Dead weight Survey Project

Our Floating Systems Business Unit (FSBU) undertook the project of Major lay up repair of the Sagar Uday Rig. Typically any rig which undergoes major modification needs to be re-classed, and re-classing of rigs mandates that an updated stability book is to be submitted. To do so, either an inclining experiment or dead-weight survey must be conducted.

Reclassification of Sagar Uday Rig was held up due to issues in results of the inclining experiment. This necessitated repeating the inclining experiment which was a major hindrance as the rig was in operation. The alternative option was to conduct a dead –weight survey which would achieve the same purpose. The advantage of a dead weight survey is that it is comparatively less sensitive to environment and therefore, can be carried out at site itself. Hence, this option was selected as an alternative to the inclining experiment.

Developing In-house capabilities

Employing a third party for conducting the survey would have increased the cost approximately by 30,000 USD), increased interfaces, slowed decision making, and reduced possibility of repeating the survey. We developed in-house capability to perform the dead weight survey. Through understanding of various guideline requirements and interaction with the industry experts to understand the critical aspects of the survey, we prepared a procedure in line with industry standards to perform the Dead Weight Survey.

The procedure was reviewed by ABS India and approved by ABS Houston & ONGC.

The Challenges

Apart from being the first time, it was challenging for us to carry out a dead weight the survey in open sea conditions. The Rig being in operation (Jacked Up), the dead weight survey could have been carried out only during the field transit. Close coordination with ONGC rig move team enabled us to decide an appropriate time for the survey. The accuracy of the dead weight survey readings was so critical, any error in data collection would have resulted in non-acceptance of the dead weight survey and rejection for re-classification. A team from LTHE Powai was mobilized and reached the site two days prior to make necessary arrangements for carrying out the survey.

Preliminary calculations were performed at site itself and in principle approval was obtained from the client. In order to accomplish the above mentioned steps, significant amount of work & coordination was involved. Detailed planning was done in close coordination with ONGC rig move team & classification society, leading to successfully conducting dead weight survey. The Sagar Uday Rig has been successfully re- classed.