



Provision of Vibration Analysis, Balancing and Recertification on AKPO FPSO Gas Export Compressor

THE ISSUE

The client had an issue with high vibration amplitudes on the Gas Export Compressor (GEC) on its FPSO facility. The GEC is run by a motor coupled with a gear box .

The GEC-A unit had vibration excursion on DE bearing of the compressor. During the excursion, the DE bearing vibration amplitudes were escalated. The DE bearing was replaced, coupling was inspected. The vibration amplitudes were subsided following the outage however a balance program was recommended to further reduce the vibration amplitude

PROJECT SCOPE

Ofserv was Contracted to Provide Vibration Analysis, Balancing and Recertification on AKPO FPSO Gas Export Compressor

OUR SOLUTION

Our team of Machinery Diagnostic Specialist was deployed to analyze and rectify the cause of the high vibrations on the GEC. Upon analysis ,swapped proximity probe cables were found on the compressor DE bearing. They were swapped to correct configuration in the junction box .

A balance program was implemented. As part of the balance program, a M8 typeset screw that weighs 7.5 grams was installed on the coupling between the gear box and compressor.

The balance program reduced the Compressor’s DE bearing direct (overall) vibration amplitude. The vibration amplitudes on the compressor bearings were low after one hour run at steady state and acceptable for long term operation of the unit without restriction.

The vibration amplitudes on rest of the bearings were low as well . The project was successfully delivered within 10 days.

Vibration and Keyphasor® signals were recorded and processed using a Bentley Nevada ADRE® 408.



Location
Offshore Port -
Harcourt, Nigeria

ManHours
240

Facilities
AKPO FPSO

Safety Statistics
Zero LTI

Status
Completed 4Q 2018