

The world's 1st industrial DLE Hydrogen Gas Turbine in commercial operation - supplied by Kawasaki.

Kawasaki Gas Turbine Europe's successful commissioning of the world's first commercial 30% DLE Hydrogen Gas Turbine Generator Set GPB17D-H2 at Chevron Phillips Chemical in Belgium.

Chevron Phillips Chemical International N.V. (CPChem) is a subsidiary of Chevron Phillips Chemical Company LLC, one of the world's top producer of olefins and polyolefins and a leading supplier of aromatics, alpha olefins, styrenics, specialty chemicals, plastic piping and polymer resins. In Belgium, the company owns and operates a plant in Tessenderlo which produces organic sulfur compounds. The manufacture of these products and the associated chemical processes result in a Hydrogen rich purge stream, valuable excess Hydrogen that can be used to save energy and to decarbonize the energy demand effectively.

In March 2021, Kawasaki Gas Turbine Europe installed a standard natural gas fired DLE (Dry Low Emission) Gas Turbine GPB17D with an electrical power of 1,8 MW_e at CPChem's Tessenderlo plant.

In October 2023, the existing standard DLE System was modified to a 30vol% H₂ DLE that can be fed by the Hydrogen generated as a by-product on site. Thanks to this new system that was implemented and commissioned during a standard maintenance, NO_x emissions are maintained below 15 ppm@O₂=15%. Since then, this Gas Turbine has been the world's first Gas Turbine to run fully flexible in the range of 0-30vol% Hydrogen capability.

The performance of the Kawasaki Hydrogen burner technology will make it possible in the future to use the Kawasaki Hydrogen Gas Turbine Micro-Mix technology at the site, which can burn up to 100vol% Hydrogen.



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