

OUR CLIENT: STOS Kapuni Production Station

INDUSTRY: Oil and Gas

VALUE: NZ\$100K

OVERVIEW: STOS Kapuni Production Station started producing in 1969 and it boasts about the one of the oldest oil(condensate) and gas field in NZ.

The STOS Kapuni field is located at small Kaponga township some 65Kms south of New Plymouth. The reservoir covers an area of about 10Kms by 25Kms with the main accumulation in gaseous form held in sandstone at depths between 3.4Km & 3.6Km

As a part of the existing well site network, a 'grandfathered' gas fired reboiler was being upgraded to modern functional safety standards for safety and compliance reasons.

ENGINEERING: The upgrade of the reboiler was implemented following a SIL study under the standards IEC 61508 and 61511. During this project a new SIL3 rated HIMA (F35 Controller) and the new Stahl 10" (EXe rated) HMI were selected to implement the new controls design.

Standard HIMA Boiler Management System blocks were chosen for this application to provide greater reliability, and proven high SIL rating application code. The extensive FAT was carried out in ECL office and this resulted in reduced commissioning on site and lower costs.

TUV certified FSEng and HIMA trained engineers ensured all aspects of the functional safety lifecycle, peer reviews, verification and validation were carried out to achieve a robust SIL2 end solution.

OUTCOME:

- Robust implementation, with confidence that SIL2 rating achieved on SIFs.
- Increased operations control and monitoring capability on the reboiler.
- Greater availability and reliability, reduced downtime.



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