



Operational modal analysis applied to jacket-type offshore structure

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Condition: New. Publisher/Verlag: LAP Lambert Academic Publishing | This report presents the results of dynamic monitoring test carried out at a jacket-type offshore platform. The dynamic measurements consisted of vibration measurements with high accuracy equipment in twelve different positions located on the decks of the structure. The source of excitation was solely the ambient vibration by waves, wind and equipment on the structure under normal operation conditions. A large amount of measured data were analysed by advanced digital signal analysis techniques, followed by the extraction of structural modes. Then, a updated numerical model of the structure was assembled and then employed to analyse the structural behaviour under various loading scenarios including seismic loading. The main conclusion is that the 50 years old oil rig structure is unable to sustain some specific loading scenarios, according to current API-RP-2A-WSD (2000) standard. Structural rehabilitation is not totally feasible, as the structure will not be safe against seismic loadings. On the other hand, it is possible to rehabilitate this structure, provided seismic loadings are not taken into account. | Format: Paperback | Language/Sprache: english | 100 pp.



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