High Pressure Gas Re-injection
Premium Technology Enhancing Oil Recovery while Protecting the Environment

Experience matters

GE Oil & Gas business has pioneered the manufacturing and testing of very high pressure sour gas compressors. The Karachaganak compression trains were full load tested in 2000 and early 2003 operating at a nominal discharge pressure of 560 bar with gas containing 5% H2S. They are the first in the world to be used in this challenging application. To achieve this leap in technological capabilities, a substantial research & development effort in materials, gaskets, rotor-dynamics and dry gas sealing was necessary. Another milestone was reached in 2003 with a compression train with a nominal discharge pressure of 630 bar operating on gas with H2S content of greater than 15%. Recently, we have tested a new re-injection train at a discharge pressure of 800 bar for compression of extremely sour gas (18% H2S, 5% CO2).

Safety is not optional

GE's compressors are designed with special focus on rotor dynamics and gas sealing to avoid toxic release or overpressure situations. Vibration is minimized at all operating conditions by using very rigid shafts. Gas seals for both the casing and shaft are designed to maximize redundancy and with the greatest possible consideration to safety.

Sour Gas Applications

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susceptible to rotating stall. The applications together with the typical of high pressure machines. Critical and challenging high lateral behavior in the most seals are used to ensure safe subsynchronous vibration potentially leading to high gas density on impellers. Rotordynamics: The impact of challenges of the industry. Meet the ever increasing and new calculation codes to make the prediction of performance computationally. To this end, an optimized operating range. Solutions to achieving a broader techniques to identify advanced computational and experimental have been validated, even in the presence of validated, and advanced high sour gas, through extensive computer-aided design, and the increased site performance. This objective has been successfully achieved,