

# Offshore Wind – Subsea High Voltage Dynamic Inter Array Power Cable Internship Engineer - Paris (La Défense) Ref : 2H-INT-PAR-2022-1

2H Offshore ([www.2hoffshore.com](http://www.2hoffshore.com)) is seeking an enthusiastic, highly motivated Engineer student with an aptitude for analytical work for its development in Renewable Energy sector.

## Subject

With the expansion of Offshore Wind farms, floating offshore wind turbine will address new areas that will be deeper such as California and Mediterranean Sea. In addition, the size of wind farms, for cost optimization, will also increase and will request longer and deeper power cables. Therefore, the design of inter array cable will be a key element structuring the new offshore wind farms. New concepts shall then be developed. Based on its experience of underwater riser & flowline but also deepwaters projects, 2H is proposing an innovative IAC (Inter-Array Cable) configuration applied to offshore wind.

The goal of this internship is to work on an innovative design of sub-sea inter-array cable for offshore wind proposed by 2H Offshore. The aim of this design is to reduce cost and risk linked to IAC.

Integrated in our project team, this internship will participate to the different stages of the design including a large part of creation, basis of design, parametric analysis and operating analysis.

Main topics will include (but not limited to):

- State of the art of existing and coming projects
- Review of 2H existing concept and/or similar concepts
- Propose a preliminary configuration
- Perform an operational and risk analysis
- Developing numerical pilot system under Orcaflex
- Develop a case study for deep offshore wind farm applied to typical site such as California

## Requirements

The successful candidate will perform design activities including calculations, dynamic structural analysis, and system configurations for a variety of subsea structures. She/he will study acceptable structural and fatigue performance of the designs, whilst considering the functional, fabrication, installation, and in-service requirements. The role will also involve extensive communication of technical results and conclusions to other members of the team – including meetings, presentations, and the preparation of written reports, and other deliverables. 2H uses several software packages, from specialist riser analysis tools such as

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OrcaFlex and SACS to general-purpose finite element analysis and design tools such as ANSYS and Solidworks. Training will be provided throughout the process as required.

## Trainee's Profile

- Master's degree in mechanical, structural, ocean engineering, or a related discipline.
- Aptitude and enthusiasm for carrying out analytical work efficiently
- Excellent problem-solving skills
- Fluent in French and English
- Desire to take responsibility and ownership of tasks
- A desire to develop a career and expertise in the renewable industry
- Software experience with Microsoft Office, finite element analysis packages (e.g., ANSYS, Deeplines, Orcaflex, Flexcom), and some knowledge of computer programming is preferable (Python)

## 2HOffshore Offer

2H offers a vibrant work environment where technical excellence, operational delivery, continuous improvement, and teamwork are highly regarded. There is also plenty of opportunity for international travel (subject to COVID restrictions), career development, and broadening your horizons into different areas of engineering within 2H's business.

Position will be in 2H office in Paris La Défense.

In addition, we offer:

- Structured training
- Support with professional engineering qualifications
- Fun team atmosphere, team building and regular social events
- Work in an international environment
- Flexible working hours
- Wage according to French Regulations
- Reimbursement of Paris and suburbs public transportation (Pass Navigo)
- Days off according to French Regulations

## How to Apply & Conditions

- The present offer is opened to apply from 1<sup>st</sup> November to 15 December 2022
  - Offer is opened to EU Schools and universities
  - Minimum level degree is Master of Science degree level
  - Minimum duration of the internship is 6 Months
  - Tentative beginning of the internship is Q1 - 2023 depending on the school's calendar.
  - Application to [pierre.guerin@2hoffshore.com](mailto:pierre.guerin@2hoffshore.com) & [paris@2hoffshore.com](mailto:paris@2hoffshore.com)
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