公司報導

ABS 核發臺大浮式風機浮台設計 TaidaFloat 原則認可證書授證典禮

管理處

台灣國際造船股份有限公司和國立臺灣大學團隊（後稱臺大）合力研發的「臺大浮台」(後稱 TaidaFloat）之浮台結構和繫泊系統的設計已獲得美國船級社（後稱 ABS）的原則認可證書（如圖一），10 月 12 日在台船公司舉辦授證典禮，為台灣在離岸風電浮式風機領域寫下一個新的里程碑。

TaidaFloat 設計為承載 15 MW（兆瓦）離岸風機容量之浮式平台（如圖二），該設計其浮台結構是基於半潛式平台的設計概念，並已應用於石油和天然氣探勘產業中且獲得充分實證。TaidaFloat 浮台結構之外型具有獨特性，沒有弧形板或圓柱體之構件，均由平板接合而成（如圖三），由於平板易於使用半自動銲接，因此可將製造流

程充分簡化並縮短製造工時以形成量產規模。

TaidaFloat 計畫在 2021 年及 2022 年獲得科技部專案補助。由臺大、台船公司和船舶暨海洋產業研發中心（後稱船舶中心）進行合作，共同完成浮台前端工程設計。浮台結構和繫泊錨碇系統設計亦於 2023 年 9 月 27 日獲得 ABS 的原則認可證書肯定。

台船公司自 2020 年起即投入浮式風機領域的研究，並以產業界的視角從 2021 年起即在離岸風電各大國際論壇及研討會中發表關於工法、產能、產業供應鏈及基礎建設需求等重要議題之建議，並與數家投入浮式風機的潛力開發商在技術及生產方案有密切的交流。台船公司有百萬噸級大船塢，長度 950 米，寬度 92 米，及各式起重設備，具備生產 15 MW 離岸風機容量之浮式平台的設施條件，也是目前開發商認可極具潛力的浮式風機浮台生產廠商。台船公司將繼續攜手本土設計團隊，一起開創離岸風電浮式風機領域的新頁。

NTU and CSBC received AIP from ABS for their TaidaFloat design

CSBC Corporation, Taiwan (CSBC) and National Taiwan University (NTU) have received Approval in Principle (AIP) from American Bureau of Shipping (ABS) for the designs of TaidaFloat hull and mooring system, a floating platform capable of carrying offshore wind turbines up to a 15MW capacity.

design concept, which is well proven in the oil & gas industry. The hull design features a distinct shape, that is made of flat panels without any curved plates or round

columns. Such a feature significantly simplifies the fabrication process and shortens the construction time because of the ease of flat-plate welding. The design has many features, which can be seen in a video: TaidaFloat, a semisubmersible floating platform, for 15MW offshore wind turbines - YouTube.

The TaidaFloat project is funded by the Taiwanese government, National Science & Technology Council (NSTC) in 2021 and 2022. NTU teamed up with CSBC and Ship & Ocean Industries R&D Center (SOIC), and completed the Front End Engineering Design (FEED). The hull and mooring system design has gained an AIP from ABS on September 27, 2023.

The design team was led by NTU Professors, Chiang and Ma, and CSBC Vice President, Mike Chou. The next step is to build a prototype and install it offshore Taiwan. NTU has received a small fund from NSTC for developing the demo plan. To reach the ultimate goal, NTU is joining SOIC which is leading the effort in finding a test site and running a Joint Industry Project (JIP) to fund and execute a demo program with industry partners.