

Replacement of gas turbine etc. at Yokohama Thermal Power Station

1. Outline of Yokohama Thermal Power Station

(1) Location: 11-1, Daikoku-cho, Tsurumi-ku, Yokohama City

(2) Plant chief: Kiyoshi Murayama

(3) Site area: Approx. 440 thousand m²

(4) Output: 3352 MW

(5) Facility overview

Unit	Overview	
5	Output	175 MW
	Generation system	Steam power generation
	Heat efficiency	41.6% (lower heating value base)
	Fuel	LNG (Liquefied natural gas)
	Operation start	March 1964
6	Output	350 MW
	Generation system	Steam power generation
	Heat efficiency	42.2% (lower heating value base)
	Fuel	LNG (Liquefied natural gas)
	Operation start	June 1968
Group 7	Output	1427 MW (350 MW * 3 units, 377 MW * 1 unit)
	Generation system	1300°C advanced combined cycle
	Heat efficiency	Units 7-1,3,4 : 54.1% Units 7-2 : 55.8%
	Fuel	LNG (Liquefied natural gas)
	Operation start	January 1998 (All units started operation) July 2015 Replacement of gas turbine at Unit 7-2
Group 8	Output	1400 MW(350 MW * 4 units)
	Generation system	1300°C advanced combined cycle
	Heat efficiency	54.1%
	Fuel	LNG (Liquefied natural gas)
	Operation start	January 1998 (All units started operation)

*Units 1 to 4 abolished.

2. Gas turbine replacement plan of Group 7 and 8

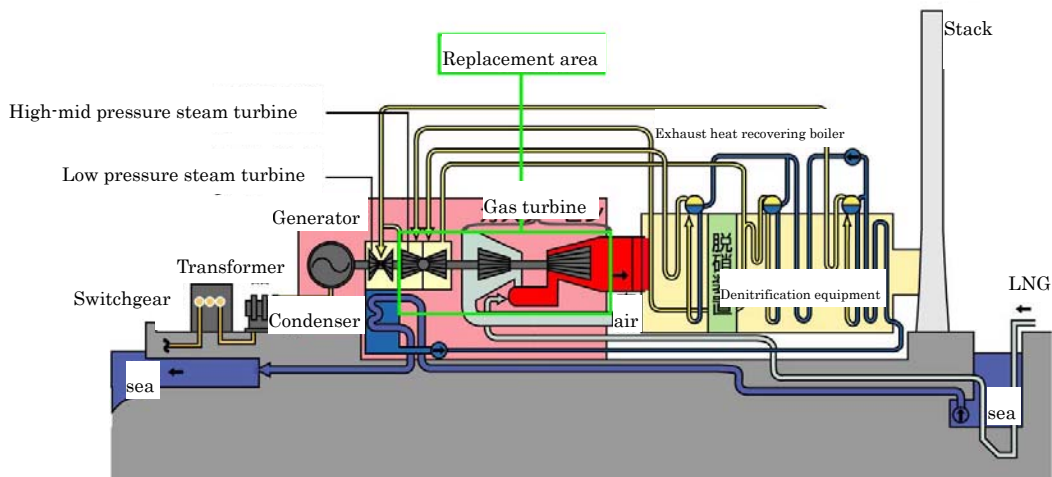
	Yokohama Thermal Power Station Group 7				Yokohama Thermal Power Station Group 8			
	Unit 1	Unit 2	Unit 3	Unit 4	Unit 1	Unit 2	Unit 3	Unit 4
Rated output	350 MW to 377 MW each Total 4 units 1508 MW				350 MW to 377 MW each Total 4 units 1508 MW			
Operation start	January 1998				January 1998			
Designed heat efficiency (LHV)	54.1% to 55.8%				54.1% to 55.8%			
Type of generation	LNG (ACC)				LNG (ACC)			
Start of operation	Jul. 2016	Jul. 2015	Jul. 2017	Jan. 2017	Apr. 2017	Jan. 2018	Jan. 2016	Apr. 2016

3. Gas turbine replacement plan

For the purpose of improving generating efficiency and output, the gas turbine and the high-mid pressure steam turbine is replaced.

Existing exhaust heat recovering boiler, low pressure steam turbine, generator, and auxiliary machine will be continued to be used.

<Replacement area>



<Replacement of Group 7 Unit 2 gas turbine>



Lifting new gas turbine



Lifting rotor of new gas turbine



Gas turbine disassembly work