

Congratulations to our students from AAU, Esbjerg, MSc. Risk & Safety Management

During this spring period of 2016, three students from Aalborg University, Esbjerg, MSc. Risk and Safety Management, 3rd Semester, have been observing and gaining technical knowledge in order to learn more on one of Ocean Team Windcare's key services; Offshore Oil Change, and to finish their 3rd semester project.

Their main focus: "*Operational Risk Management in Offshore Wind Turbine Oil Exchange*" resulted in a report, where the students; Numa Toro from Venezuela, Ludmila Kyselicova from Slovakia and Ole Bjørn Pedersen from Denmark, elucidate the operational risk by changing oil in offshore wind turbines.

The report is based on four different methods of oil change, whereof Ocean Team Windcare's SOCOT and SOCOT Flex state as two of these.

We hereby release sections from the students' concluding paragraphs to illuminate their opinions and results:

OPERATIONAL HAZARD IN OFFSHORE WIND TURBINE OIL EXCHANGE

3rd SEMESTER

MSc. Risk and Safety Management

Operational Risk Management in Projects

May 26th 2016



AALBORG UNIVERSITY
STUDENT REPORT

"Conclusion

Industrial processes are meant to continually evolve in order to not only improve its practices (more economic, faster, safer, etc.), but to adapt to the current tendencies.

The environment preservation is a matter that has gained importance exponentially in the past decades, where disasters have affected many communities as well as complete ecosystems. Alongside with this, there has been an increased awareness for the safety of personnel, performing risky activities such as the offshore environment offers..."

"...Oil exchange is an important maintenance task and should occur regularly throughout the lifetime of all wind turbines. It is essential in order to prolong the life cycle of wind turbine parts, resulting in less chance of breakdown, downtime and expensive corrective maintenance repairs."

"...After studying the risk involved in offshore wind turbine oil exchange, it is clear that there exist several comprehensive hazards within the process. However, these hazards can be mitigated by using appropriate technologies and methods."

"Analyzing and comparing three alternative oil exchange methods, it is evident from a system's point of view, that the SOCOT method from OTW is the simplest system and reduces a complicated process with many repeating process system elements.

However, SOCOTFlex offers more variability within time and project management, as well as offering a more flexible solution for far-offshore projects, which can be more attractive for many wind farm operators."

"The SOCOT and SOCOTFlex both have advantages and disadvantages in different aspects throughout the entire process. Nonetheless, overall they outperform current traditional methods such as canister and 400 L

tank methods from an operational point of view. Therefore, these methods can be recommended as a new de facto standard for oil exchange in the offshore wind energy industry."

Source: Student Report - Operational hazard in offshore wind turbine oil exchange_FULL.pdf - [contact auu](#)

*Ocean Team Windcare cannot be held responsible for the content of the report.

All questions regarding report or presentation need directed to AUU - <http://www.aau.dk/>