)



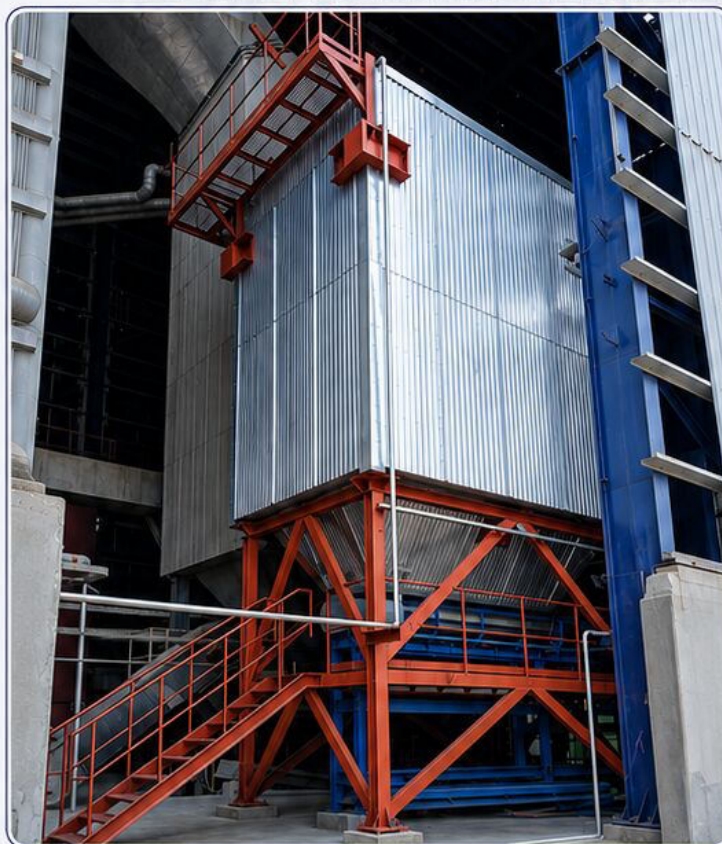
COMPLETION

Successfully Commissioned



END USE

Flue Gas Dust Collection from
Boiler System



OUR SCOPE (COMPLETE EPC)



ENGINEERING

- Process & Mechanical Design
- P&ID, GA & Isometric Drawings
- Structural & Ducting Design
- Instrument & Control Design
- Technical Specifications
- Material Requisition & BOQ



EXECUTION

- Equipment Procurement
- Fabrication & Manufacturing
- Supply & Delivery
- Installation & Erection
- Piping, Ducting & Structural Works
- Electrical & Instrumentation Works



COMMISSIONING

- Pre-Commissioning Activities
- Commissioning & Start-up
- Performance Testing
- Emission Verification
- Operator Training
- Final Handover

TECHNICAL DATA

	System Type	: Pulse Jet Bag House
	Bag Filters	: 264 Nos.
	Collection Efficiency	: > 99%
	Outlet Dust Concentration	: $\leq 50 \text{ mg/Nm}^3$
	Gas Volume	: As per Design
	Operating Temperature	: Up to 250 °C

	Design Basis	: Customer Provided
	Design Codes	: ASME, AISC, SMACNA
	Quality Standards	: ISO 9001, ISO 14001, ISO 45001
	Inspection & Testing	: Client / Third Party
	Application	: Flue Gas Dust Collection from Boiler System



KEY FEATURES

- High collection efficiency (>99%)
- Compact & robust design
- Low pressure drop
- Easy maintenance & long bag life
- Reliable pulse jet cleaning system
- Compliant with environmental norms



BENEFITS

- Effective removal of fine particulate
- Improved air quality
- Environmentally compliant operation
- Reduced emission levels
- Enhanced equipment protection
- Safe & reliable performance



OUR COMMITMENT

- Quality Engineering
- On-time Delivery
- Safe Execution
- Client Satisfaction
- Sustainable Solutions



BAG FILTERS
264 Nos.



COLLECTION EFFICIENCY
> 99%



OUTLET DUST
 $\leq 50 \text{ mg/Nm}^3$



SYSTEM TYPE
Pulse Jet Bag House



LAYYEH SUGAR MILLS LIMITED

165 TPH

BAGASSE FIRED BOILER

PES successfully delivered the Design Engineering for a 165 TPH, 65 Bar(g), 485°C Bagasse Fired Boiler for Layyeh Sugar Mills Limited. The engineering package included complete multidisciplinary design covering Process, Mechanical, Piping, Civil & Structural, Electrical and Instrumentation disciplines in accordance with applicable international codes and client requirements.



CLIENT

Layyeh Sugar Mills Limited



PROJECT TYPE

Boiler Design Engineering



BOILER TYPE

Bagasse Fired Boiler



OUR SCOPE – DESIGN ENGINEERING



- Process Design & Heat Balance
- Boiler Thermal Design Calculations
- Mechanical Design
- Pressure Parts Design
- PFD & P&ID Development
- Piping Design



- Civil & Structural Design
- Electrical Design
- Instrumentation & Control (E&I)
- GA Drawings & Detailed Engineering
- Equipment Datasheets
- Material Requisition & Technical Specifications



- Design Calculations
- Process Datasheets
- Equipment Datasheets
- Piping Layouts
- Structural Drawings
- Electrical Single Line Diagrams
- Instrument Index
- Cable Schedule
- Bill of Quantities (BOQ)

ENGINEERING STANDARDS



ASME
Section I



ASME
B31.1



TEMA



API
(Applicable)



IEC / IEEE



ISO
Standards

TECHNICAL DATA – BOILER



Boiler Capacity : **165 TPH**



Steam Pressure : **65 Bar(g)**



Steam Temperature : **485°C**



Boiler Type : Bagasse Fired Boiler



Fuel : Bagasse



Application : Sugar Mill Cogeneration



Steam Service : Process & Power Generation



KEY FEATURES

- High-efficiency Bagasse Fired Boiler
- Optimized Furnace Design
- Reliable Steam Generation
- High Thermal Efficiency
- Low Fuel Consumption
- Environmentally Friendly Combustion
- Compliance with International Standards



BENEFITS TO CLIENT

- Optimized Boiler Performance
- Reduced Operating Cost
- Improved Steam Reliability
- Enhanced Fuel Utilization
- Long Equipment Life
- Easy Maintenance



OUR COMMITMENT

- Quality Design Engineering
- International Design Standards
- Timely Engineering Deliverables
- Technical Excellence
- Reliable Engineering Solutions



BOILER CAPACITY
165 TPH



STEAM PRESSURE
65 Bar(g)



STEAM TEMPERATURE
485°C



FUEL
Bagasse



AL-MOIZ SUGAR MILLS LIMITED

120 TPH

BAGASSE FIRED BOILER

PES successfully delivered the Design Engineering for a 120 TPH, 65 Bar(g), 480°C Single Drum Water Tube Bagasse Fired Boiler for Al-Moiz Sugar Mills Limited. The engineering package included complete multidisciplinary design covering Process, Mechanical, Piping, Civil & Structural, Electrical and Instrumentation disciplines in accordance with applicable international codes and client requirements.



CLIENT

Al-Moiz Sugar Mills Limited



PROJECT TYPE

Boiler Design Engineering



BOILER TYPE

Single Drum Water Tube
Bagasse Fired Boiler



OUR SCOPE – DESIGN ENGINEERING



- Process Design & Heat Balance
- Boiler Thermal Design Calculations
- Mechanical Design
- Pressure Parts Design
- PFD & P&ID Development
- Piping Design



- Civil & Structural Design
- Electrical Design
- Instrumentation & Control (E&I)
- GA Drawings & Detailed Engineering
- Equipment Datasheets
- Material Requisition & Technical Specifications



- Design Calculations
- Process Datasheets
- Equipment Datasheets
- Piping Layouts
- Structural Drawings
- Electrical Single Line Diagrams
- Instrument Index
- Cable Schedule
- Bill of Quantities (BOQ)

ENGINEERING STANDARDS



ASME
Section I



ASME
B31.1



TEMA



API
(Applicable)



IEC / IEEE



ISO
Standards

TECHNICAL DATA – BOILER



Boiler Capacity : 120 TPH



Steam Pressure : 65 Bar(g)



Steam Temperature : 480°C



Boiler Type : Single Drum Water Tube



Fuel : Bagasse



Application : Sugar Mill Cogeneration



Steam Service : Process & Power Generation



KEY FEATURES

- High-efficiency Bagasse Fired Boiler
- Optimized Furnace Design
- Reliable Steam Generation
- High Thermal Efficiency
- Low Fuel Consumption
- Environmentally Friendly Combustion
- Compliance with International Standards



BENEFITS TO CLIENT

- Optimized Boiler Performance
- Reduced Operating Cost
- Improved Steam Reliability
- Enhanced Fuel Utilization
- Long Equipment Life
- Easy Maintenance



OUR COMMITMENT

- Quality Design Engineering
- International Design Standards
- Timely Engineering Deliverables
- Technical Excellence
- Reliable Engineering Solutions



BOILER CAPACITY
120 TPH



STEAM PRESSURE
65 Bar(g)



STEAM TEMPERATURE
480°C



FUEL
Bagasse



Proactive Engineering
Solutions (Pvt) Limited

LAYYAH SUGAR MILLS

65 TPH BAGASSE FIRED
BOILER PLANT



Project Type
Sugar Mill



Boiler Capacity
65 TPH



Steam Pressure
65 Bar



Steam Temperature
(Saturated)



Firing
Bagasse Fired

BOILER SPECIFICATIONS

- Boiler Capacity : 65 TPH
- Steam Pressure : 65 Bar
- Steam Temperature : Saturated
- Firing : Bagasse Fired
- Type : Water Tube Boiler
- Drum Type : Single Drum
- Fuel : Bagasse
- Feed Water Temperature : 105°C (Approx.)
- Economizer Outlet Temp. : 150°C (Approx.)
- Design Efficiency : $\geq 85\%$

PES SCOPE OF WORK

- ✓ Conceptual & Basic Engineering
- ✓ Detailed Engineering & Design Calculations
- ✓ Equipment Sizing & Specification
- ✓ Manufacturing Drawing Preparation
- ✓ Inspection & Quality Assurance
- ✓ Supervision of Erection & Installation
- ✓ Testing, Commissioning & Performance Evaluation
- ✓ Successful Commissioning



PES successfully delivered the 65 TPH Bagasse Fired Boiler Plant for Layyah Sugar Mills with a focus on operational reliability, efficiency and safety. The solution ensures optimum steam generation with enhanced fuel utilization and long-term performance.

ENGINEERED FOR PERFORMANCE. DELIVERED WITH COMMITMENT.



DELIVERING RELIABLE ENGINEERING SOLUTIONS
FOR A BETTER TOMORROW



Proactive Engineering
Solutions (Pvt) Limited

AZGARD NINE LIMITED

7 MW POWER PLANT
45 TPH BOILER PLANT



Project Type
Power Plant



Plant Capacity
7 MW



Boiler Capacity
45 TPH



Steam Pressure
66 Bar



Steam Temperature
485°C

BOILER SPECIFICATIONS

- Boiler Capacity : 45 TPH
- Steam Pressure : 66 Bar
- Steam Temperature : 485°C
- Firing : Bagasse Fired
- Type : Water Tube Boiler
- Drum Type : Single Drum
- Fuel : Bagasse
- Feed Water Temperature : 105°C (Approx.)
- Economizer Outlet Temp. : 150°C (Approx.)

PES SCOPE OF WORK

- ✓ Conceptual & Basic Engineering
- ✓ Detailed Engineering & Design Calculations
- ✓ Equipment Sizing & Specification
- ✓ Manufacturing Drawing Preparation
- ✓ Inspection & Quality Assurance
- ✓ Supervision of Erection & Installation
- ✓ Testing, Commissioning & Performance Evaluation
- ✓ Successful Commissioning



PES successfully delivered the 7 MW Power Plant for Azgard Nine Limited with high performance, efficiency and reliability. The plant is designed to ensure optimum fuel utilization, operational safety and long term sustainability.

ENGINEERED FOR PERFORMANCE. DELIVERED WITH COMMITMENT.



DELIVERING RELIABLE ENGINEERING SOLUTIONS
FOR A BETTER TOMORROW



PLANT BOILERS HEALTH ASSESSMENT

PES provides comprehensive Boiler Health Assessment services to evaluate the condition, reliability and performance of process and power plant boilers. Our assessments help identify potential risks, ensure safety, improve efficiency and support informed decision-making for maintenance, repair or life extension.

WHY BOILER HEALTH ASSESSMENT IS ESSENTIAL

-  Ensure safe and reliable boiler operation
-  Identify degradation and remaining life
-  Reduce risk of unplanned shutdowns
-  Optimize maintenance and repair planning
-  Improve efficiency and reduce operating cost
-  Ensure compliance with codes and standards

OUR ASSESSMENT SERVICES INCLUDE

-  Visual & Dimensional Inspection
-  Non-Destructive Testing (NDT)
-  Material Condition Evaluation
-  Remaining Life Assessment (RLA)
-  Stress & Strength Evaluation
-  Efficiency & Performance Analysis
-  Corrosion, Erosion & Fouling Assessment
-  Reporting with Recommendations

OUR APPROACH



TYPICAL BOILER COMPONENTS COVERED



With PES Boiler Health Assessment, you gain clear insight into your boiler's condition, mitigate risks and ensure long-term reliability and performance.

INSPECT TODAY. RELY TOMORROW.



Proactive Engineering
Solutions (Pvt) Limited

CONSULTANT/TECHNICAL ADVISOR

Independent Technical Advisory | Due Diligence | Project Monitoring

PES provides independent technical advisory services to banks, financial institutions, lenders, investors, and project stakeholders for the technical evaluation, financing assessment, and monitoring of industrial and infrastructure projects.

OUR LTA SERVICES



Technical Due Diligence
Assessment of project technical scope, feasibility, and implementation requirements.



Detailed Due Diligence Reports (DDR)
Comprehensive review of project status, costs, technical risks, and implementation.



Plant & Machinery Assessment
Technical evaluation of existing and proposed plant, machinery, and equipment.



CAPEX & Cost Assessment
Review and validation of project costs, BOQs, MTOs, and major equipment costs.



Technology & Process Review
Assessment of process technology, production capacity, and equipment selection.



Engineering & Design Review
Review of engineering drawings, specifications, BOQs, MTOs, and technical documentation.



Project Progress Monitoring
Monitoring of procurement, construction, installation, and overall project progress.



Site Inspection & Asset Verification
Physical verification of project assets, equipment, and site progress.



Technical Risk Assessment
Identification and assessment of technical, cost, schedule, and operational risks.



Contractor & Vendor Assessment
Technical evaluation of EPC contractors, suppliers, and key vendors.



Environmental & Regulatory Review
Review of applicable environmental and regulatory requirements.



Post-Disbursement Monitoring
Periodic technical monitoring and reporting throughout project implementation.



Completion & Commissioning Assessment
Assessment of project completion, commissioning, and readiness for operations.



“
Independent
technical insights
for informed
project financing
and monitoring
decisions.
”

OUR VALUE



Independent
Technical Assessment



Cost Validation



Risk Identification



Project Monitoring



Lender Reporting

PES supports lenders and financial institutions with independent technical insights for informed project financing and monitoring decisions.



57-A, CCA, Khayaban-e-Amin,
Lahore, Punjab, Pakistan



www.proltd.net



info@proltd.net



PROJECTS

Sr	Project Title	Short Description	Location/Plant Name	Status
1	50 MW Qursun Solar Limited (Independent Engineer)	Provided independent Engineer services for a 50 MW Solar Power Project in Pakistan, including technical review and assessment. Supported project stakeholders through engineering evaluation, progress monitoring, and technical due diligence.	Gharo, Sindh Pakistan	Completed
2	Shah taj Sugar Mills Ltd (Technical Consultancy)	PES provided technical consultancy services for the Heat Rate Test at Shah taj Sugar Mills. The test was conducted to evaluate the thermal performance and efficiency of the power generation system. PES reviewed the test results and provided technical assessment based on the measured operating parameters.	72-C-1, MM Alam Road, Gulberg III, Lahore - 54660.	Completed
3	Mughal Energy Limited (Lender Technical Assistance)	PES provided Lender's Technical Assistance (LTA) services for the technical assessment of the project. The scope included technical due diligence, engineering review, and evaluation of project costs and implementation plans. PES also provided independent technical advisory and monitoring support to assist the lender in its financing assessment.	17-KM Sheikhpura Road, Lahore	Completed
4	Capital Industries (Pvt) Limited (Lender Technical Assistance)	PES provided Lender's Technical Assistance (LTA) services to Capital Industries for the independent technical evaluation of the project. The assignment covered technical due diligence, review of engineering and project cost estimates, and assessment of implementation requirements. PES supported the lender through independent technical advice and project assessment for informed financing decisions.	26-KM Chiniot, Jhang Road, District Chiniot, Punjab, Pakistan	On Going





QHSE POLICY

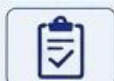
At **PROACTIVE ENGINEERING SOLUTIONS (PVT.) LIMITED (PES)**, we are committed to delivering engineering excellence while maintaining the highest standards of Quality, Health, Safety and Environmental (QHSE) performance. We believe that protecting our employees, clients, contractors, communities and the environment is an integral part of every activity we undertake.

PES is committed to complying with all applicable legal, regulatory and client requirements while continuously improving the effectiveness of our QHSE Management System.

WE ARE COMMITTED TO:



- Establishing, implementing and periodically reviewing measurable QHSE objectives and targets.



- Delivering engineering, procurement, construction and commissioning services that consistently meet customer requirements and international quality standards.



- Providing a safe and healthy workplace by eliminating hazards and minimizing occupational health and safety risks.



- Preventing injuries, occupational illnesses, environmental pollution and property damage through effective risk assessment and control measures.



- Ensuring compliance with all applicable legal, statutory, regulatory and client-specific QHSE requirements.



- Promoting a strong safety culture through training, awareness, communication and active participation of all employees.



- Encouraging every employee and contractor to take personal responsibility for Quality, Health, Safety and Environmental performance.



- Conserving natural resources by minimizing waste generation, emissions and environmental impacts wherever practical.



- Selecting and working with suppliers, subcontractors and business partners who share our commitment to QHSE excellence.



- Continuously monitoring, measuring and improving our processes, systems and overall QHSE performance.



At PES, Quality, Health, Safety and Environmental Excellence is not only a business requirement—
it is a core value that guides every project and every decision we make.



Proactive Engineering Solutions (Pvt) Limited

Head Office

📍 57-A, CCA,
Khayaban e Amin, Lahore
Pakistan

🌐 www.proltd.net

✉ info@proltd.net

