Nomenclature

C_g	specific heat of the exhaust gas	kJ/（kg K）
e	specific exergy	kJ/kg
E	available exergy	kW
ΔE	exergy loss	kW
h	specific enthalpy	kJ/kg
$\dot{m}$	mass flow	kg/h
NCR	Normal Continuous Rating	kW
p	pressure	MPa
PP	pinch point	K
$\dot{Q}_{need}$	the needed heat to preheat the organic fluid	kW
s	specific entropy	kJ/（kg K）
SFOC	specific fuel oil consumption	g/（kW h）
SMCR	Specified Maximum Continuous Rating	kW
T	temperature	K
W	work output	kW

Greek symbols

η	efficiency
η_B	exhaust gas boiler efficiency considering the radiation loss
η_{hr}	heat recovery efficiency
η_{pp}	pump efficiency
η_s	turbine isentropic efficiency

Subscripts

amb	ambient air
back	back pressure of steam turbine
B	exhaust gas boiler
B_1	part of saturated water from the boiler
C	condenser
exh	exhaust gas
exh,B	exhaust gas boiler
exh,in	exhaust gas at boiler inlet
exh,out	exhaust gas at boiler outlet
ex	exit
g1	exhaust gas at superheater inlet
g2	exhaust gas at evaporator inlet
g3	exhaust gas at economizer inlet
g4	exhaust gas at economizer outlet
heating	heating service onboard
hw	hot well
net	net electric power of waste heat recovery system
ORC	ORC system
pp	working fluid pump
pre	preheater
sat	saturated
sh	superheated
sup	superheated
T	steam turbine
0	reference state
1	superheater outlet state
2	expander outlet state
2_s	expander outlet isentropic state
3	saturated liquid state at condensing pressure
3'	saturated steam state at condensing pressure
4	condenser outlet state
5	pump outlet state

Superscripts

‘	saturated steam
‘‘	saturated water