ZOZEN: Top Water Tube Boiler Manufacturer Showcases Eco-Power at HEAT&POWER EXPO 2026

Wuxi, Jiangsu Jan 18, 2026 (Issuewire.com**)** - The industrial heating sector's premier gathering is approaching as manufacturers and technology providers prepare for HEAT&POWER EXPO 2026, the international exhibition dedicated to industrial boiler equipment, heat exchange systems, and power generation technologies. Among the exhibitors converging on Moscow's Crocus Expo Exhibition Center, ZOZEN Boiler stands out as a **Top Water Tube Boiler Manufacturer**, bringing decades of

engineering innovation to an audience seeking advanced thermal solutions that balance performance with environmental responsibility.

HEAT&POWER EXPO: Industry Convergence Point

The HEAT&POWER exhibition has evolved into a critical business platform where industrial heating specialists evaluate emerging technologies and forge partnerships with equipment suppliers. The event attracts professionals from metallurgy, oil and gas, power generation, chemical processing, and manufacturing sectors—industries where thermal efficiency directly impacts operational economics and environmental compliance.

Previous editions have established the exhibition as a specialized forum for industrial boiler and heat generation equipment, alongside systems for water treatment and fuel preparation. This technical focus creates an environment focusing on in-depth technical exchange, allowing manufacturers to demonstrate genuine technological strengths, share operating experience and explore project-specific solutions.

For companies like ZOZEN, participation represents an opportunity to showcase water tube boiler innovations that help industrial users improve energy utilization and reduce emissions. The exhibition timing coincides with heightened regulatory pressure and rising fuel costs, factors driving industrial facilities to reassess aging equipment and consider replacements delivering measurable performance improvements.

Water Tube Boiler Basics for Modern Industrial Heat

From an engineering perspective, a water tube boiler is defined by the fact that water or steam–water mixture flows inside the tubes while high-temperature flue gas passes outside the tubes. In contrast, fire tube boilers place hot gas inside tubes and surround them with water in a shell.

Water tube construction is typically chosen when users expect higher steam capacities and pressures, faster load response and long-duration operation under demanding conditions. By arranging multiple banks of tubes in the furnace and convection sections, the boiler can provide a large heating surface within a compact footprint, ensuring efficient heat transfer and stable steam quality.

Water Tube Technology: Engineering Fundamentals

In a water tube boiler, tubes form the primary heating surfaces in both the radiant furnace and the convective gas passes. Feedwater enters the system, absorbs heat as it flows through the tubes and is converted into saturated or superheated steam depending on process requirements. Downcomers and risers form natural or assisted circulation paths that keep the steam–water mixture moving and prevent local overheating.

Because the heating surface is distributed in tube walls instead of the shell, water tube boilers can safely operate at higher pressures and temperatures, and can be configured with superheaters, reheaters and economizers. These characteristics make them suitable for power generation, high-load process industries and projects where steam demand varies during the day but must remain stable in quality.

ZOZEN's Water Tube Boiler Portfolio

As a **Top Water Tube Boiler Manufacturer**, ZOZEN applies water tube structures across oil/gas, biomass, and coal fuel categories, forming a diversified product matrix addressing diverse industrial requirements.

SZS Series: Gas/Oil-Fired D-Type Design

The SZS series represents ZOZEN's packaged water tube boiler with double drums and D-type layout, featuring membrane water-wall construction that encloses the furnace on all four sides.

Core Advantages: The narrow-spacing membrane walls enhance sealing while reducing heat loss. The large radiation area improves heat absorption efficiency. The D-type configuration positions the furnace on the right side and convection tube bundle on the left, optimizing flue gas flow and heat transfer.

Parameters:

- Capacity: 2–110 t/h
- Working Pressure: up to 5.3 MPa
- Fuels: natural gas, liquefied petroleum gas, coke oven gas, biogas, diesel, heavy oil, light oil

ZZ Series: Power Generation and Cogeneration

The ZZ series provides water tube boilers specifically designed for combined heat and power (CHP) applications, delivering superheated steam to support turbine-driven electricity generation.

Core Advantages: Superheater sections elevate steam temperature beyond saturation point, maximizing energy extraction for power generation. The design accommodates both electrical generation requirements and downstream process steam needs, improving overall energy utilization in industrial parks and manufacturing complexes.

Parameters:

- Capacity: 20–130 t/h
- Working Pressure: up to 5.4 MPa
- Fuels: natural gas, liquefied petroleum gas, diesel, heavy oil

SZL Series: Biomass-Fired Chain Grate Design

The SZL series biomass-fired steam boiler employs horizontal double-drum and vertical layout structure with chain grate combustion system, addressing biomass fuel characteristics through specialized furnace and grate design.

Core Advantages: The water-cooled wall construction forms the combustion chamber, efficiently absorbing radiant heat. Chain grate with independent air chambers ensures thorough combustion across varying biomass fuel qualities. The design addresses common biomass combustion challenges including arch burning and furnace door burnout.

Parameters:

- Capacity: 6–35 t/h

- Working Pressure: 1.0–2.5 MPa
- Fuels: biomass pellets, rice husks, corn cobs, wood chips, sawdust, agricultural residues

Third-Generation DZL Series: Enhanced Ash Management

ZOZEN's third-generation DZL biomass boilers feature three-drum water tube design with water-cooled walls connected to upper drum and lower header, forming a combustion chamber optimized for radiant heat absorption.

Core Advantages: The three-drum water tube configuration delivers more stable steam output with reduced fluctuations. Enhanced ash cleaning design mitigates tube fouling challenges common in biomass applications. The structure improves long-term efficiency sustainability in continuous biomass heating operations.

Parameters:

- Capacity: 10–40 t/h
- Working Pressure: 1.25–2.5 MPa
- Fuels: biomass pellets, wood chips, rice husks, agricultural residues

DZW Series: Reciprocating Grate for High-Moisture Biomass

Overview: The DZW series represents ZOZEN's third-generation biomass water tube boiler consisting of three drums with reciprocating grate combustion system, specifically engineered for high-moisture biomass fuels.

Core Advantages: Reciprocating grate with separate air chambers accommodates fuel moisture content variations effectively. Dense water-cooled tube walls create large radiation areas achieving thermal efficiency above 86.7%. High-automation control system manages fuel feeding, ash handling, and slag discharge, simplifying operation while maintaining performance.

Parameters:

- Capacity: 15–35 t/h
- Working Pressure: 1.25–2.5 MPa
- Fuels: high-moisture biomass including wood chips, agricultural residues, forestry waste

SZL Series: Coal-Fired Chain Grate Configuration

Overview: The SZL series coal-fired water tube steam boilers adopt horizontal double-drum, vertical layout with chain-grate combustion system, available as packaged or shop-assembled units.

Core Advantages: Membrane wall at front forms combustion chamber while convection tube bundle at rear fully utilizes flue gas heat. Multiple independent air chambers with adjustable dampers enable precise air distribution for complete fuel combustion. The design improves thermal efficiency while helping control fuel costs.

Parameters:

- Capacity: 6–35 t/h

- Working Pressure: 1.0–2.5 MPa
- Fuels: bituminous coal, lean coal, anthracite

Eco-Power Focus: Efficiency and Emissions

ZOZEN emphasizes that water tube boilers across different fuels can achieve high-efficiency, low-emission operation through systematic design:

Combustion Optimization: Advanced burners for oil/gas applications and optimized grate/air distribution systems for coal and biomass ensure complete combustion, reducing unburned losses.

Heat Recovery: Economizers and condensers recover flue gas heat to preheat feedwater, improving overall system efficiency while reducing exhaust temperatures.

Emission Control: Low-NOx combustion technology, combined with appropriate tail-end treatment equipment, enables compliance with increasingly stringent emission standards across fuel types.

These eco-power features apply across ZOZEN's water tube product line, enabling users to pursue high efficiency and low emissions regardless of fuel selection.

Global Manufacturing Standards

ZOZEN's 150,000-square-meter manufacturing facility in Wuxi incorporates advanced CNC cutting, automated welding, and non-destructive testing equipment. The company holds ASME "S" and "U" stamps, CE marking, and ISO9001:2015 certification, validating its capability to design and fabricate pressure equipment meeting international standards.

These certifications provide evidence that material selection, welding procedures, inspection protocols, and documentation follow standardized, audited processes, helping customers reduce technical and compliance risks throughout equipment lifecycles.

Comprehensive Boiler Solutions

Beyond water tube boilers, ZOZEN manufactures fire tube boilers and thermal oil heaters, forming a complete product portfolio. Water tube and fire tube structures each offer distinct advantages suited to different operational scenarios:

Water tube boilers typically suit applications requiring:

- High steam evaporation capacity and scalability
- Rapid load response for variable demand
- Complex industrial processes or power generation: Ideal for applications requiring precise control over steam qualityand extreme safety under high-pressure conditions

Fire tube boilers (such as ZOZEN's WNS series) commonly serve:

- Small to medium-scale steam requirements
- Facilities emphasizing compact layout,fast installation, and simplified operation
- Lower-pressure saturated steam applications where cost-effectiveness and ease of maintenance are primary considerations.

ZOZEN's engineering team evaluates project-specific factors including steam capacity, pressure requirements, site constraints, load profiles, fuel availability, and emission regulations to recommend appropriate boiler structure and fuel configuration. This scenario-based selection ensures equipment matches actual operating conditions rather than applying one-size-fits-all solutions.

ZOZEN at HEAT&POWER EXPO 2026

ZOZEN's participation in HEAT&POWER EXPO 2026 provides visitors with:

- Comprehensive overview of water tube boiler families across oil/gas, biomass, and coal applications
- Discussion of project cases involving SZS, SZL, third-generation DZL, and DZW implementations
- Engineering consultations on equipment selection for specific industrial requirements

For professionals seeking practical ways to improve energy efficiency, reduce emissions and modernize boiler houses, ZOZEN’s booth offers both technical insight and field-proven experience. Visitors are welcome to bring concrete project parameters—such as fuel analysis data and steam requirements—to the booth for consultation; ZOZEN engineers will provide on-site selection advice tailored to each project. For detailed information about ZOZEN's complete water tube boiler portfolio, technical specifications, and application capabilities, visit https://en.zozen.com/

Media Contact

ZOZEN

*********@zozen.com

Source : ZOZEN

See on IssueWire