

**A REVIEW ON EXPERIMENTAL FATIGUE ANALYSIS OF TUBULAR
JOINTS FOR OFFSHORE WIND TURBINES**

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ABSTRACT

The scientific community is devoting more attention to the wide scope of offshore wind turbine structures. Since such structures are subjected to high level of fatigue loads as well as a large number of load cycles caused by wind, waves and turbine operation, the fatigue performance of welded connections is usually a design driving criteria.

In this paper, a brief review on experimental fatigue analysis of tubular joints of jacket structures is presented. Special emphasis is given to full-scale experimental testing on scope of offshore wind turbines. In order to face some of the challenges in this area of expertise, an experimental research plan within the framework of the Innovative Training Network (ITN) AEOLUS4FUTURE is introduced, aiming to understand and validate the fatigue performance of tubular joints produced by an automated process, using Tandem MIG/MAG welding.

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