



Scour Protection of Offshore Structures

LICEngineering A/S offers more than 2 decades of experience for development and design of Scour Protection Systems. We have designed a number of scour protection systems in the North Sea for the Offshore Oil & Gas Industry and also have experience with systems for Offshore Wind farms. We have carried out extensive research within the areas of both the scour development and the scour protections taking into account issues such as cost, installation, durability, repair and maintenance. Additionally, we continuously participate in research projects in order to investigate and improve the methods ensuring a simple and robust system.

Model Tests

LICEngineering A/S participated in a project with the objective to study erosion around offshore structures on movable beds. The model scale was approximately 1:20. The scour protection is designed as a toothfilling plugging the scour hole and arresting it for further scour. It is also designed with an over height of minimum 1 m to allow for an armouring of the surface and for a gradual transition to the natural seabed. The transition is automatically made during the stronger storms.

Project References - Scour Protection

- Scour protection assessment for Kriegers Flak & Vesterhav Nord/Syd
- Scour protection design for 3 floating Caissons. NOVATEC/Saipem/NGI/DH
- Engineering assistance incl. scour design to support the Wineyard OWF project
- Owners Engineer tendering assistance for foundations on Noirmoutier & Dieppe et Le Tréport windfarms, including scour design
- MP detailed design for DAFENG H3 OWF including scour design



Model test with Monopile foundation at movable seabed. Situation after sand bank has been eroded.



Scour around a circular cylinder during combined waves and current. Notice the relative limited scour development due to the presence of waves.

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