Heat recovery type burner

STB burner

STB-10,20

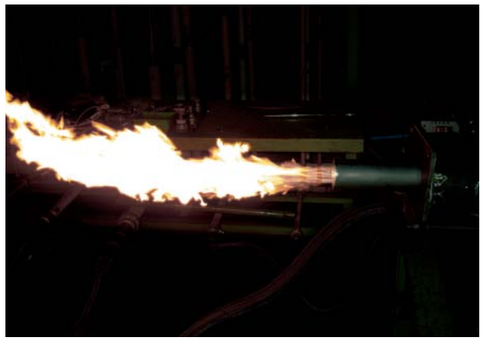
Self-recuperative burner with high fuel economy and low cost

Feature

Regenerative burners, which are in the spotlight, are extremely large investments because they use special mechanisms and expensive parts.In industrial furnaces with large combustion consumption, fuel savings are large and investment collection can also be expected, but for facilities with small combustion volume, it takes a very long time until the effect is obtained.

1. The STB burner is somewhat inferior in capacity from 25 to 40% (*) against "fuel saving efficiency (about 40 to 50%)" of regenerative burner.However, since the burner is inexpensive, if energy saving repair of the furnace is carried out at the same time as replacing the conventional burner with STB, energy saving rate can be further improved and recovery in a short period becomes possible.
   (*) Efficiency varies depending on the conditions of the furnace installed.
2. Built-in heat-resistant metal heat exchanger. Continuous use is possible even under harsh conditions such as dust.
3. Ladle heating and others can be burned in a sealed condition, so environmental aspects such as noise and ambient temperature are greatly improved.
4. Because combustion air is preheated, it is reliable fuel saving.
5. With self-exhaust gas recovery ducts on the furnace body side are unnecessary.

●火　炎



Main Usage

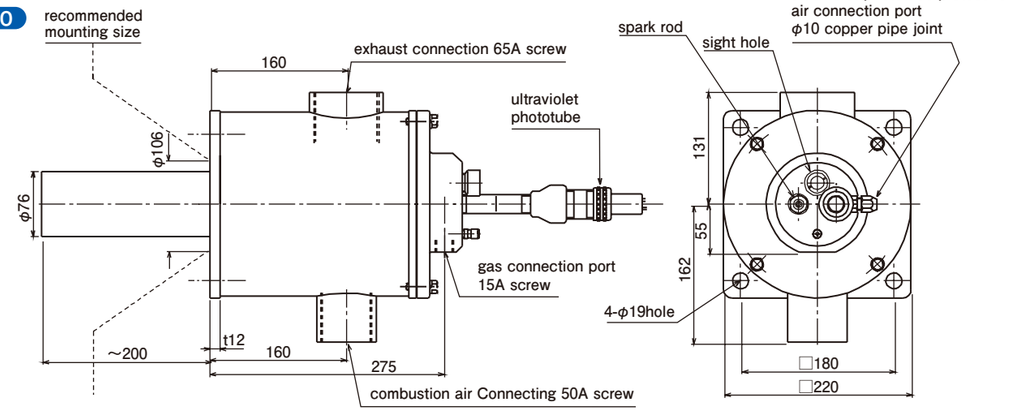
- Ladle heating, drying and heat-up of ladle.
- Metal melting · crucible furnace, holding furnace.

Specifications

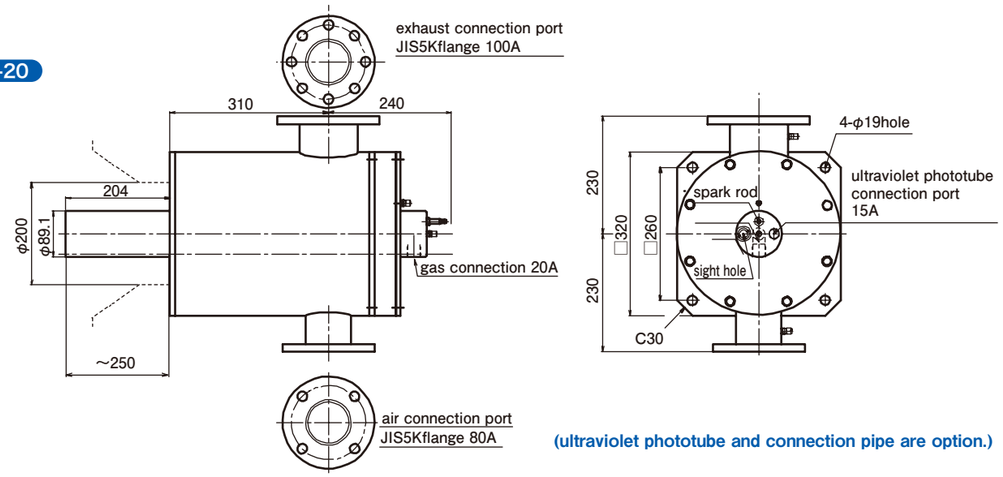
model	STB-10	STB-20
maximum combustion capacity (kW)	116	232

Overall size

» STB-10

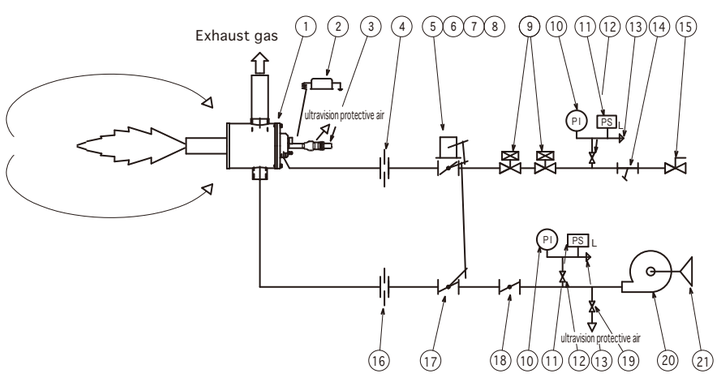


» STB-20



(ultraviolet phototube and connection pipe are option.)

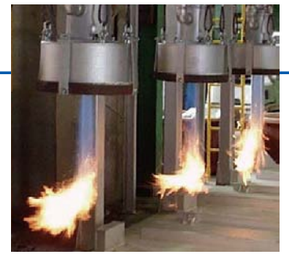
Example of flow sheet



number	name	number	name
1	STB burner	11	pressure switch
2	ignition transformer	12	ball cock
3	ultravision	13	inspection tube
4	orifice meter	14	strainer
5	control motor	15	ball cock
6	proportional valve	16	orifice meter
7	linkage set	17	control butterfly valve
8	motor plate	18	butterfly valve
9	solenoid valve	19	needle valve
10	pressure gauge	20	blower
		21	filter

Delivery example

Ladle heating

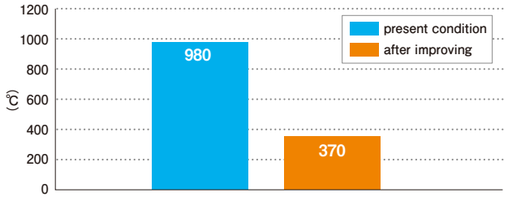


1 The efficiency of energy saving after improving

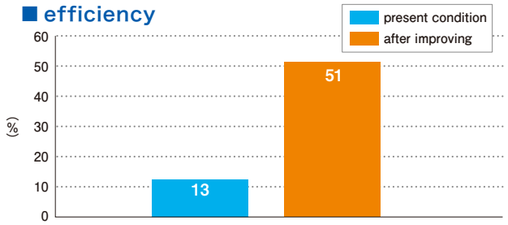
Specification

fuel	13A(45MJ/Nm³)	before improving	premixing type ladle heating burner
object	Desulfurized ladle for cast iron	after improving	STB-10 burner

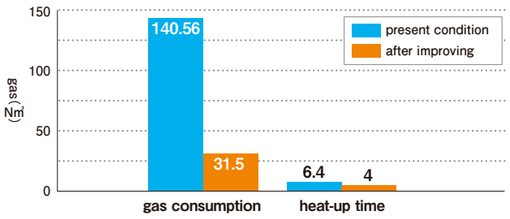
■ exhaust gas temperature



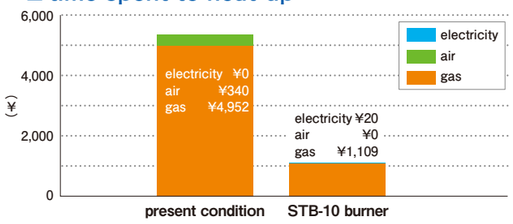
■ efficiency



■ Exhaust gas usage and time



■ time spent to heat-up

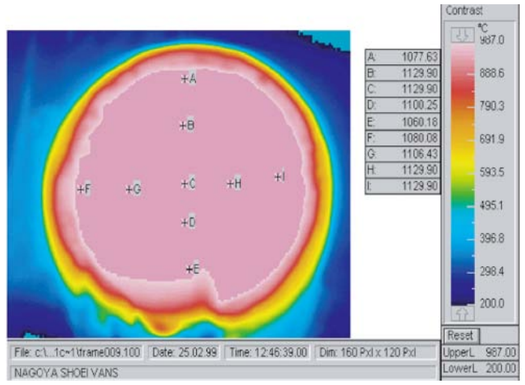


2 heat-up speeds and temperature distribution after improving

Specification

fuel	13A(45MJ/Nm³)	after improving	STB-10 burner two STB burners used (232kW)
object	2ton/ch Ladle for cast iron		

■ Inside temperature of the ladle after heating for 2 hours.



■ heat-up curve

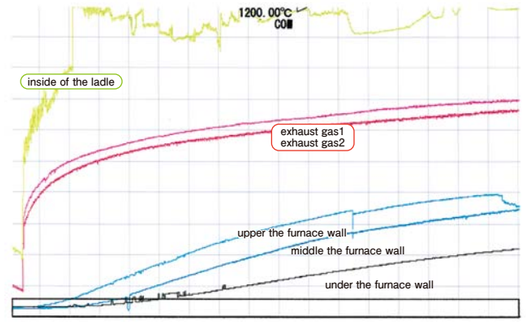


chart speed 10min/1cell(square)

Handling Precautions

Matching with the furnace body will greatly affect efficiency, so please be sure to consult with us beforehand.