

Fit for purpose instrumentation for CNG compressors

Egypt's growing CNG filling network



CEO, Harry Kwon



Compressor model: GEO-BII 200HP 4stage, Electric motor driven CNG Compressor delivered in Egypt

"With Endress+Hauser I have a good partner for all my projects, from the most demanding and upscale ones to the fit for purpose ones, thanks to their different technologies and segmentation"

Harry Kwon, CEO

The Egyptian government is working to replace liquid fuels with natural gas. To achieve this they targeted increasing the number of CNG stations in their country from 306 to 1000 by the end of 2021. Existing fuel stations offering octane are being extended with natural gas vehicle filling services, and new natural gas filling stations will be built.

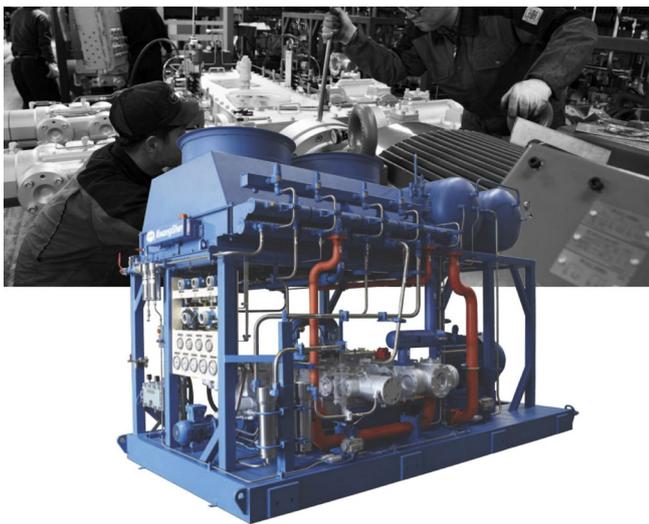
KwangShin is a Korean compressor manufacturer. They build reciprocating gas compressors for the process industries among others. They also manufacture high-pressurized ones for PET bottle manufacturing and 800 bar high pressure diaphragm compressors for H₂ fuelling stations. KwangShin has also expanded with the "GEO Series" CNG compressors, and CNG and H₂ fuelling dispensers with mass flow meters from Endress+Hauser. The expansion into natural gas has already borne fruit, with the delivery of a massive fuelling



Dispenser model : Dual hose, CNG Dispenser delivered in Egypt

station project in 2021 to Egypt's Natural Gas Vehicles Company (Car Gas) and Gas Technology Company (Gastec).

For the skids of the Egyptian project for Car Gas and Gastec they needed to measure the pressure in the compressor inlet and outlet, the level of the oil tank as well as the pressure of the storage cylinder systems.



Compressor model: GEO-C4 600HP CNG compressor

Customer challenge

Kwangshin needed right fit instrumentation and standardization for the competitive Egyptian project. They were looking to reduce the footprint of the instrumentation of their skids.

Our solution:

- **Cerabar PMP21** was chosen because of its compact form, being fit for purpose for the application and Ex certificates.
- The recently launched **Liquiphant FTL41** is a fit for purpose instrument based on a proven technology and with the necessary Ex certificates as well.

The results/benefits

- **Compact design.** The PMP21 helps reduce space in the skid due to its small footprint.
- **Maintenance free** and better long-term stability than float switches due to no mechanically moving parts of the Liquiphant level switch.
- **One stop shop supplier** for all the measuring parameters. CNGmass for flow measurement, Cerabar pressure transmitters from the fundamental and extended segments, iTEMP temperature sensor and Liquiphant level point switches.
- **Local presence and support** in the countries where the projects take place, with a supplier capable of meeting tough timelines even on big projects.

Cerabar PMP21



Absolute and gauge pressure

Liquiphant FTL41



Vibronic level switch

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