

ACFM® NodeScanner™



Deck Launched Critical Diverless Weld
Inspection for Offshore Wind Platform



CASE STUDY

Successful weld inspection carried out from the deck of an offshore wind platform using ACFM® NodeScanner™ demonstrates transferable skills and technology from O&G sector.

TSC Subsea was contracted by Ocean Breeze Energy GmbH (OBE), for selected weld subsea inspections at the BARD Offshore1 wind farm in the German Bight. Commissioned during 2010-2013, the wind farm consists of 80 5MW turbines and a single Offshore Substation Platform (OSP).

The primary weld inspection points were four overlapped node joints at a depth of -11.5m which must be inspected in line with current inspection concept of the jacket structure.

OBE, concerned for human safety, preferred a diverless inspection and where the entire campaign would be undertaken from the platform. The deck launched solution would eliminate both the expense of a vessel and divers resulting in a safer inspection and reduced cost.

TSC Subsea was selected for the work because of our world-leading position in carrying out

diverless robotic inspections and our expertise in platform-based inspections.

We deployed our field proven ACFM® NodeScanner™ for the project, making only minor modifications to tailor it to this specific structure.

The project was successfully completed to the satisfaction of the client. Performing all inspection works from the platform not only resulted in significant cost savings but using TSC Subsea's remote robotic inspection methods significantly improved safety because the inspection could be carried out without divers. Automated scanning also produced higher quality data for the client. OBE's project manager in charge, Viktor Ziegler, says:

"The data obtained by ACFM® NodeScanner are to our full satisfaction, enabling us to get a reliable proof of the absence of cracks at the selected weld regions of the underwater steel structure of the OSP. With TSC Subsea we found a reliable partner with whom we were able to complete the relevant offshore work in a safe manner, within the scheduled time frame and within the planned budget."

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This project demonstrated the versatility of TSC Subsea technology. The work which was carried out highlighted the many similarities between working on an offshore wind farm and the many projects previously undertaken in the O&G sector.

Wind farm owners and operators are looking for technology which can protect and monitor the condition of their assets in a safe and cost-effective way. This aligns with the services TSC Subsea provides. Our equipment and technology is readily transferable to this market and wind farm owner and operators can benefit from the very latest technology and techniques which we use to deliver cost effective, and safe, advanced inspections.



Figure 1: BARD Offshore1 Platform



Figure 2: ACFM NodeScanner performing inspection underwater

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