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台灣離岸風電施工作業安全準則架構研析
Study of the Construction Operation of Safety and Health Guideline Framework for Taiwan Offshore Wind Farm

簡連貴[1]、陳碩霆[1]、蔡效廷[1]、房辰陽[1]、周顯光[2]、鍾承憲[2]、許顥騰[2]
[1]國立臺灣海洋大學河海工程學系
[2]財團法人船舶暨海洋產業研發中心
Lien-kwei Chien[1], S.-T. Chen[1], H.-T. Tsai[1], C.-Y. Fang[1],. S.-K. Chou[2], C.-H. Chung[2], H. T. Hsu[2]
[1]Department of Harbor and River Engineering, National Taiwan Ocean University
[2]Ship and Ocean Industries R&D Center
bigshow810211@gmail.com

摘要

台灣海域具有全球最佳的風場發電潛能，因此離岸風電是目前國家發展的重要目標，除增加新興再生能源產業之就業機會外，亦能減少對化石燃料與核能之依賴，但目前台灣本土之施工法規多數僅針對一般陸上施工作業撰寫，缺乏在離岸風電施工時可能涉及之潛水作業、高空作業及特殊工作環境因子的施工安全衛生管理相關規定。本研究參考國外先進國家離岸風電及海事工程之規範內容，並輔以國內現有相關施工安全法規及考量產業現況發展之能量，初步研析提出本土適用之離岸風電施工安全作業準則架構，本草案架構與撰寫方式主要參考國外先進法規之內容順序，主要包括行政規劃、人員培訓與機具操作、施工技術、風機設備、安全管理體系、工作環境因子、營運管理等均有說明，希冀適用於台灣離岸風電發展之現況，以期提供風電開發商或政府單位參考，做為推動後續離岸風電與海事工程施工安全法規的參考依據。

關鍵詞：離岸風電、施工作業、人員培訓、安全衛生準則架構

Abstract

Taiwan’s marine area is one of the most highly potential wind farms in the world. Developing offshore wind farm has become the most important targeted industry in Taiwan. What's more, developing wind farm can not only increase employment opportunities in the renewable energy industry, but decrease the dependence on fossil fuels and nuclear energy. However, the related Health and Safety Act now existing in Taiwan are more directed to onshore construction and lack of construction operation guideline of offshore wind farm, such as regulations about diving operations, working at high and specific working etc. environmental conditions’ factors. Therefore, in accordance with guidelines by advanced countries which equipped the advanced technology of marine engineering and those existing regulations in Taiwan, this study is proving to create a format which can be used to suit Taiwan’s environment and local construction. By referring to advanced legislations, the health and safety guideline framework are included in from the beginning administration plan, manpower training, construction technology, turbine equipment, safety management, working environmental factors and in-service inspection and maintenance in this study. It can be useful for the development of Taiwan’s offshore wind farm. In this case, the draft could become a reference for offshore industry’s development and public enterprises when they have questions about offshore wind farms and marine engineering’s safety problem.

Keywords: Offshore wind farm, Construction operation, Manpower training, Health and safety guideline framework.