



leanwind

Logistic Efficiencies And Naval architecture for Wind Installations with Novel Developments

Project acronym: **LEANWIND**
Grant agreement n° 614020
Collaborative project
Start date: 01st December 2013
Duration: 4 years

D7.3 Use of simulation for O&M and Installation phase scenarios **Work Package 7 – Task 7.2**

Lead Beneficiary: FORCE Technology
Due date: 31.01.2017
Delivery date: 27.11.2017
Dissemination level: CO



This project has received funding from the European Union's Seventh Programme for research, technological development and demonstration under grant agreement No. 614020.

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Document Information

| Version | Date | Description | | | |
|---------|------------|---------------------|-------------------------------------|-------------------------------------|--------------------|
| | | Organisation | Prepared by | Reviewed by | Approved by |
| 1.0 | 2017.09.20 | FORCE Technology | Jacob Michelsen & John Koch Nielsen | Jacob Michelsen | John Koch Nielsen |
| 1.1 | 2017.11.16 | FORCE Technology | Jacob Michelsen & John Koch Nielsen | Karsten Lundsgaard Haegg | John Koch Nielsen |
| 1.2 | 2017.11.20 | Maersk Training | Karsten Lundsgaard Haegg | Jacob Michelsen & John Koch Nielsen | John Koch Nielsen |
| 1.3 | 2017.11.23 | FORCE Technology | Jacob Michelsen & John Koch Nielsen | Jan Arthur Norbeck, Carlos Lopez | Jan Arthur Norbeck |
| 1.4 | 2017.11.26 | FORCE Technology | Jacob Michelsen & John Koch Nielsen | Karsten Lundsgaard Haegg | Jan Arthur Norbeck |

Author(s) information (alphabetical):

| Name | Organisation |
|------|--------------|
|------|--------------|

Jacob Michelsen

FORCE Technology

John Koch Nielsen

FORCE Technology

Karsten Lundsgaard Haegg

Maersk Training, Svendborg

Definitions

| O&M Vessel | Operation and Maintenance Vessel | | |
|------------|---|--|--|
| IV | Installation Vessel | | |
| DP | Dynamic Positioning | | |
| PMS | Power Management System | | |
| PRS | Position Reference System | | |
| DOF | Degrees of Freedom | | |
| TP | Transition Piece | | |
| IMO | United Nations' International Maritime Organisation | | |
| MODU | Mobile Offshore Drilling Units | | |
| ERN | Environmental Regularity Number | | |
| LNG | Liquid Natural Gas | | |
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Executive Summary

This report describes the activities, assess the results and compile recommendations arising from the various O&M and installation scenarios simulated in task 7.2

Two main types of vessel designs were developed in the LEANWIND project:

- Operation and Maintenance vessel (O&M) tailor-made for far offshore service operations
- Installation vessels: Jack-Up vessel and floating DP vessel (the latter for foundation installation only)

The O&M vessel simulation activities, results and recommendations are found in section 2 of this report.

The Installation Vessel simulation activities, results and recommendations are found in section 3 of this report.

Three types of design assessments were arranged:

- Evaluation of design by experts (Naval Architects, Captains and Gangway operators).
- Feedback on design aspects from trainees (navigators and gangway operators).
- Feedback received from potential stakeholders during stakeholder showcase events.

In general, the developed vessel designs were appreciated during the test and validation activities, however a number of suggestions for potential improvements to the designs were received during this process. These recommendations are reported in sections 2 and 3 of the report.