



Cost-saving upgrade for SA company

A South African petrochemical plant wanted to upgrade an existing process facility as part of a large-scale project which included the retrofitting of existing process pumps with dual pressurized mechanical seals and seal support systems.

The aim was to comply with international API 682 standards and local regulatory requirements, as well as addressing hazardous classification specifications. The company asked AESSEAL® to select and design an API-682 compliant mechanical seal for the specific process and pump application which would require minimal alterations, and to retrofit Plan 53B seal support systems, adhering to the existing pump and base footprint.

To achieve this, AESSEAL® engineers installed the CAPI™ A dual pressurized, multi spring seal with single python and accumulator. The design allowed for installation without requiring additional modifications to the pumps while ensuring the correct positioning to meet the dimensional requirements for Plan 53B installation.

The upgrade was carried out in January 2023 as part of a broader plant project known as “Clean Fuels.” Several pumps were included in the upgrade to ensure all equipment—both stationary and rotating—met the necessary compliance standards. As of August 2026 the system has been operating successfully for more than three years, achieving significant cost savings by using existing ‘legacy’ pumps in conjunction with compliant API seals and systems.



‘Retrofitting legacy pumps for API 682 compliance’

Industry:	Petrochemical
Product:	CAPI™ A Dual & Plan 53B System
Application:	Process pumps
MTBF:	More than 3 years
Savings:	Significant
Reference N.O:	TD3151866

