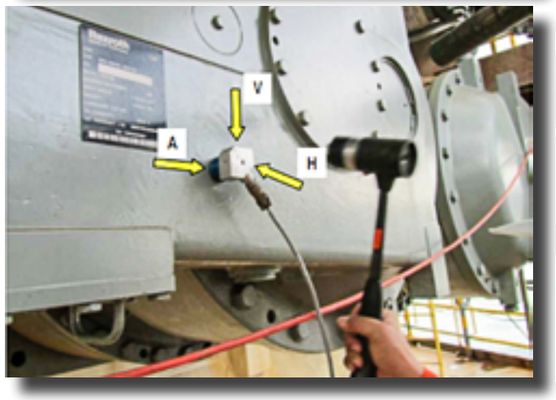
AFTER SALES

SERVICES

Vibration Services

In OTD our core business is Design, Engineering & Aftermarket services for all our Jack-up rigs. We have a dedicated, highly skilled group of professionals who have been involved in the Offshore & Onshore jacking system inspections services for many years.

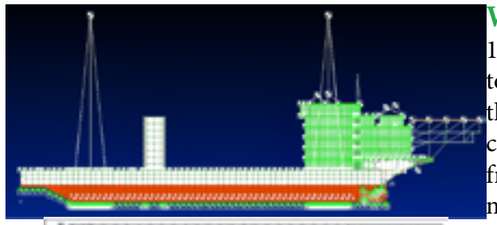


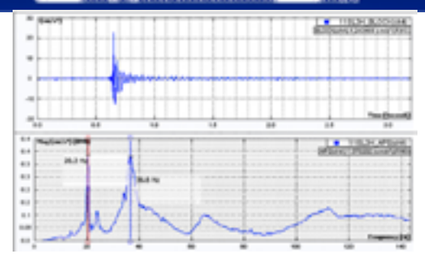
Why choose OTD?

- Vibration Analysis, our Engineering Team has the capability to conduct vibration studies on a global level to provide technical solutions during design or on-going retrofit projects stages. We perform in-depth post-processing analysis with recommendations to solve vibration issues on any onshore/offshore building, vessel or any other structure.
- Measurement Service, our experienced Service Technicians are equipped with latest tools to perform vibration measurements.
- Troubleshooting service, our Technical Team is able to post-process the field measured data and provide clients with detailed analysis reports.

Vibration Services

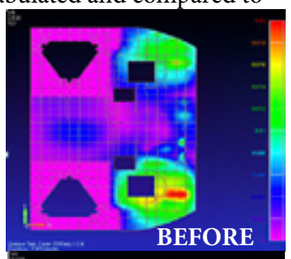
Vibration is a mechanical phenomenon whereby oscillations occur about an equilibrium point. In most cases, vibration is undesirable, wasting energy and creating unwanted sound. High levels of vibration exposure in a working environment can be a health hazard. Furthermore, vibration can be the early warning signs of machine failures and loss of operating efficiency. Vibration analysis is a method to detect and identify the cause of the excessive vibration and provide a suitable solution to the problem. In the design stage, it can also be used to study vibration related issues due to resonance.

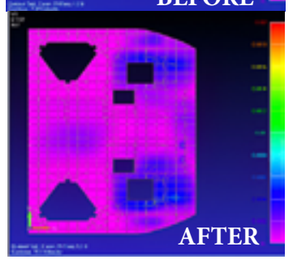




Why do Vibration Services

1. Resonance analysis/Free Vibration Analysis :
to evaluate the natural frequencies of local structure around the vibration source. Risk of resonance is to be evaluated by comparing the natural frequency of selected structure to the frequencies associated with relevant excitation sources, with measures suggested for avoidance of risk resonance.
2. Forced response analysis:
to be performed by utilizing the finite element (FE) technique. A model of the complete component/structure is to be generated. For plates that are exposed to water, additional dynamic effects will be taken into account by including added mass in the FE model. Excitation forces from all excitation sources will be included in forced response vibration analysis. Vibration levels at selected locations will be tabulated and compared to vibration acceptance criteria. Re-analysis will be done to evaluate the effectiveness of the proposed solution in cases where vibration exceeds the criteria.





When to do Vibration Services

- In conceptual design stage to detect potential vibration problem in the design
- After delivery to provide solution to reducing the vibration level in the structure
- When suspected high levels of vibration in equipment
- For certification on various classification standard

Benefits of doing Vibration Services

- Enabling accurate detection of the machineries condition as well as whole body vibration measurements, ensuring safe allowable design/operating limits within them
- Reduce resonance in equipment and increase life and operating efficiency
- Bump test can also be performed by our Team to ensure that machinery operation will not cause future resonance

For further enquiries please contact us at: service.otd@keppelotd.com

Keppel Offshore Technology Development

55 Gul Road, Singapore 629353
Tel : (65) 6863 7409
Fax : (65) 6862 3465
Enquiries : enquiry@keppelotd.com
Support : support.otd@keppelotd.com