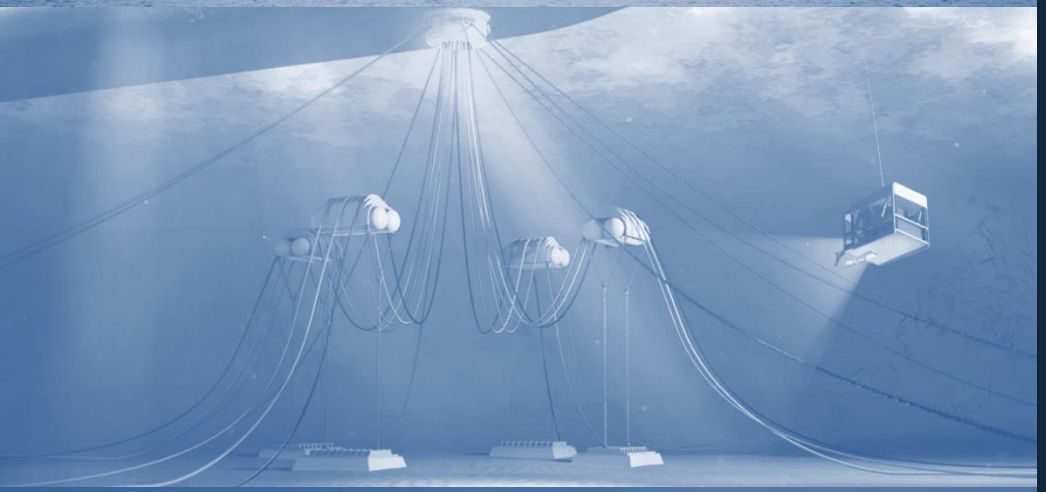

TRAINING

| Subsea | Offshore Structures

| Renewable Energy

PRINCIPIA

PROGRAM

DEEPLINES WIND
BASICS

Duration : 4 days (28 hours)

Engineering Software

For all

PRINCIPIA

PRESENTATION

DEEPLINES WIND software is used by design offices to simulate the dynamic behavior of systems subjected to the marine environment such as floating wind turbines. Indeed, the scale used in a DEEPLINES WIND model makes it possible to consider the wind turbine as a whole, that is to say, to take into account the different couplings between the wind forces exerted on the turbine up to the wind forces. ground at the level of the anchorages by integrating the vibrations brought by the control of the blades and the hydrodynamic forces on the floating platform.
The interface forces between the different components of a wind turbine are the main results of these simulations; post processing integrated into DEEPLINES WIND directly combine these efforts to translate them in terms of mechanical integrity under extreme conditions or in terms of service life.

TRAINING GOALS

Thanks to this training, you will be able to:

- Create a mechanical model of a wind turbine on an anchored platform ;
- Define the regulatory loading cases and the correct calculation parameters ;
- Manage simulations, check the consistency of results ;
- Set up the appropriate post-processing.

PUBLIC AND PREREQUISITE

This training covers all the stages of analysis of a floating wind turbine carried out with DEEPLINES WIND. Each step could be the subject of in-depth training. Also, to facilitate learning, it is recommended (but not mandatory) to have a first experience in one of the following areas:

- Use of DeepLines software or similar software (Orcaflex, Flexcom, Riflex ...) for offshore applications;
- Use of DeepLines WIND software or software for turbines (Fast, Bladed, Hawc2);
- Sizing of structures: knowledge of standard offshore standards (BV, API, DNV ...), code check and fatigue, finite element analysis.

TRAINING CONTENTS

Day 1

Playing with a simple model - Introduction to DEEPLINES WIND

- Using DEEPLINES WIND: presentation of the software operation
- Know the repositories (global & local)
- Model lines in finite elements
- Define an anchoring system
- Use a control command

Day 2

Build a model of aero generator (NREL 5MW)

- Presentation of the aero module
- Build a model of aero generator
- Create environmental loads
- Check the behavior of the turbine under constant wind
- Check the behavior of the turbine in turbulent wind

Day 3

Model the float

- Know the different modeling options
- Model a float with HDB
- Model a float as beams using ISYMOST and TDL files
- Check the model

Day 4

Run calculations & post process the results

- Launch multiple analyzes
- Use Python scripts
- Use the advanced features of DEEPLINES WIND for post processing
- Playing with degrees of freedom

TERMS AND GENERAL INFORMATION

DEEPLINES WIND
BASICS

Duration : 4 days(28 hours)

PRINCIPIA

MOBILIZED METHODS AND EVALUATION MODALITIES

- **Educational, Technical and Coaching Means**

Each of our training is provided by an expert engineer in the field taught in an appropriate training room, for intra-company application.

The course material, projected using an overhead projector, is given to each trainee (paper version and/or computer version), each module giving rise to practical exercises to apply the theoretical aspect. The answers to the exercises are carried out progressively, during the session.

Each trainee has a computer and the license for the software used.

- **Methods of evaluating learning outcomes**

The trainer ensures the proper acquisition of knowledge throughout the training via oral questions and scenarios through practical exercises and, also, at the end of the training, via an evaluation.

The training is sanctioned by the delivery of an individual training certificate.

ACCESSIBILITY TO PEOPLE WITH DISABILITIES

We pay particular attention to adapting our training courses to people with disabilities.
This training is accessible to anyone with a disability. Contact us to tell us about your specific need and allow us to study how to adapt this training to it.

SATISFACTION RATING

The evaluation of trainee satisfaction covers aspects related to the organization, the pedagogical qualities of the trainer, the methods and training materials used.

TERMS AND CONDITIONS OF ACCESS

Registration is effective after validation of the prerequisites and receipt of the signed agreement. As the services are intra-company training, tailor-made, requests must be sent to our teams at least one month before the start of the training.

PRICE

From 1000 € HT per day of training (maximum 6 people).
Do not hesitate to ask us for a personalized quote based on your needs.

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