

# Optimus™ Engineered Products

## Waste Heat Steaming Equipment, Packaged Economizers

*Babcock & Wilcox (B&W) Chanute's line of Optimus engineered products include custom-designed waste heat recovery and heat transfer equipment for sulfuric acid plants, thermal oxidation systems, process gas coolers, sulfur recovery and other process industries worldwide.*



### Fire-tube waste heat boilers

Fire-tube waste heat boilers recover valuable energy from hot process gases for a variety of applications including sulfuric acid plants, thermal oxidation systems, process gas coolers and sulfur recovery. With our ability to handle large and heavy vessels, we can design, manufacture and ship extraordinarily large units. Our proven design and operational standards for such things as circulation ratio, retention times, corrosion allowance, and blow-off configuration improve the life and reliability of the boiler. For high-capacity sulfuric acid plants we offer a system with two boilers operating in parallel with a common steam drum to accommodate very high-heat duty and steam production requirements.



### Water-tube waste heat boilers

Water-tube waste heat boilers recover valuable energy from hot process gases for a variety of applications including thermal oxidation systems, furnaces / incineration and process gas coolers. We optimize our customers return on investment by custom designing each boiler based on specific gas conditions and site requirements. The boilers are designed and constructed to ASME Section I or Section VIII.

B&W offers these boilers with a variety of materials and casing constructions including internally insulated and lined, refractory lined and membrane wall construction. Membrane wall construction allows for a gas tight, water-cooled, inner casing useful for high-temperature applications and corrosive gas (high SO<sub>2</sub>) applications.



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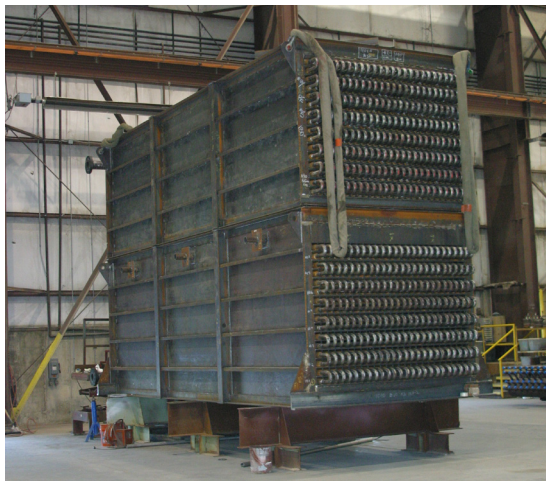
## Economizers and superheaters

Economizers and superheaters are used to recover the useful heat in exhaust or flue gas before it is released into the atmosphere and transfer it to the steam production cycle.

We offer a wide range of packaged economizers and superheaters. Each system is custom designed for the application. Whether the gas is clean burning or subject to fouling, B&W will select the proper tube configuration, metallurgy and heat transfer extended surface for the application.

We can also manufacture pendant sections for utility or power boilers, including support systems and inlet/outlet headers and associated piping.

Economizers and superheaters manufactured in our Chanute facility receive the benefit of onsite tube finning, innovative bending technology and superior pressure part welding quality.



## Sulfuric acid plant boilers

Boilers for waste heat recovery systems are a critical component to the cost-efficient operation of sulfuric acid plants. We have extensive experience integrating waste heat boilers with a plant's sulfur burner and recovery system. This includes designing and fabricating for unique operating conditions such as high gas-side pressures, caustic environments and high operating temperatures.



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Established in 1867, Babcock & Wilcox is a global leader in renewable, environmental and thermal technologies and services for power and industrial applications.

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