

The First Commercial-Use Gas Turbine

Registration No.	Number 00146		
Registration Date	September 2, 2014	Registration Category	Category 2

Name (Model, etc.)	MW-171 Gas Turbine (MW-171G)
Location	Takasago-shi, Hyogo
	Mitsubishi Heavy Industries, Ltd. Takasago Machinery Works
Owner (Custodian)	Mitsubishi Heavy Industries, Ltd. Takasago Machinery Works
Manufacturer (Company)	Shin Mitsubishi Heavy Industries, Ltd. (Currently: Mitsubishi Heavy Industries, Ltd.)
Year Manufactured	1963
Year first appeared	1963
Reason For Selection	The first commercial-use gas turbine manufactured by Shin Mitsubishi Heavy Industries, Ltd. (Currently: Mitsubishi Hitachi Power Systems, Ltd.) under the technical license agreement with Westinghouse Electric Corporation, USA. Supplied to Chiba Plant of Aasahi Glass Co., Ltd. in 1963. At 12,000kW it was the most powerful open cycle gas turbine in Japan at the time. It ran for more than 250,000 hours over the next four decades and retired in 2000. Bunker C oil and natural gas were used to keep power generation costs down, while the design laid the way for future cogeneration facility with characteristics such as having a turbine inlet temperature of around 730 °C and equipping with the heat recovery steam generator. Since it burned Bunker C oil, which contains a lot of ingredients that cause smoke and particulate matter, as well as ingredients that cause high temperature corrosion of hot parts, efforts were made to develop combustion technology and turbine blade corrosion inhibiting technology; these initiatives formed the basis for Japan's independent development of gas turbine technology and led to the development of large-capacity gas turbine for combined cycle applications.
Registration Standard	1-A (Show an important aspect or stage of the development of science and technology.)

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Other useful information	