



ENVIRONMENTAL TECHNOLOGY

AESSEAL® product saves millions for oil and gas producer

Repeated installation errors were causing frequent failures of seals on a debutanizer reflux pump and various other pumps at a South African oil and gas facility. The replacement of 138 units in 2024 alone had cost the company more than R8 million, or close to half a million dollars.

To reduce the scale of the problem, AESSEAL® recommended replacing the existing seals, which employed an ineffective hook sleeve design, with the AESSEAL® range of SMSR™ single cartridge mechanical seals, which have been specifically designed to eliminate some of the main causes of premature mechanical seal failure.

The small SMSR™ design features monolithic seal faces, which are less likely to distort in high and low temperature applications. Precise, solid machined drive lugs reduce drive slop between the drive ring and seal face. This reduces seal face damage on equipment start-up / shut-down, and the stationary seal construction helps to minimize spring fatigue on high shaft speed applications.

The new seals were installed in January 2023 and have been running for more than three years with no issues. The overall spend on seal replacement fell sharply from R8 million in 2024 to less than R3 million (US\$180,000) in 2025, with the average replacement cost for each unit falling from R58,340 (US\$3,555) to R37,176 (US\$2,265).



‘Reliability increased from 6 months to >3 years’

Industry:	Oil & Gas
Product:	SMSR™
Application:	Various Pumps
MTBF Increase:	566% (and counting)
Savings:	>R5 million (>US\$300,000)
Reference N.O:	TD3134043



aes seal.com/info