

Kawasaki's 1.8 MW Dry Hydrogen Gas Turbine, GPB17MMX, Wins "Hydrogen Technology of the Year 2024" Award

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Kawasaki's 1.8 MW dry hydrogen gas turbine, GPB17MMX, has received the prestigious "Hydrogen Technology of the Year 2024" award at Connecting Green Hydrogen MENA 2024, part of The Hydrogen Future Awards.

This event, the largest of its kind in the Middle East, attracts over 3000 decision-makers, energy ministers, and business representatives from more than 50 countries. The award acknowledges cutting-edge advancements that have positively impacted the hydrogen industry across production, storage, transport, and applications. Notably, this marks Kawasaki's next major recognition, following its 2022 Innovation Award from the German Gas Association for hydrogen gas turbine technology.

Hydrogen has the advantage of emitting no CO₂ when combusted, but it also burns faster and at higher temperatures than natural gas, leading to issues such as increased NO_x emissions and overheating of combustor components.

By uniquely combining Micromix (MMX) combustion and supplemental combustion, Kawasaki has succeeded in developing a dry-type hydrogen combustor (referred to as 'MMX combustor') that addresses these issues and is the first in the world to commercialize it. This enables stable and clean operation in compliance with the Air Pollution Control Act even with hydrogen combustion. Additionally, the system can be operated flexibly in accordance with the hydrogen supply, as it can utilize hydrogen at any ratio from 50% to 100% by volume for hydrogen and natural gas co-firing operations.

The award was given in recognition of the significant contribution to the reduction of CO₂ emissions through the commercialization of the world's first gas turbine equipped with MMX combustor, which is capable of dry hydrogen firing.

Kawasaki plans to implement MMX combustion technology for all Kawasaki gas turbines for cogeneration and balancing/peaker systems that Kawasaki sells by 2030.

MMX combustor utilizes the technology developed as part of NEDO's (New Energy and Industrial Technology Development Organisation) 'Hydrogen Society Development Project'.

About The Hydrogen Future Awards 2024

<https://www.mena.gh2events.com/hydrogen-future-awards>

Official Press Release Kawasaki Heavy Industries Ltd.

https://global.kawasaki.com/en/corp/newsroom/news/detail/?f=20240424_5532



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