

## Installation of an Additional Flue and Smoke Tube Boiler. This boiler features Japan's Largest Capacity

In response to increased heating demand arising from development in the district, MM21 DHC added another 36t/h flue and smoke tube boiler, which is the largest capacity boiler of its kind in Japan. The additional boiler was installed in the No. 2 Plant in December 2019.

The boiler is the same type as that installed in 2010 and another in 2014. This third boiler was installed for greater utilization of the limited equipment space.

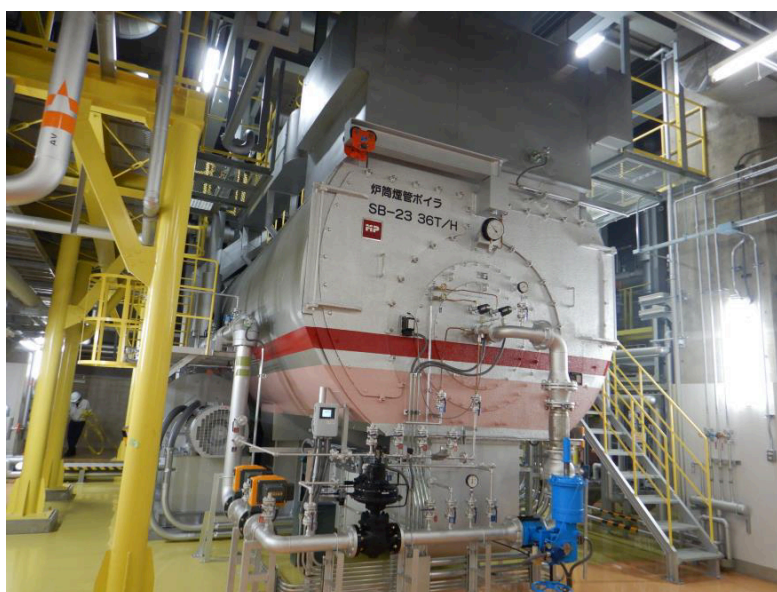
Going forward, MM21 DHC will continue to enhance equipment in step with development in the district and further increase the stability of heat supply.

Table: Specifications of the Flue and Smoke Tube Boilers

	No. 2 Plant New equipment	No. 2 Plant Existing equipment	Central Plant Existing equipment		
	Boiler capacity	36.0 t/h	36.0 t/h	15.0 t/h	24.0 t/h
Number of installed units	1	2	1	1	1
Boiler efficiency (Including the amount recovered by the economizer)	93% or more	93% or more	92% or more		
Year installed	2019	2010 2014	1993	1988	

\* Ratio of heat absorption of steam generated in relation to the total calorific value of the fuel supplied to the boiler

$$\text{Boiler efficiency} = \frac{\text{Generating capacity} \times (\text{Heat contained in steam} - \text{Heat present in feed water})}{\text{Fuel consumption} \times \text{Calorific value of fuel}} \times 100$$



*The additional 36 t/h flue and smoke tube boiler installed in the No. 2 Plant in December 2019,  
the largest capacity boiler of its kind currently operating in Japan*