



## **How to improve the accuracy of Inclination of Semi-Submersible Drilling Rigs- Some practical experience**



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**Time :** Online Technical Presentation will begin at 17:30 and ends at 19:00 pm (SGT)

**Venue:** online ZOOM meeting

**Cost:** Free for members.

## **ABSTRACT**

Recent increase in the number of accidents with Semi-submersible Drilling Rigs (SSDR), leading to the loss of Rigs, attracts special attention to their safety. An important part of rig's safety is the control of Stability, whose effectiveness is highly dependent on an accurate and reliable Inclination Experiment (IE).

Typical for most SSDRs, the increased ratio of VDL/LSW and a significant amount of liquid loads and ballasts during IE increases the possibility of errors in the final LSW calculation.

On the other hand, the high sensitivity of SSDR to mistakes in LSW, due to a low TPC and an increased demand from operators and owners for a larger amount of equipment on the rig, leading in some cases to a higher risk adoption approach – all this increases the need for a higher accuracy and reliability of IE.

Due to the configuration of hulls and certain specifics of exploitation of Rigs, the Inclination Experiment of SSDR has some features which are different from conventional ship's IE, such as: Special approach to accuracy and to selections of draft, direction of inclination and ways of inclining the Rig; specifics of Lightship weight and Variables definition; Hydrostatic and Tank Sounding Tables preparation and etc.

The article discusses these features, their influences on techniques of IE and possible ways to increase the effectiveness of an Experiment.

The implementation of some of these techniques leads to a slight increase in the cost and time of preparation of IE but can significantly increase the accuracy and reliability of the results of the Experiment for Semi-submersible Drilling Rigs.

Some of these techniques could be recommended for implementation in any Inclining Experiment of SSDR, others can be used when high accuracy is the required. However, the knowledge of the discussed procedures could help to any Naval Architect to make the appropriate decision.

The recommendations mentioned above were tested on different projects and have demonstrated good results, when high accuracy of IE was desired.

## **ABOUT THE SPEAKER**

Speaker is a Naval Architect with more than 35 years of experience in offshore shipbuilding.

He is a Fellow Member of the Royal Institution of Naval Architects (UK) and Institute of Marine Engineering, Science and Technology (UK). From 1999 he is also a Chartered Engineer in the UK Engineering Council.

In the past, he was involved in many major projects of such companies as SOCAR, BP, McDermott, SantaFe, Technip, JDC, Prosafe, Global Maritime in the different countries. He has involved in offshore operations, in marine R&D, in fabrication and installation of Fixed platforms, in design and construction of FPSOs, Semi-submersible Drilling Rigs, Jack ups and Fixed Platforms at all levels from Engineer to Regional Manager.

From 2002 till now Rasim is an active member on Council of Joint Branch of RINA & IMAREST in Singapore. During 2003-2005, 2013-2014, 2019-2021, 2023-2024 Rasim was served as an Honorary Secretary of Joint Branch, and in 2011, 2022 he was a Vice Chairman of Joint Branch.

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