

#### Access

##### Kure First Plant

6-9 Takara-machi, Kure-shi, Hiroshima 737-8508, Japan Phone: +81-823-21-1161

[By train/bus] Take the JR Kure Line to Kure Station. About 4 minutes on foot  
About 60 minutes by bus from Hiroshima Airport to Kure Station

##### Kure Second Plant

10-1 Showa-cho, Kure-shi, Hiroshima 737-0027, Japan Phone: +81-823-21-7236

[By train/taxi] Take the JR Kure Line to Kure Station. About 10 minutes by taxi

##### Akitsu Plant

3300 Kazahaya Akitsu-cho, Higashi Hiroshima-shi, Hiroshima 739-2403, Japan Phone: +81-846-45-4225

[By train/taxi] Take the JR Kure Line to Akitsu Station. About 4 minutes by taxi  
About 20 minutes by taxi from JR Higashi-Hiroshima Station (Sanyo Shinkansen)  
About 40 minutes from Hiroshima Airport by taxi

# KURE WORKS



## KURE SINCE 1959

### Contributing to Society through Energy and Environmental Technologies

Kure Works was established in 1959 as a boiler manufacturer, that provides energy and environmental conservation solutions, including but not limited to: thermal power generation boilers, flue gas desulfurization (FGD) systems and selective catalyst reduction (SCR) systems. Currently, new technologies related to integrated coal gasification combined cycle (IGCC), low-grade coal combustion and CO<sub>2</sub> capture are in development.

#### Area

246,451 m<sup>2</sup>(Site) 81,050 m<sup>2</sup>(Building)

#### International Certifications

- ISO 9001 Quality Management System
- ISO 14001 Environmental Management System

#### Annual Production Capacity

Boilers  
2,300 MW

#### Brief History

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| <p><b>1958</b> The acquisition of former naval arsenal premises through government privatization initiated the construction of the first factory works.</p> <p><b>1959</b> Kure branch factory of Hitachi, Ltd. established.</p> <p><b>1961</b> Kure factory of Hitachi, Ltd. established.</p> <p><b>1964</b> Kure factory became independent as Hitachi Boiler Ltd.</p> <p><b>1965</b> Hitachi Boiler Ltd. and Babcock-Hitachi K.K. merged to form Babcock-Hitachi K.K. (Hitachi 85%, UK B&amp;W 15%)</p> <p><b>1987</b> Hitachi financing increased to 100%.<br/>Akitsu Plant established.</p> <p><b>1989</b> Philippines factory (currently Mitsubishi Power (Philippines) Inc.) established.</p> | <p><b>1999</b> Kure factory renamed Kure Works.</p> <p><b>2011</b> China Catalyst Works (currently Mitsubishi Power (Hangzhou) Environmental Equipment Co., Ltd.) established.</p> <p><b>2014</b> Mitsubishi Hitachi Power Systems, Ltd., a joint venture company formed by Mitsubishi Heavy Industries and Hitachi integrating thermal power generation systems and other related businesses, established. Mitsubishi Hitachi Power Systems and Babcock-Hitachi K.K. merged to form Mitsubishi Hitachi Power Systems' Kure Works.</p> <p><b>2020</b> Established Mitsubishi Power, Ltd.<br/>Mitsubishi Power's Kure Works was formed as a result.</p> |
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Mitsubishi Power, Ltd.

power.mhi.com

MP43-06CC04E1-A-0, (3.0)20-9, ZTP



# KURE WORKS

## Main Products



1,050 MW Coal-Fired Once-Through Boiler



Integrated Coal Gasification Combined Cycle Gasifier



FGD (Flue Gas Desulfurization Plant for Coal-Fired Boiler [1,000 MW]) Wet Limestone-Gypsum Process

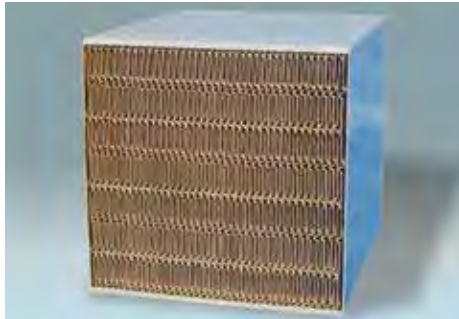


Plate Type SCR (Selective Catalytic Reduction) Catalyst

## Main Production Facilities



High-Frequency Pipe Bender



Pressure Vessel Hydrostatic Test Pit

## Outline



- |                 |                              |                                |                             |                            |
|-----------------|------------------------------|--------------------------------|-----------------------------|----------------------------|
| 1 Main Gate     | 4 Bending Roll Factory       | 7 Panel Factory                | 10 Pipe Factory             | 13 Gymnasium and Cafeteria |
| 2 Design Office | 5 Module Yard                | 8 Equipment and Header Factory | 11 First Test Site          |                            |
| 3 Main Building | 6 Assembly and Panel Factory | 9 Coil Factory                 | 12 Combustion Test Facility |                            |

## Kure First Plant

The Kure First Plant is located in Kure City, a city that has a culture of diverse scientific technologies including shipbuilding and steel manufacturing that were and are the cornerstones of Japan's modernization, whose history stretches back to the Meiji era. Facing the Seto Inland Sea and located close to JR Kure Station and Kure Central Pier Terminal, the First Plant is easily accessible on foot. Boilers and other core products are designed and manufactured here.



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| 14 Equipment, Components and Pressure Vessel Factory |
| 15 Equipment Factory                                 |
| 16 Press Factory                                     |
| 17 Jetty Crane                                       |

## Kure Second Plant

Located 10 minutes by car from the Kure First Plant, the Kure Second Plant manufactures pressure vessels, drums and other heavy components. The Plant houses a pit (diameter: 18 m, depth: 21 m), which was used to assemble gun turrets for battleships *Yamato* and *Musashi*, and is still used for manufacturing and testing pressure vessels.



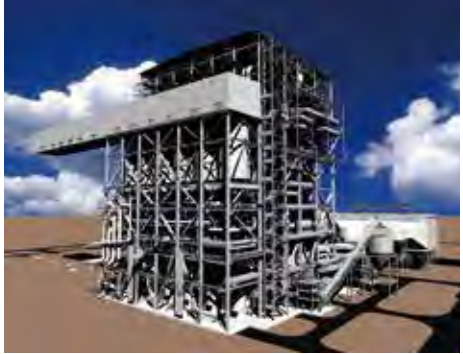
- |                                 |
|---------------------------------|
| 18 Main Gate                    |
| 19 Office                       |
| 20 Catalyst Fabrication Factory |
| 21 R&D Department               |
| 22 Large Scale Test Facilities  |
| 23 AQCS Testing Site            |

## Akitsu Plant

The Akitsu Plant's main operation is the manufacture of selective catalytic reduction (SCR) catalysts. It has facilities covering environmental research and development through to production.

## Design Using 3D Digital Model

The Kure Works delivers worldwide a high number of large-scale, high temperature, high pressure boilers that boast high efficiency and exceptional environmental performance. In order to achieve advanced performance and reliability as well as to respond to diverse customer needs, we realize optimal plant design, production and construction through state-of-the-art 3D digital design technology that combines such features as 3D CAD, CAE (analysis) and a 3D viewer. We are currently striving to shorten the construction period and enhance quality.



## Air Quality Control Systems (AQCS)

Mitsubishi Power has established air pollutant removal techniques for nitrogen oxides (NOx), sulfur dioxide (SO<sub>2</sub>) and dust in gasses emitted during combustion. The practical application of an AQCS combines a selective catalytic reduction (SCR) system, an electrostatic precipitator (ESP) and a flue gas desulfurization (FGD) system in combination with boiler combustion, that guarantees clean power generation in compliance with world most stringent environmental regulations.

