

Challenge for Carbon Neutrality

-Toward the realization of a CO2-free hydrogen supply chain

October 2024

Motoko Daimon

Kawasaki Heavy Industries, Ltd.



Introducing Kawasaki Heavy Industries

130 year-old heavy construction company

Ship & Offshore Structure



Rolling Stock



Aerospace Systems



Energy Solution
Plant Engineering



Motorcycle & Engine



Precision Machinery & Robot

Vision for Hydrogen Supply Chains

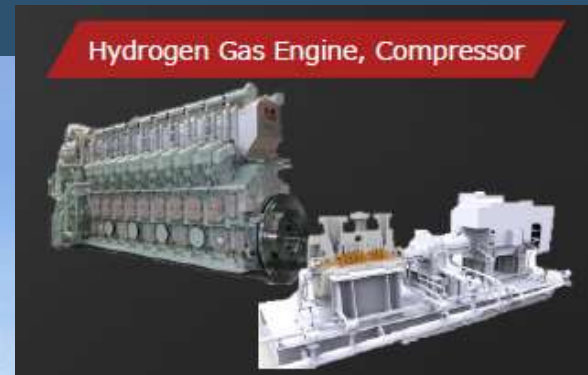
Stable energy supply while reducing CO2 emissions



Hydrogen Gas Turbine CHP* at Kobe Port Island

*CHP: Combined heat and power

Started power generation by hydrogen combustion in 2018



Supported by NEDO
NEDO : New Energy and Industrial Technology Development Organization

International hydrogen supply chain: completed pilot demonstration

February 2022

World's First International Liquefied Hydrogen Transportation Liquefied hydrogen carrier 'SUISEI FRONTIER'



Reduce hydrogen costs by increasing the size of equipment

«Suiso Frontier»: 1 250 м³



X 128

Коммерческий масштаб: 4 резервуара × 40 000 м³



Резервуар для жидкого водорода: 2 500 м³



X 20~



Expanding hydrogen fuel to Marine and Aviation



Development of Hydrogen-Fueled Vessel Propulsion System * 1

Complete lineup for various applications by around 2026



Hydrogen Aircraft Core Technology Development Project* 2

Promote development in anticipation of full-scale launch after 2035



Hydrogen Engine Motorcycle

*1 NEDO Green Innovation Fund Project "Development of a Hydrogen Fuel Ship Propulsion System" (about 21.9 billion yen in subsidies) (Yanmar Power Technologies to be Adopted in Consortium with Japan Engine Corporation)

*2 NEDO Green Innovation Fund Project "Core Technology Development for Hydrogen Aircraft" (grant: about 18 billion yen)

Our DAC business

Large-Scale DAC ready around 2025

KHI promotes
CO₂ capture business from the atmosphere
through large-scale DAC facilities (Approx.
500,000 - 1 million t - CO₂ / year)

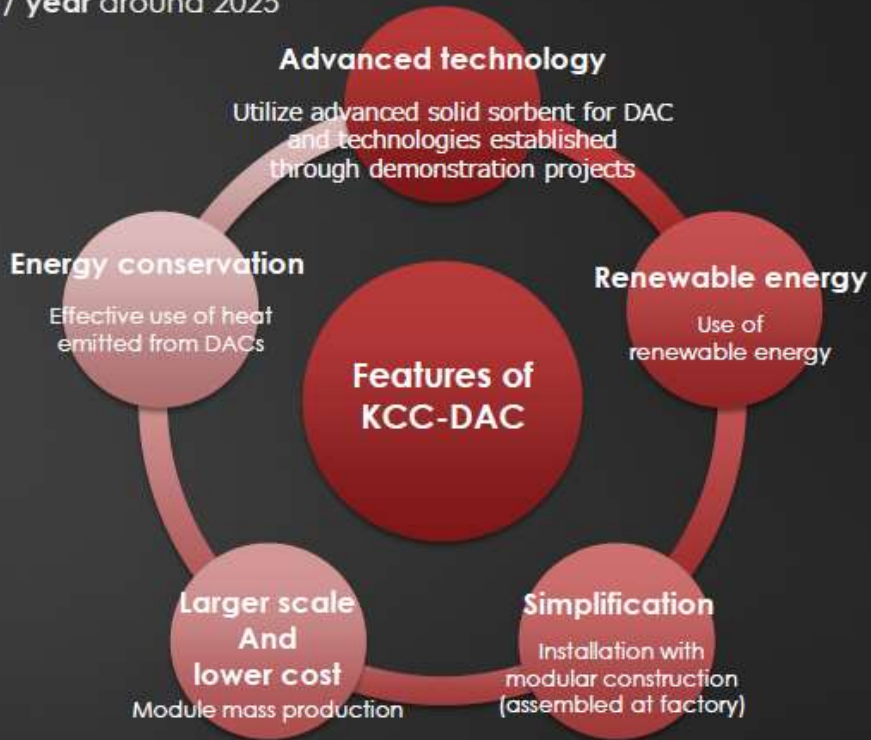
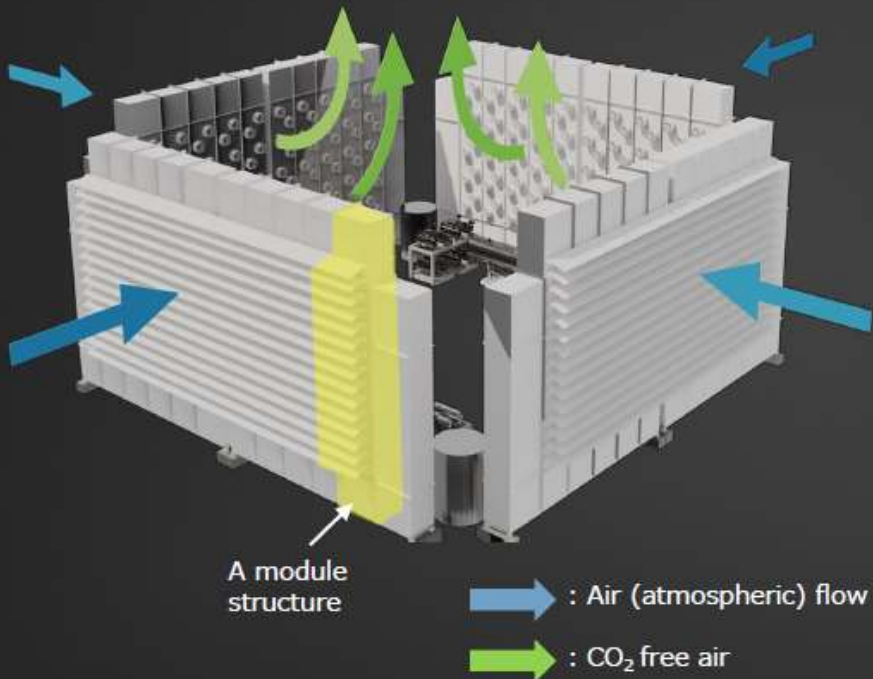
Respond to contacts from energy companies

DAC image of 1 million t - CO₂ / year



Toward large-Scale DAC ready

- Demonstration of facilities of **Approx. 20,000 t - CO₂ / year** around 2025





Powering your potential