

Position and refloat the jack up barge

Overview

This standard is about jacking the barge up and down in compliance with company procedures and the jack up barge operations manual. This involves assessing whether safe jacking is possible at the specified site in the prevailing weather and sea conditions and ensuring that specified safe jacking procedures are followed.

Target Group

This standard is relevant to operatives with specific responsibility for jacking the barge up and down. This could be a specialist jacking engineer or a bargemaster with overall responsibility for the jack up barge while it is at sea.

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Performance criteria

You must be able to:

1. review the site specific assessment data for the field location and check that the jack up barge will be able to operate within the operational limits of the jack up barge operations manual for the field location
2. where further checks are required to confirm the jack up barge's ability to operate in the field location, gather further information about that location
3. visually observe and check on charts and available data that the jack up barge is not at risk from visible hazards or exclusions within the field location
4. visually observe and check on charts and available data that the minimum safe clearances are maintained between the jack up barge and any subsea or surface hazards or exclusions
5. read, interpret and assess the prevailing and forecast environmental conditions including wind, sea state and weather to decide whether the jack up barge can be jacked up in compliance with company jack up barge operations manual
6. plan, develop and execute a contingency plan for the safe passage to a pre-determined safe haven or port if the site is not suitable for jacking
7. communicate via telephone, radio or other communication media with the jack up barge provider, employer, client and contractors to agree a planned course of action to implement the contingency plan as defined in the method statement or passage plan, in compliance with the company procedure documents
8. follow and implement company procedures and all relevant legal, safety and operating requirements relating to establishing the suitability of the operational site as stated by local and national law, international convention and the jack up barge operations manual
9. review the site specific assessment for the field location to control the installation behaviour of the jack up barge during preloading and jacking up and that this is within the operational tolerances stated in the jack up barge operations manual
10. perform pre-loading in accordance with jack up barge operations manual and procedure document and / or method statement
11. monitor actual leg penetration through visual checks of gauges / markers or other visual indicators on the jack up barge against the

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- anticipated penetration predicted in the site specific assessment for site soil conditions
12. elevate the jack up barge to the operational air gap as stated within the jack up barge operations manual
 13. level the jack up barge and secure jacks in accordance with and within tolerances stated in the jack up barge operations manual
 14. take appropriate action in line with the jack up barge operations manual where unexpected or unsafe jack up installation behaviour has occurred or the installation behaviour is outside of the jack up barge operations manual tolerances and specifications
 15. implement remedial action as outlined in the jack up barge operations manual to bring the jack up barge systems and stability within the recommended tolerances of the manual, to ensure safety of the jack up barge
 16. communicate via telephone, radio or other communication media with designated people ashore to agree any variation from plan and report progress
 17. communicate via telephone, radio or other communication media to report to the client on operational progress
 18. follow and implement company procedures and all relevant legal, safety and operating requirements relating to jacking the jack up barge at the operational site as stated by local and national law, international convention and the jack up barge operations manual
 19. check that the environmental and weather conditions, including wind and sea state, and forecasts for the 24-hour period ahead are within the recommended operational limits for the jack up barge to be jacked down as stated by the jack up barge operations manual
 20. visually and physically check that the deck load and equipment for jacking down is in working order in line with the jack up barge operations manual
 21. visually check and verbally confirm with deck crew that the jack up barge is prepared for towing as stated in the jack up barge operations manual
 22. verbally confirm with the tug master that towing provision is on standby to assist
 23. lower the jack up barge and lift and pull the legs in accordance with jack up barge operations manual and procedure document or method statement

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24. visually monitor progress of leg extraction to ensure the legs are extracted to the required sequence and process as outlined in the jack up barge operations manual
25. take corrective action if problems with leg extraction and retraction occur
26. communicate via telephone, radio or other communication media with designated people ashore to agree any variation from the method statement or operational plan and report on progress
27. follow and implement company procedures and all relevant legal, safety and operating requirements relating to jacking down the jack up barge at the operational site as stated by local and national law, international convention and the jack up barge operations manual

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Knowledge and understanding

You need to know and understand:

1. the fundamental principles of jack up foundations
2. site specific assessments
3. information from appropriate supplementary sources
4. minimum safe clearances between the jack up barge and any subsea or surface hazards or exclusions
5. the effects of environmental conditions on the safe jacking up of the jack up barge
6. the contingency plans in the event of safe jacking up not being possible
7. differences between predicted and actual seabed characteristics
8. the risks associated with the geological structure of the seabed and the implication for jacking
9. the design limits of the jack up barge for engaging the seabed
10. the principles and practice of preloading
11. the results of the leg footing penetration analysis based on the seabed soil conditions
12. how to calculate leg load
13. how to monitor leg penetration
14. how the safe air gap is calculated
15. the causes of leg misalignment and its effects on jack up barge jacking systems
16. the effects of environmental conditions on the safe jacking down of the jack up barge
17. how to prepare the jack up barge for jacking down and towing
18. methods of extracting legs from the seabed and their associated risks
19. the co-operation required with the tug master to plan a 'window of escape' from the operational location

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