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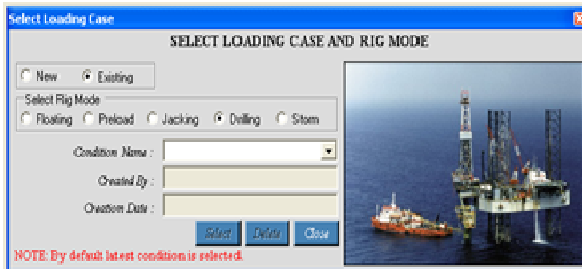


LOAD ASSESSMENT TOOL FOR JACK-UPS (LATJ) - VERSION 1.01AUG 2012

The software is used as load assessment tool for data management and loading calculations in day-to-day operations of Jack-Up Rigs. It is a user friendly menu-driven, interactive software and specific for a jack-up vessel operation.

Loading Conditions:

- Weight management by grouping and sub-grouping of various items onboard and light ship weight.
- Grouping of weights based on solids, liquids, consumables and miscellaneous items etc.
- Individual weights and centre of gravities and their subtotals and totals.
- Summary of consumables and their graphical representation for present status in terms of inventory.
- Centre of gravity (CG) of weights about specified coordinate systems.
- Weight management for keeping the vessel with in selected draft and allowable KGs in floating condition.
- Weight management for keeping leg reactions for even distribution during elevated conditions.
- Tank tables data feeding in master vessel data at various sounding to calculate the liquid weight details at any sounding level.



Software Features:

- Initial customization of basic software tools with the rig specified data inputs like weight details, tank configuration, stability data etc.
- Password protected three stage inputs by administrator, master input and user input. Blocking of vessel customized data to prevent user entry during day to day data feeding.
- User friendly data input by software interactive pull-down and pop-up menus.
- Selection choice of either Metric or FPS system.
- Graphical representation of vessel status and status of her consumables in addition to text results.
- Screen preview and print options for output results.
- Results may be only condition summary or with complete weight & result details.
- Help menu and operation manual.
- Initial onboard data input of the existing vessel loading condition by sb marine naval architect before handing over the software.
- Training can be given to the vessel staff to help in future day to day operation.

Distinctive Features:

- Calculation of liquid weights and CGs from protected master data of tank tables for any sounding level.
- Calculation of every liquid tank free surface moments and their effect on stability of the vessel.
- Assessments of vessel conditions during single or multiple damage of tanks or compartments.
- Calculation of leg reactions, pinion loads etc.
- Calculations during preload operation.
- Load equalization calculations by auto transfer of liquids in tanks to correct the unwanted vessel trim & heel during floating mode or to reduce excessive uneven leg reaction distribution in various legs.
- Regular inventory checks for consumables.
- Warning at various states in emergency like crossing load-line draft, excessive vessel trim or heel, vessel vertical centre of gravity is exceeding allowable kg limit, GM value lower than required limit, leg reactions very close to the allowable limit, excessive pinion load at any elevated condition etc.
- All stages of elevated conditions like jacking up, drilling condition, and simply elevated conditions can be assessed.



Results:

- Vessel loading condition data at interval of times during a day can be recorded and can be kept for 6 months duration as recorded log files. Status of prior vessel data at any condition can be accessed by reference file name.
- Calculations of vessel draft, stability parameters, free surface effect, leg reaction and deck loads.
- Regular update of drafts, trim and heel angles, deck loads and KGs for any change of loading data.
- At elevated conditions, calculation of present leg reactions and comparing with allowable limits.
- Condition summary at any stage of vessel loading.