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NEWS RELEASE

新聞稿發佈

BH Global Successfully Delivered Singapore's first hybrid-powered ship –the "Penguin Tenaga" 明輝環球成功交付新加坡首艘混合動力船 - 企鵝泰納加號

Singapore, 8 April 2021 – Further to our press release on 11 February 2020 on the signing of MoU with several strategic partners, **BH Global Corporation Ltd** ("BH Global" or the "Group"), is pleased to announce the successful delivery of Singapore's first hybrid-powered ship –the "Penguin Tenaga". **新加坡，2021年4月8日**—明輝環球企業有限公司（簡稱"**BH Global**"或"集團"）繼2020年2月11日與幾個戰略合作夥伴簽署諒解備忘錄新聞稿之後，我們很榮幸地在此宣佈已成功交付新加坡首艘混合動力船—"企鵝泰納加號"。

Together with our project partners, Penguin International Limited ("Penguin"), Danfoss Power Solutions Pte Ltd, Durapower Technology (Singapore) Pte Ltd, ZF Asia Pacific Pte. Ltd. and Bureau Veritas ("BV"), this landmark shipbuilding project epitomises the cooperative 'can-do' spirit among like-minded innovators working together towards Singapore's future environmental sustainability. 這個具里程碑意義的造船專案，是我們與企鵝國際有限公司（簡稱" Penguin"），Danfoss 電力解決方案私人有限公司，Durapower 科技（新加坡）私人有限公司，ZF 亞太私人有限公司及 Bureau Veritas ("BV")，等幾位志同道合的創新者專案合作夥伴，共同為新加坡未來環境永續努力合作的「能幹」精神縮影。

Built, owned and operated by Penguin, the 15-metre aluminium monohull ship is Singapore's first hybrid-powered ship with BV's ZE (Zero Emission) class notation. The launch and commissioning of the "Penguin Tenaga" signifies the first step towards electrification of maritime vessels operating in Singapore waters.

這艘 15 米長的鋁殼船由企鵝公司建造、擁有和運營，是新加坡第一艘採用 BV ZE（零排放）級的混合動力船。"企鵝泰納加"號的下水和調試象徵著在新加坡水域作業的海事船隻已朝電氣化邁進了一大步。

The on-board electric-hybrid propulsion system supplied by BH Global's subsidiary, Sea Forrest Power Solutions Pte Ltd ("Sea Forrest"), was designed for ease-of-use, with an ergonomic graphic user interface and a feature that automatically switches the propulsion mode from diesel to hybrid to pure electric.

明輝環球子公司 Sea Forrest 電力解決方案有限公司（簡稱"Sea Forrest"）提供的車載油電混合動力推進系統是專為便於使用而設計，具有符合人體工學的圖形使用者介面和自動將推進模式從柴油切換到混合動力再到純電動的功能。

Significantly, the vessel is capable of running on pure battery mode at 5 knots for more than 30 minutes. The "Penguin Tenaga" will shortly be deployed to Pulau Bukom to join Penguin's fleet of workboats that are supporting Shell's island refinery operations.

特別值得一提的是，該船能夠在純電池模式下以 5 節的速度運行超過 30 分鐘。「企鵝特納加號」很快就會被調派到 Pulau Bukom 加入企鵝工作船隊去支援殼牌的島嶼煉油廠業務。

"The success of the "Penguin Tenaga" is a major milestone for BH Global and its strategic partners. We have embarked on this journey in support of Singapore's Sustainability and Environmental goals, in which we took the lead for the joint design, development, and construction of Singapore's first hybrid-powered vessel.

「企鵝泰納加號」的成功是明輝環球與其戰略合作夥伴的一個重要里程碑。我們已踏上支援新加坡永續發展和環境目標的旅程，為此我們率先共同設計、開發和建造新加坡第一艘混合動力船。

The International Maritime Organisation ("IMO") adopted an initial strategy to reduce, by 2050, Greenhouse Gas (GHG) emissions from shipping operations from 2008 levels by 50%. Singapore also pledged to reduce, by 2030, GHG emissions from 2005 levels by 36%. We will continue working towards our goal of providing solutions to lower emission footprint for coastal vessel owners and operators in Singapore and the regional waters." said Vincent Lim, Chairman of BH Global.

國際海事組織（簡稱「IMO」）通過了一項初步戰略，在 2050 年之前將船舶的溫室氣體(GHG)排放量從 2008 年水準減少 50%。新加坡還承諾在 2030 年之前將溫室氣體排放量自 2005 年水準減少 36%。我們將繼續朝向我們為新加坡和附近水域的沿海船舶船東和運營商提供減少排放足跡的解決方案目標努力。」明輝環球主席林翔寬先生說。

Penguin's Managing Director Mr James Tham said, "It is especially heartening to work with fellow homegrown companies like BH Global and Sea Forrest to deliver Singapore's first hybrid-powered ship."

企鵝董事總經理 James Tham 先生表示：「與像明輝環球和 Sea Forrest 這樣的本土公司合作，交付新加坡首艘混合動力船，尤其令人振奮。」

"Sea Forrest is a truly competent and creative provider of hybrid solutions, ranging from hardware to software," Mr Tham added.

「Sea Forrest 是一家真正有能力和具創造性的混合解決方案供應商，從硬體到軟體不一而足。」Tham 先生補充道。

Understanding the importance of sustainability and environmental targets coupled with the extensive technical knowhow and experience learnt from this maiden project, Sea Forrest is working towards the vision of contributing to Zero Emission targets. Building on the success of the "Penguin Tenaga", Sea Forrest is developing a "Full Electric Ready" system that will enable electric-hybrid vessels to transform into pure electric vessels with minimal modifications in the future. Sea Forrest is also trialling a plug-and-play quick-charging system capable of charging multiple vessels simultaneously rapidly.

Sea Forrest 瞭解永續和環境目標的重要，加上從此一處女專案中學到的廣泛技術知識和經驗，正為實現零排放目標的願景而努力。在「企鵝特納加號」的成功基礎上，Sea Forrest 正在開發

一種「全電動」系統，該系統將使電動混合動力船能夠在未來以最小的改裝方式轉變為純電動船。Sea Forrest 還正在試用一種隨插即用的快速充電系統，能夠提供多艘船隻同時快速充電。

"We aim to achieve a complete eco-system for Singapore's electric-hybrid and pure electric propulsion systems, ranging from shore chargers to on-board systems," said Mr George Lee, CEO of Sea Forrest.

Sea Forrest 首席執行官 George Lee 先生說，「我們的目標是為新加坡的電動混合動力和純電動推進系統實現一個完整的生態系統，從岸上充電器到車載系統。」

"Electrifying harbour craft vessels operating in and around Singapore waters will significantly help to reduce Singapore's emissions footprint. Equipped with the technical knowhow and relevant experience, BH Global, together with our subsidiary Sea Forrest, will endeavour to participate in and contribute towards realising this national vision." Mr Vincent Lim added.

「對新加坡水域周圍的港口船隻進行電氣化，將有助於大量減少我國的碳排放足跡。憑藉技術知識和相關經驗，明輝環球將與我們的子公司 Sea Forrest 一起，努力參與並致力於實現此一國家願景。」林翔寬先生補充說。

Sea Forrest will continue to spearhead further collaboration with owners, operators, suppliers and the authorities and drive initiatives towards the electrification and digitalisation of vessel operations. The Sea Forrest Marine Electric Integration Centre ("MEIC") - a Complete System Verification Facility launched in 2019, provides research and development, with Testing and Certification capabilities, to customise Hybrid/Full electrification designs for a wide range of marine vessel types.

Sea Forrest 將繼續帶頭與船東、運營商、供應商和政府當局進一步合作，推動船舶運營電氣化和數位化。Sea Forrest 海洋電氣整合中心 ("MEIC") 已於 2019 年啟動完整的系統驗證設施，具有測試和認證功能的研發能力，可為各式船舶提供量身訂製混合/全電氣化的設計。

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About BH Global Corporation Limited (Bloomberg Code: BHGM.SP)

關於明輝環球企業有限公司 (Bloomberg 代碼：BHGM.SP)

BH Global Corporation Ltd is an established group providing solutions internationally through five key divisions: Electrical and Technical Supply, Green LED Lighting, Integration Engineering, Cyber Security and Infrared Thermal Sensing Technology.

明輝環球企業有限公司是一家歷史悠久的集團，通過包括電氣和技術供應、LED 環保照明、整合工程、網路安全和遠紅外線熱感應技術等五個主要部門提供國際化解決方案。

The Group is focused on continual transformation through sustainable Digitalization, Electrification and Environmental initiatives.

本集團致力於透過可持續的數位化、電氣化和環境方案不斷轉型。

For more information, please refer to the website, www.bhglobal.com.sg

如欲瞭解更多資訊，請參閱網站 www.bhglobal.com.sg

About Sea Forrest Power Solutions

關於 Sea Forrest 動力解決方案

Sea Forrest Power Solutions Pte Ltd, an 80%-owned subsidiary of BH Global, from the Integrated Engineering Division, focuses on driving the growth of Marine Electrification business by providing electrification solutions coupled with increased efficiency of electrification process - lower turnaround time which is crucial for the mass deployment of electrification technology on vessels.

Sea Forrest 電力解決方案私人有限公司是明輝環球持股 80%的子公司，來自整合工程部門，專注於通過提供電氣化解決方案及提高電氣化過程效率來推動海洋電氣化業務發展，以降低周轉時間，這對在船舶上大規模部署電氣化技術至關重要。

For more information, please refer to the website, www.seaforrest.com

如欲瞭解更多資訊，請參閱網站 www.seaforrest.com

About Penguin International Limited

關於企鵝國際有限公司

Penguin International is a Singaporean homegrown, publicly listed designer, builder, owner and operator of aluminium high-speed crafts. Through a group of wholly owned, integrated subsidiaries, Penguin International operates a fleet of crewboats and passenger ferries, as well as shipyards in Singapore and Batam, Indonesia. Penguin International serves customers worldwide.

企鵝國際是一家新加坡本土公開上市的鋁殼高速快艇設計公司，製造商，船東和運營商。企鵝國際透過一個全資擁有的綜合子公司集團，經營一個交通輪和客輪船隊，及新加坡和印尼巴淡島的船廠。企鵝國際為全球客戶提供服務。

Since 1995, Penguin International has delivered more than 200 aluminium workboats, patrol crafts and passenger ferries to ship owners around the world, including over 150 of its proprietary-designed Flex offshore crewboats and armoured security boats.

自 1995 年以來，企鵝國際公司已向世界各地船東交付了 200 多艘鋁製工作船，巡邏艇和客輪，其中包括 150 多艘專利設計的 Flex 海上交通輪和武裝海警船。

For more information, please refer to the website, <http://www.penguin.com.sg>

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