At the Kure Works Akitsu Plant, We Manufacture Products that Protect the Environment.

Research and Development

- We develop new catalysts and DeNOx technologies, evaluate overall performance of DeNOx plants by use of aged deterioration diagnosis of previously delivered catalysts, and develop and evaluate DeSOx technologies in-house.
- We build optimal flue gas treatment systems for total removal of NOx, dust, and SOx.

■ Pilot Scale Test Facility







Plant for Total System of Combustion & Flue Gas Treatment



Central Operation Room

■ DeNOx Catalyst Test Laboratory

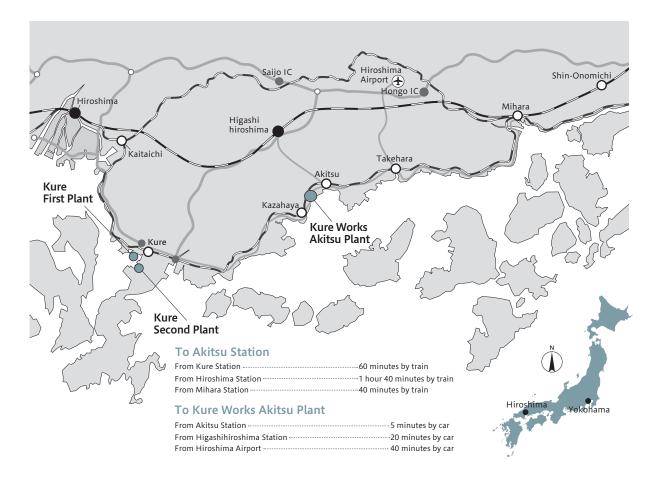


talyst Analysis Facility Cataly



Catalyst Durability Evaluation Apparatus

Kure Works Akitsu Plant Map





China Catalyst Works (MHHE)

Mitsubishi Power, Ltd.

power.mhi.com/jp

Head Office: 3-1, Minatomirai 3-chome, Nishi-ku, Yokohama, Kanagawa, 220-8401, Japan Phone: +81-45-200-6100

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

Kure Works Akitsu Plant: 3300, Kazahaya, Akitsu-cho, Higashihiroshima City, Hiroshima, 739-2403, Japan Phone: +81-846-45-4225

MITSUBISHI POWER

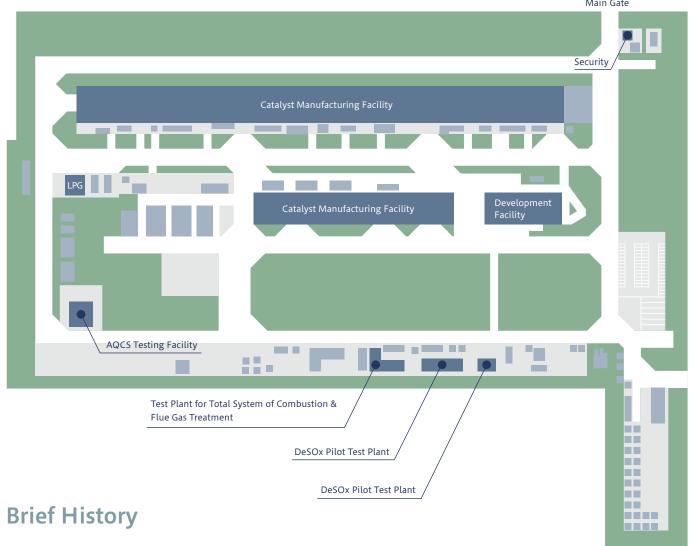
KURE WORKS Akitsu Area



KURE WORKS Akitsu Area

Mitsubishi Power's Kure Works Akitsu Plant delivers many products throughout Japan, as well as to the United States, and other countries across Europe and Asia.

Plant Layout



1976 DeNOx catalyst production started at Kure Works, Babcock-Hitachi, K.K.

1987 Akitsu Branch, Kure Works, Babcock-Hitachi, K.K. established.

August 1988 Akitsu Office, Kure Research Laboratory, Babcock-Hitachi, K.K. established.

October 2014 Mitsubishi Hitachi Power Systems, Ltd. and Babcock-Hitachi, K.K. merged to

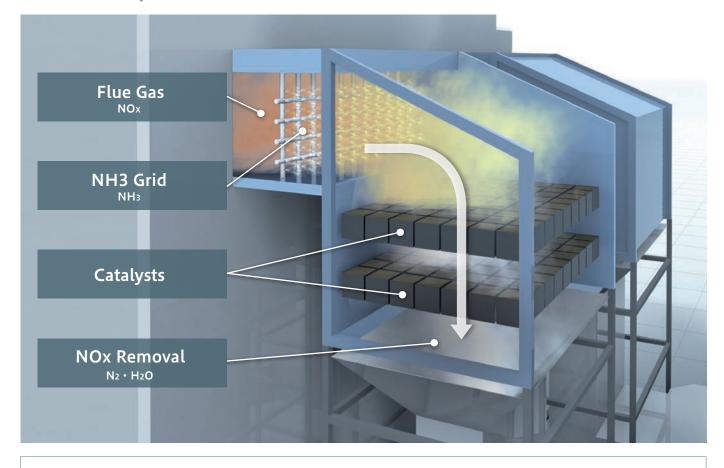
form Kure Works Akitsu Plant, Mitsubishi Hitachi Power Systems, Ltd.

September 2020 Name changed to Mitsubishi Power, Ltd.

Features of Kure Works Akitsu Plant

- Highly productive catalyst production, with the latest equipment
- Strong development capabilities with on-site development department
- Protects the environment by observing anti-pollution measures
- Rich natural environment with wild birds living on site, due to the promotion of tree planting

Basic Principle of NOx Removal

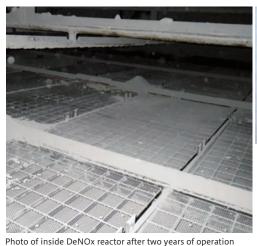


DeNOx Chemical Reactions

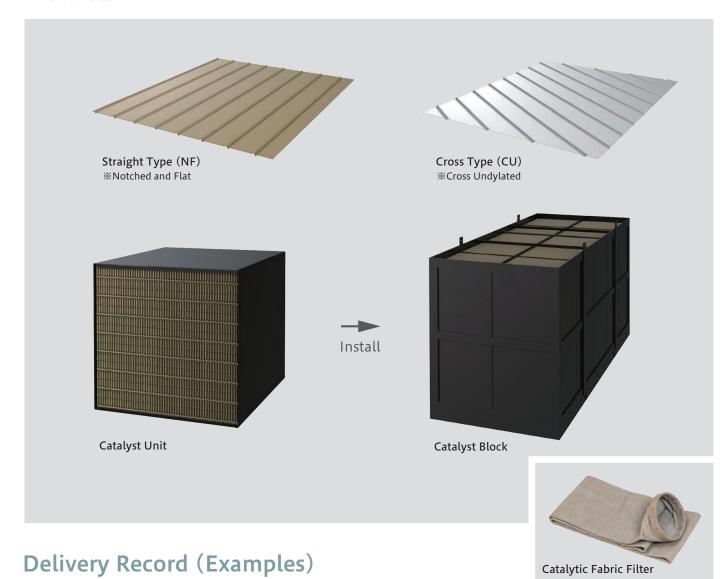
 $4N0 + 4NH_3 + 0_2 \rightarrow 4N_2 + 6H_20$ 4N0 + 4NH₃ + O₂ → $6NO_2 + 8NH_3 \rightarrow 6NO_2 + 8NH_3 \rightarrow 7N_2 + 12H_2O$

Special Features of Plate Type Catalyst

- (1) High activity and long life
- (2) Low pressure loss
- (3) High resistance against erosion and plugging
- (4) Multilayer catalyst stacking capability for compact reactor
- (5) Easy handling due to shock resistance and high strength
- (6) High quality catalyst due to our automated manufacturing facility



Products



■DeNOx Plant (Reactor)



Year delivered: 2012 / 2013

Year delivered: 2010







- (1) **Delivered to:** Chubu Electric Power Co, Inc. (Domestic) **Plant:** Joetsu Thermal Power Station Units 1-1 and 1-2 Fuel: Natural gas Generating capacity: 1.19 million kW
- (2) Delivered to: Empresa Electrica Guacolda S.A (Chile) Plant: Guacolda Ünit 4 Fuel: Coal Generating capacity: 150,000 kW
- Generating capacity: 2.20 million kW
- (4) **Delivered to:** Zhejiang Guohua Zheneng PowerGeneration Co.,Ltd. (China) **Plant:** Ninghai Unit 4 Fuel: Coal Generating capacity: 600,000 kW Year delivered: 2006