

case study

Prevention of shutdown of major Oil & gas company in Qatar

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Problem

A prominent Oil and Gas corporation operating in Qatar observed an elevation in the thermal readings at the Non-Drive End (NDE) of their compressor unit. In response, they conducted a Membrane Patch Colorimetry (MPC) analysis, which yielded a result indicative of a low level of varnish potential. Despite the ostensibly minor MPC value, the escalating temperatures in the bearings posed a significant risk of leading to an unforeseen operational shutdown. The bearing temperature signature combined with oil analysis results suggest that Shear Stress is the primary mode of fluid degradation.

Solution

With the help of Petrotec, Fluitec's **ESP VITA™** unit was attached to the system to help remove the existing deposits. Over the period of one month, weekly samples were taken and the progress of deposit removal was tracked.

Total Saved

\$175K

Client:	Major Oil & Gas Company
Country:	Qatar
Application:	Siemens Compressor
Cost savings:	\$175,000 over 5 years
Oil savings:	3,300 liters
CO2e kg saved in 5 years:	20,218 CO2e kg
Solution:	ESP VITA III



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Results

Almost immediately, the bearing temperatures returned below the critical value and within two weeks, the MPC values were halved. Within one month, the ESP VITA III unit was taken offline and over the next couple of months, the bearing temperatures were maintained well below the critical value.

MPC before ESP

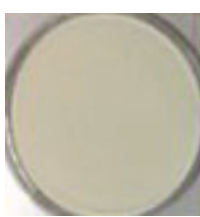
MPC during ESP



DAY 1:
MPC VALUE 8.5



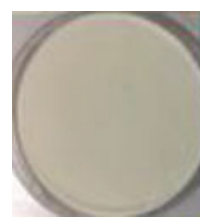
DAY 8:
MPC VALUE 4.7



DAY 15:
MPC VALUE: 3.8



DAY 22:
MPC VALUE: 2.4



DAY 29:
MPC VALUE 2.7

