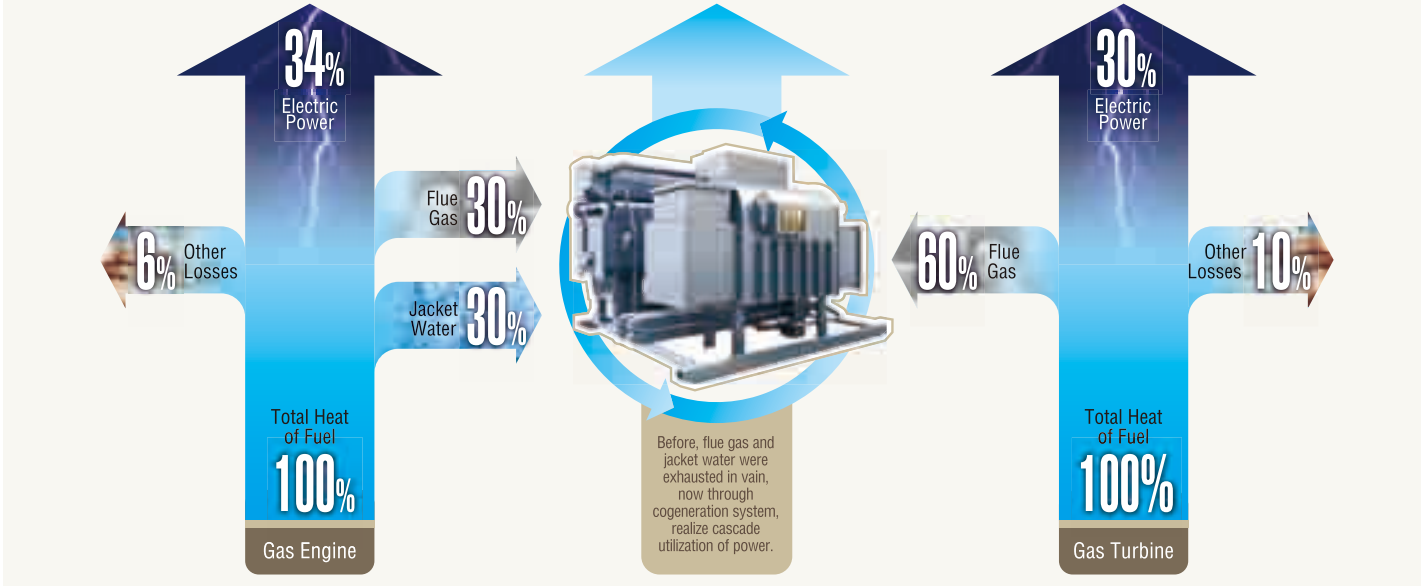
China Well-known Trade Mark
China Famous Brand

GREEN SOLUTIONS
FOR ECO-ENERGY SYSTEMS

SHUANGLIANG
ECO-ENERGY

Beijing Conference Center for 2008 Olympic Games



COGENERATION SOLUTION

Generator
2 units of Gas Engines

Chiller
2 units of 992USRT Lithium Bromide Absorption Chillers driven by both exhaust flue gas and jacket water

Iutput Power Capacity
2×521KW

Output Cooling Capacity
2×3490KW

Output Heating Capacity
7103KW

Energy Saving & Environmental Protection
Equals to save 5,633tons steam every year, save power 3MW/hour, 17,000 tons of CO_2 emission reduction

Shuangliang waste heat utilizing solution raises fuel utilizing efficiency up to

85%

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SHUANGLIANG PRODUCTS

Direct Fired
LiBr Absorption
Chiller/heater

Hot Water Operated
LiBr Absorption Chiller

Steam Operated
LiBr Absorption Chiller

ENERGY SAVING

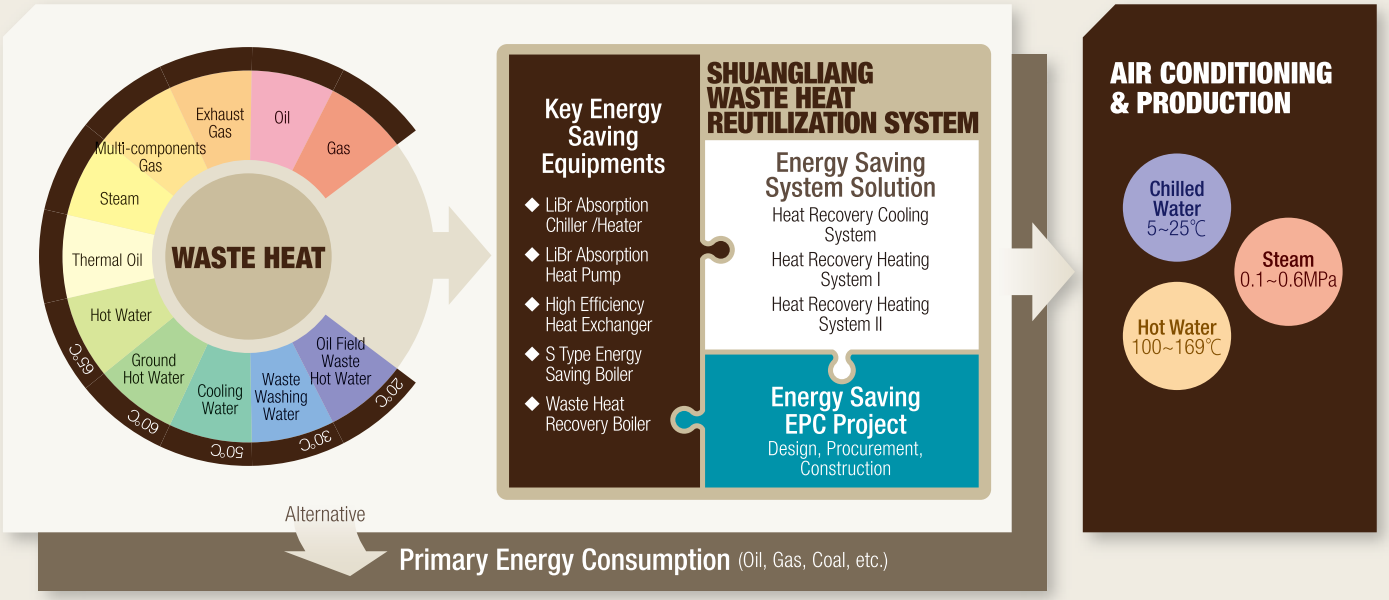
Waste heat source also can act as driving power of Lithium Bromide Absorption Chiller/Heat Pump to produce chilled water/hot water/steam, like low grade hot water, steam or exhaust flue gas, etc.
Through recovery of waste heat, realizing cascade utilization of energy, not only raise utilizing efficiency of primary energy outstandingly, but also save energy and reduce emissions greatly.

Lithium Bromide
Absorption Heat Pump

Flue Gas Operated
LiBr Absorption Chiller

FRESH WATER SAVING

Air Cooled Condenser is being adopted to replace normal U type water cooling tower in the latest trend, condensing waste steam from thermal power plant's steam turbine or air-separation plant of petro-chemical industry straight by air, helping to save huge quantity of fresh water as well as protect environment better.



FRESH WATER PRODUCING

Low Temperature Multi-effect Distillation Seawater Desalination Plant is designed to be driven by waste heat from power/steel plant/chemical plant or low temperature nuclear reactor to desalinate seawater then produce fresh water for both industrial and municipal purposes, in the meanwhile reduce consumption of primary energy and emission of green house gas.

Taking the waste heat reutilization system as the platform, Shuangliang integrates various high-efficiency and energy-saving equipments and customizes the integrated waste heat reutilization solution composed to cater for individual requirements of customers and specific resources conditions. Besides, the general contracting services integrating engineering, procurement and construction will be provided for customers.

Exhaust is not waste but wealth.

Introduction

The unused waste heat resource exists in various industries and is always discharged. According to statistics, the total waste heat resource is about 17%~67% of its total fuel consumption, 60% of which is recyclable.

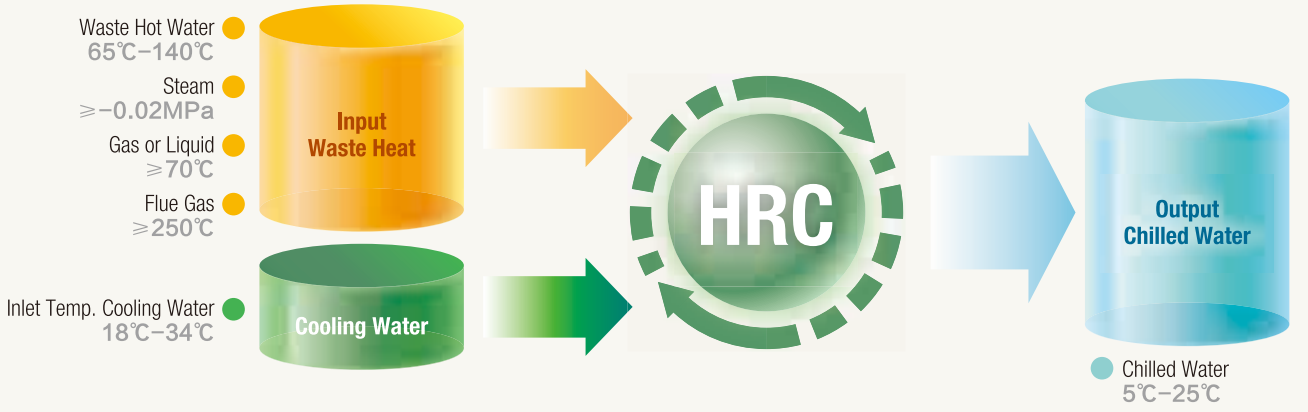
Shuangliang Waste Heat Reutilization System reutilizes waste steam, wastewater, waste residue and other media for cooling or heating, by which the energy cascade use is achieved. It realizes energy saving, efficiency improvement and environmental protection at the same time.

Applications

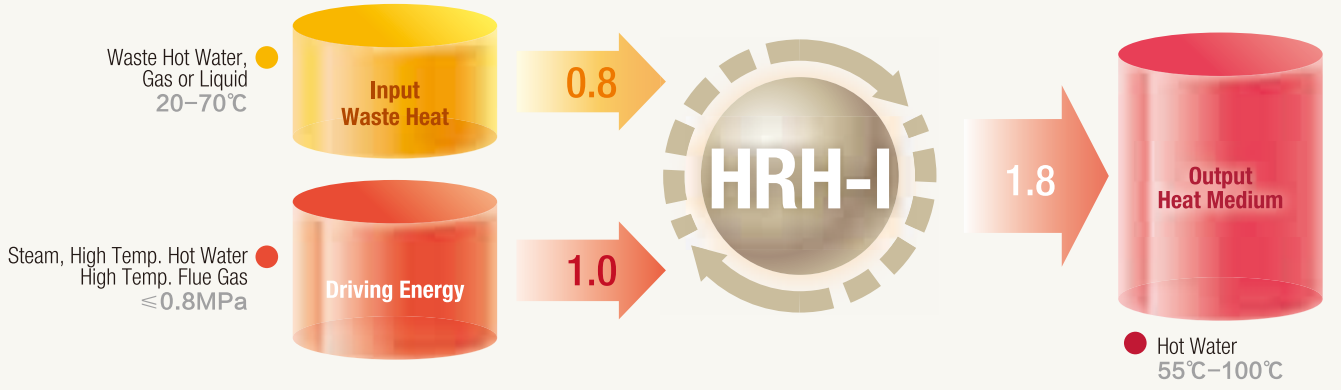
It is applicable almost for any place with waste heat, especially for high energy-consumption industries such as thermoelectricity, petroleum, textile, steel, biochemistry, metallurgy, etc.. Based on more than 300 kinds of products, the performance, reliability and automation of which have reached the international advanced level.

The wide popularization and application has not only made contributions to realizing the requirements of energy saving, emission reduction, low carbon-economy of the nation, but also brought direct economic benefits for customers. The general payback period of customers' investment is within 2 years and the shortest period is 6 months, by which energy and money saving and the win-win or even multiple-win goal are really achieved.

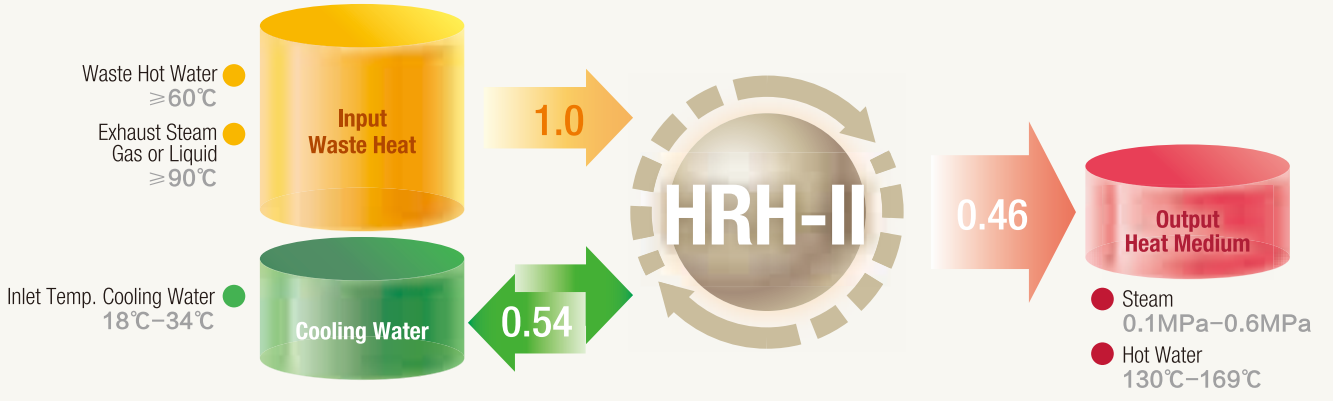
Heat Recovery Cooling System



HEAT RECOVERY HEATING SYSTEM I



Heat Recovery Heating System II



SHUANGLIANG

APPLICATIONS

With Shuangliang Waste Heat Recovery Cooling and Heating Solution, Waste Heat Will Create Wealth for You.

Industry	Petroleum and Chemical			Biochemical	Chemical	Steel	Coal Carbonization	Metallurgy
Available Waste Heat	Stripping gas from butadiene rubber coacervation furnace	Hot water changed from catalytic cracking process in oil refining	Hot water changed from hot desalting water of the 1st absorbing column of urea producing	Ethanol steam and condensed ethanol liquid from ethanol producing	Hot water changed from Hydrochloride synthetic reaction in Chlorine Alkali producing	Waste steam existed in steel factory	Coke-oven gas or hot water changed from such gas existed in coal carbonization	Evaporated water existed in aluminium oxide producing
Adopted Solution and Application Purpose	Absorption Heat Pump	Hot Water Absorption Chiller	Hot Water Absorption Chiller	Absorption Heat Pump and Hot Water Absorption Chiller	Hot Water Absorption Chiller	Steam Absorption Chiller	Direct Fired Absorption Chiller or Hot Water Absorption Chiller	Absorption Heat Pump
	Produce hot water for heating of coacervation furnace to save consumption of steam	Produce chilled water to improve absorbing column operating condition so that recover more C3 (LPG)	Produce chilled water to cool down hot carbonic propenyl ester to eliminate operation of electric chiller	Produce hot water for heating of ethanol distillation column, produce chilled water for cool down of ethanol	Produce chilled water to cool down Chlorine and Hydrochloride to eliminate operation of electric chiller	Produce chilled water to remove moisture from inlet air of iron producing blast furnace so that improve burning efficiency to reduce consumption of coke and increase output of iron	Produce chilled water to cool down gas exhausted from Coke-oven	Produce hot water for washing of Riopone

Thermal Power		Textile	Brewery	Food and Beverage	Palm Oil	Pulp Mill	Cooling, Heating and Power (Trigenaration)	Solar Heating/Geothermal
Cooling water of thermal power plant	Exhaust flue gas from gas turbine/engine or steam from waste heat recovery boiler of Gas and Steam Combined Cycle	Esterified steam from glycol separation tower	Saccharify steam from beer producing	Hot milk after pasteurization	Biogas or steam made from waste palm tree and shell	Steam made from waste product-bark and chips	Flue gas exhausted from gas engine/turbine	Hot Water and Steam changed from solar/geothermal
Absorption Heat Pump	Flue Gas Absorption Chiller or Steam Absorption Chiller	Steam Absorption Chiller	Steam Absorption Chiller	Absorption Heat Pump	Direct Fired Absorption Chiller or Steam Absorption Chiller	Steam Absorption Chiller	Flue gas exhausted from gas engine/turbine	Hot Water Absorption Chiller or Steam Absorption Chiller
Produce hot water for winter heating	Produce chilled water to precool inlet air of gas turbine/engine so that reduce fuel consumption and increase power output	Produce chilled water for spinning	Produce chilled water to cool down hot wheat juice	Produce hot water for pasteurization	Produce chilled water for palm oil refining	Produce chilled water for pulp mill	Produce chilled water/hot water for district cooling/heating	Produce chilled water for air conditioning

GREEN HEART, GREEN FUTURE

SHUANGLIANG
WASTE HEAT
RECOVERY
COOLING
& HEATING
SOLUTIONS LEAD
WASTE HEAT
TO SOURCE OF
WEALTH AND
GREEN.

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