Kawasaki
Powering your potential

Hydrogen Liquefaction System

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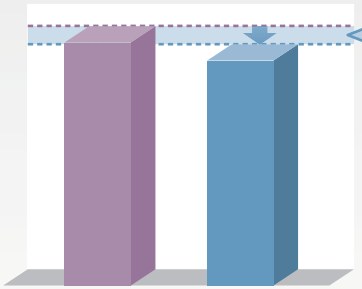
Kawasaki
SUPER Green Product

Kawasaki Heavy Industries, Ltd.

The hydrogen liquefaction system achieves industry-leading liquefaction efficiency(*).

The hydrogen liquefaction system has achieved industry-leading efficiency by repeatedly optimizing the components based on the liquefaction process developed independently.
The expansion turbine, which has been developped in-house, works by hydrogen gas bearings. The hydrogen gas bearings can prevent the liquefaction process from contaminations, and provide easy maintenance because of non-contact bearing.

* Liquefaction efficiency means necessary electric power consumption to produce 1 kilogram of liquefied hydrogen



Liquefaction efficiency [kWh/kg-H_2]

By optimizing all the system, liquefaction efficiency has been improved in approximately 8%.

Hydrogen liquefier

Product Description

The hydrogen liquefaction system is a necessary technology in order to build a hydrogen supply chain.
Hydrogen is shrunk to 1/800th than its original gas volume by hydrogen liqeufaction. It achieves mass storage and effective transportation of hydrogen.
Rated production of this system is 5 tons of liquefied hydrogen per day (equivalent to the fuels for 1000 of FCVs)

Special Features

- Japan's first industrial hydrogen liquefaction system
- The expansion turbine, which is a key component of the liquefier, works by hydrogen gas bearings. The hydrogen gas bearings can prevent the liquefaction process from contaminations, and provide easy maintenance because of non-contact bearing
- The total weight of the liquefier has been reduced from that of the prototype because of the improvement of the internal equipment layout