

WASTE HEAT RECOVERY UNITS BIOMASS BOILERS

WASTE-TO-ENERGY

FIRED BOILERS

Custom Designs 🕑



Supply **②**



Ongoing Support

✓



Celebrating 20 Years Fueled by Innovation



SON S.r.I. proudly celebrates 20 years as a trusted provider of innovative energy-saving solutions. Established in 2004 by the founder of **CCT SpA**, an industry leader in steam generators for over 40 years, **SON S.r.I.** was created to pioneer a new era in energy production, with a focus on industrial waste heat recovery.

Specializing in products that enhance efficiency and profitability for businesses dependent on thermal and electrical energy, **SON S.r.I.** offers a comprehensive range of solutions, including Waste Heat Recovery Units, Biomass Boilers, Waste-to-Energy Boilers, Heat Recovery Steam Generators and Fired Boilers. Our ongoing commitment to innovation drives us to explore new partnerships, products, and technologies.

In 2020, **SON S.r.I.** reclaimed the CCT name, marking an expansion into service, maintenance, and fabrication. While product development and project design remain at the core of our business, we also offer tailored, end-to-end solutions, providing full support from design and fabrication to post-sales service.

A LEGACY OF ENERGY SOLUTIONS

Via Cremona, 1 - Legnano (MI) - Italy +39 0331 926600

www.son-energy.com



We offer projects and products that maximize efficiency and minimize emissions



Custom Designs

We adapt our designs to fit your Industrial Settings and Operational Requirements.

Supply

We offer a range of WHRUs, Biomass boilers, Waste-to-Energy Boilers, HRSGs and Fired Boilers.



Fabrication

We customize and build products in the workshop of our subsidiary **CCT SERVICE**.

Ongoing support

We follow-up with **CCT SERVICE** to ensure continued success of all our products.





WASTE HEAT RECOVERY UNITS

Thermal Oil, Superheated Water, Air



HEAT RECOVERY from different INDUSTRIAL PROCESSES

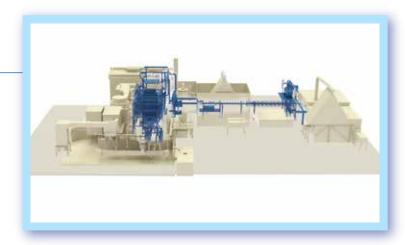
Steel Mill
Paper Mill
Expanded Clay
Biomass
Cement Industry
Carbon Fiber Products

BIOMASS & WASTE-TO-ENERGY BOILERS

Up to 50 MWth High Pressure and Temperature Steam for Power Generation

MAIN FUELS

Wood Chips, Wood Pellets, Bark, Waste Wood, Olive Waste, RDF, MSW, Sorted Waste, and various types of Biomass



INNOVATIVE ENERGY SOLUTIONS

HEAT RECOVERY STEAM

GENERATORS Up to 40 MWel,

with or without Post Firing and Fresh Air



HRSG Downstream GT up to 40 MWel

Licensee of Nooter Eriksen Inc. for design, manufacturing, supply and installation in Italy and European Community.



FIRED BOILERS Firing Natural Gas, Oil, H2 Fuels







Reliable WHR Solutions for the Cement Industry

To provide a cost-effective and eco-friendly WHR solution for the cement industry, SON Srl partnered with Kawasaki in 2023. Based on the successful boiler designs of both companies, they have joined their strengths to develop a Thermal Oil Heat Exchanger now tailored for Thermal Oil Circuits powering ORCs.

■ Kawasaki

Combined STRENGTHS

Expertise in Efficient Primary Heat Exchangers with stable, long-term power output

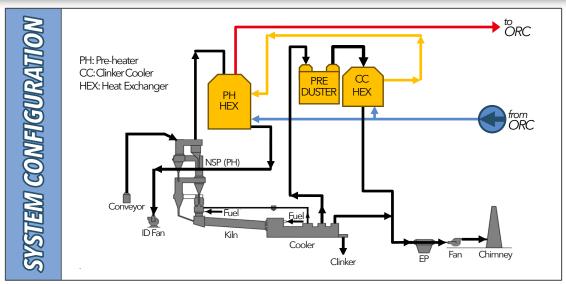
+ 40 years of Heat Recovery experience in the Cement Industry

776 WHR BOILERS supplied for dust-laden cement flue gas

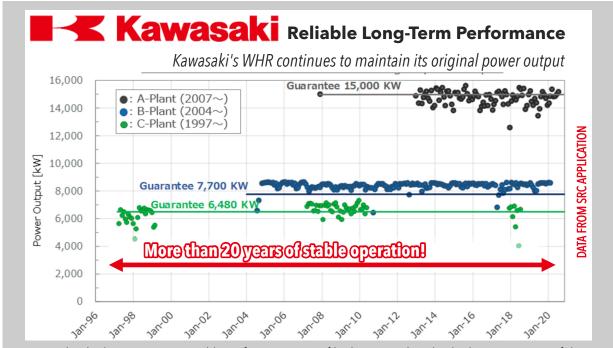
Experience in Heat Exchangers for Thermal Oil Systems and Steam Generators

Expertise in WHR systems across diverse industries in the EU

Manufacturing and Dedicated After Sales support based in Italy



Selection of the most efficient configuration of PH and Clinker Cooler (series, parallel, partial parallel) to be done according to the operating conditions.



Kawasaki's boiler can maintain stable performance even if boiler is introduced to high concentration of dust in PH gas ($10 \sim 100$ times more than other waste gases.)

www.son-energy.com info@son-energy.com

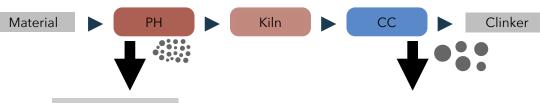




Reliable WHR Solutions for the Cement Industry

Understanding dust characteristics is crucial for designing HEX for CEMENT APPLICATION





Dust in PH GAS

Concentration: HIGH (>100g/Nm³)

Grain Diameter: SMALL($1\sim10\mu m$)

Dust accumulation on heating tubes

Dust in **CC GAS**

Concentration: LOW (<10g/Nm³⁾ Grain Diameter: LARGE (>100 µm)

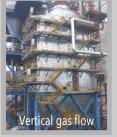
Heating tube erosion caused by hard & large grain dust

PH HEX

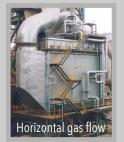
Key Technology

Effective Dust Removal from heating tubes

by hammering equipment



VEGA® Boiler



Conventional PH Boiler

CC HEX

Key Technology

Dust Removal Upstream of CC HEX



Pre Duster

Sedimentary Type pre-duster for very low draft loss



CC Boiler

Efficient **Heat Recovery**

■ Upstream Installation to prevent tube erosion





Draft Loss Drop Flue Gas Side

Optimized Structure

- **Easy Installation** A MODULAR BLOCK DESIGN
 - for easy transportation and installation.
- Lightweight & Compact Compared to a conventional PH boiler the VEGA® is 40% smaller and weighs 32% less.
- **Effective Dust Removal** Stable operation and Easy maintenance!

info@son-energy.com www.son-energy.com

EXPERT BOILER SOLUTIONS

From Prefabrication to Installation Emergency Response Certified Service



SUPPLY, PREFABRICATE, ASSEMBLE, TEST, CERTIFY AND INSTALL

components such as superheater banks, evaporators, economizers, combustion chambers and boiler piping, along with flue gas/steam, air steam and flue gas/water heat exchangers; skid oil & gas vessels.

EMERGENCY RESPONSE SERVICE

with qualified EN/ASME certified personnel, ensuring speed and professionalism to minimize plant downtime.

EXTENSIVE PRODUCT KNOWLEDGE

allows us to service any type of boiler, whether designed for steam energy production for industrial users, district heating, or incineration (biomass-waste)





Via Cremona, 1 Legnano (MI) - Italy +39 0331 926600

www.cctservice.net