# The First Won $LH_2$ Site in Korea

## RESULTS

- Met all regulatory requirements, including certification from Korea Audit and Certification body, ensuring the safety and reliability of the hydrogen plant.
- The plant became a reference project for Emerson's participation in Korea's Green Initiative, helping to further the nation's decarbonization goals.
- The liquefaction plant now serves as a key part of Korea's hydrogen infrastructure, contributing to the country's hydrogen supply and sustainable energy transition.


The first $LH_2$ liquefaction plant in Korea marks a significant milestone for our customer and Korea's growing hydrogen sector. The plant's purpose is to produce and store liquefied hydrogen for both local consumption and export, contributing to the country's decarbonization efforts. Emerson provided the necessary pressure relief valves (PRVs) for this critical infrastructure project, ensuring the safe and efficient handling of liquefied hydrogen at extreme cryogenic temperatures.

***Emerson delivered reliable cryogenic solutions on time and supported us through every step. A true partner in our hydrogen journey.***

## APPLICATION

Pressure Relief Valves (PRVs) for $LH_2$ Plant

## CUSTOMER

A leading South Korean engineering and manufacturing company specializing in industrial tanks and hydrogen infrastructure.

## INDUSTRY

Liquefied Hydrogen Plant

*Anderson Greenwood™ 81 Series, Crosby™ OMNI Series and J-Series*

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## CHALLENGE

**New to the Industry Technology:**
This was Korea's first $LH_2$ liquefaction plant, with no prior experience in handling cryogenic hydrogen applications, requiring significant engineering support.

**Korea Audit and Certification body approval:**
The project was subject to Korea governing bodies approval, a new application that had to meet stringent certification standards for hydrogen applications.

**Tight Delivery Schedule:**
Due to the tight project schedule, all components needed to be delivered on-site within 5 months, reducing the standard lead time of 8 months.


## SOLUTION

**Cryogenic Expertise:**
Emerson leveraged its Anderson Greenwood proven record in cryogenic applications (down to -269°C), supporting the engineering team with PRV specifications tailored to the unique needs of hydrogen liquefaction.

**Valve Specification:**
Emerson reviewed and proposed PRVs with right size and material fit, ensuring compatibility and performance.

**Engagement with Inspection bodies:**
Close engagement with Korea audit and certification bodies to arrange and witness Liquid Helium cryogenic testing for the pressure relief valves, meeting all regulatory requirements.

**Fast Execution:**
Worked with the Emerson team to reduce the lead time by streamlining the project execution and logistics.

**Ongoing Support:**
Provided 24/7 site support through local authorized service partner, ensuring smooth project execution and timely delivery.

**Emerson**

Americas
T +1 800 558 5853
T +1 972 548 3574

Europe
T +39 051 419 0611

Asia Pacific
T +65 6777 8211

Middle East / Africa
T +971 4811 8100



For more information: www.Emerson.com

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