



MARINE OPERATIONS

Combined jack-up, dynamic positioning and marine scour engineering

This two-day course introduces you to aspects and implications of scour and seabed instability when positioning and jacking at a site. An understanding of the seabed, the ambient environment as well as the interaction with the rig provides valuable knowledge enabling you to make better and safe decisions.

The course is divided in two parts:

Part 1 focuses on jack-up and dynamic positioning (DP) addressing the critical phases from soft pinning to positioning and set down, the effects of weight on stability and trim combined as well as operational scenarios encompassing raising and lowering of legs, pre-loading and risk for punch-through. Related hands-on exercises take place in a virtual environment with simulators that model the physical leg and seabed interaction correctly.

Part 2 focuses on marine scour. Scour occurs when structures are placed on erodible beds and exposed to current and waves. Therefore, one of the most prominent risks to the stability of the jack-up vessels is scouring during the jacking phase. The assessment of the risk of scour and in turn risk of punch-through requires detailed knowledge of the local environmental and soil conditions. Thus, the course includes detailed knowledge of the hydrodynamic challenges involved in engineering assessment of jack-up vessels during operation.

COURSE TOPICS

Part 1 - Jack-up & Dynamic Positioning (DP)

- DP console
- Jacking console
- History and types of units
- Planning of moves and manoeuvring theory
- DP approach
- Station keeping, jacking systems, stability of jack-up vessels and soft pinning
- Site specific assessment
- Jack-up elevated operations
- Emergency procedures

Part 2 - Scour is a well-known issue for marine engineering

- Flow processes in the presence of marine structures
- Scour around piles and complex structures
- Scour in complex soils such as stratified beds and erodibility of soils
- Mitigation procedures against scour
- Hands-on exercises to determine the risk of scour and punch-through

THE ACADEMY BY DHI

THE ACADEMY offers a palette of courses and capacity building packages designed to fit your needs and challenges. We offer standard and/or tailored training - face-2-face as well as online.

MIKE Powered by DHI courses focus on practical skills, hands-on exercises and teaching you how to get the most out of your software. These courses also enable you to understand the power of the MIKE tools for building decision support systems.

Thematic courses allow you to apply concepts, applications and decision support principles to the entire business process within current areas: aquaculture and agriculture, energy, climate change, flooding, coast and marine, surface and groundwater, urban water, industry, environment and ecosystems, product safety and environmental risk, etc.

Our trainers are experienced professionals, many of whom are recognised international experts in their fields. The use of highly skilled trainers guarantees the quality of THE ACADEMY courses.

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