

Application

Gas mix:	CH ₄	45 %
	C ₂ H ₄	36 %
	Others	19 %

Medium pressure: up to 21.5 bar(g) / 312 psi(g)
Temperature: 30 - 54 °C / 86 -129.2°F

Challenge

Depending on the compressor or turbine design, often split shaft seals are required. This means that mechanical dry gas seals are not applicable. When the process gas has to be prevented from leaking, usually oil flushed bushing seals in split design are applied. Such seals require complex auxiliary oil systems to maintain the oil pressure, to cool the flush oil and to clean the flush oil from process gas contaminations. This case study describes the replacement of an oil buffered bushing seal by a gas buffered carbon ring seal in split design.

Solution

The shaft seal SDW20 made by STASSKOL is designed as engineered high pressure version of the standard seal. The screws are specially designed to withstand the higher forces. The sealing rings are made of impregnated carbon. They are designed to run contact-free while a very small sealing gap is maintained. To avoid any leakage of process gas to the atmosphere, Nitrogen is applied as buffer gas.



Seal casings of STASSKOL SDW20 (high pressure version)



Sealing rings of STASSKOL SDW20 made of impregnated carbon

FIELD CASE

SDW20 – Carbon ring seal in highpressure service

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