

Case Study

Rotork aids in South Korean fuel cell production

Industry: Industrial Gases

Client: Fuel Cell producer, South Korea

Product: CMA, ExMax

Summary

Rotork linear actuators were selected to control the flow of hydrogen gas at a fuel cell power plant in South Korea. The actuators will operate globe and ball valves which control the flow of hydrogen gas in fuel cells at the site. Each fuel cell will include two CVL actuators and four ExMax actuators.

Overview

A fuel cell is a generator which creates electricity and heat through the electrochemical reaction of hydrogen and oxygen. It has no transmission or distribution costs meaning it can reduce energy costs by more than 25%. It is also able to operate 365 days a year and provides immediately available renewable energy.

Challenge

The control of natural gas into the fuel cell requires continuous modulating control with high precision requirements.

Solution

CML actuators were installed to control the natural gas that flows into the fuel cell to create hydrogen. The actuator receives position signals and constantly adjusts its position based on the signal received. Each CML unit controls the amount of natural gas into the system, so the accuracy provided by the actuator is essential. They operate globe valves within each skid.



Customer Benefits

The accuracy and precision of flow control provided by CML actuators is of great importance to the customer; if flow is too low the fuel cell can degrade to the point of catastrophe and if too high can cause major operational issues. CML actuators are durable, accurate and precise, providing stabilisation to the flow of natural gas and making the process safe for operators and efficient to run.



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