Outline of Kawasaki Thermal Power Station

- 1. Outline of power station
 - (1) Address: Chidori-cho 5-1, Kawasaki-ku, Kawasaki-shi
 - (2) Plant Chief: Hiroshi Sato
 - (3) Site Area: Approx. 280km²
 - (4) Output and generation efficiency:
 - Unit 1 at Group 1 Output: 500MW, Generation efficiency: approx. 59%, MACC
 - Unit 2 at Group 1 Output: 500MW, Generation efficiency: approx. 59%, MACC
 - Unit 3 at Group 1 Output: 500MW, Generation efficiency: approx. 59%, MACC
 - Unit 1 at Group 2 Output: 500MW, Generation efficiency: approx. 59%, MACC
 - Unit 2 at Group 2 Output: 710MW, Generation efficiency: approx. 61%, MACC II
 - Unit 3 at Group 2 Output: 710MW, Generation efficiency: approx. 61%, MACC II
 - (5) Fuel: LNG (Liquefied natural gas)
 - (6) Outline of Unit 3 equipment at Group 2:
 - Power generation system: 1,600°C-class combined cycle power generation (MACC II)
 - Thermal efficiency: Approx. 61% (lower heating value)*
 - Gas turbine: Open and simple cycle uniaxial type
 - Air compressor: Axial compressor
 - Exhaust heat recovery boiler: Natural circulation type with exhaust heat recovery and triple pressure reheat systems
 - Steam turbine: Reheat and combined pressure condensation type with single current exhaust system
 - Starter: Thyristor starting method
 - Generator: Horizontal cylindrical revolving field type three-phase AC synchronous generator
 - Smoke treatment equipment:
 - Fuel gas NOx equipment: Dry ammonia catalytic reduction method

Chimney: 85m, three cylinders assembly type

*Currently, rated output has been reduced from 710MW to 685MW and generation efficiency from approx. 61% to approx. 59% when comparing with the original design. This is due to emergency construction work based on another company's defective steam turbine.

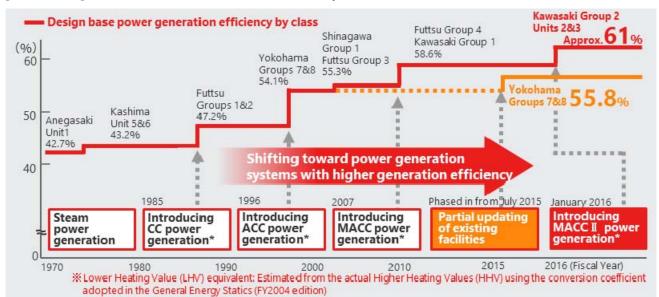
2. History of Construction

July 1961	Unit 1 (output: 175MW, Fuel: Coal)		Started operation
November 1968	Units 1 to 6 (Total output:	1,050MW, Fuel: Coal)	Started operation
August 1996	Groups 1 and 2	Construction plan was announced	
August 18, 1999	Group 1	Construction plan was approved	
October 1, 1999	Group 1	Started construction	
March 27, 2006	Units 1 to 6	Terminated	
June 15, 2007	Unit 3 at Group 1	Started operation	
June 4, 2008	Unit 2 at Group 1	Started operation	
February 5, 2009	Unit 1 at Group 1	Started operation	
July 1, 2009	Unit 1 at Group 2	Notification of construction	on plan
October 6, 2009	Unit 1 at Group 2	Started construction	
January 17, 2013	Units 2 and 3 at Group 2	Notification of construction	on plan
February 1, 2013	Unit 1 at Group 2	Started operation	
March 1, 2013	Unit 2 and 3 at Group 3	Started construction	
January 21, 2016	Unit 3 at Group 2	Started test operation (fi	rst parallel)
January 29, 2016	Unit 2 at Group 2	Started operation	
June 29, 2016	Unit 3 at Group 2	Started operation	

3. Panoramic view of Power Station



(Photographed on February 2016)



[Reference] Transition of Generation Efficiency