



Joint press release  
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## **Concept Design and Engineering for World's first Pure-Electric tanker completed**

Asahi Tanker Co. Ltd, together with its partner Exeno-Yamamizu Corporation Tokyo, has jointly developed the new domestic shipping tanker design which incorporates “zero emission electric propulsion”.

In anticipation of future adaptations to regulatory conformity ClassNK has been appointed to make technical advice on ship design and electric propulsion.

Commercial model development of “e<sup>5</sup>” design is underway for all bunker supply vessels trading in Tokyo Bay. The target of the first vessel launching is set for quarter four 2020. The project is also working for creating “e<sup>5</sup>” coastal vessels which would require longer cruising range.

The “e<sup>5</sup>” concept creates solutions to issues such as shortage of crews, vessel demand balance and environmental regulation thus contributing to the sustainability of the domestic shipping industry. The project is confident that by utilizing the “e<sup>5</sup>” concept of ocean transport that a stable energy supply will be achieved enriching people's lives and adding value to each client.



The new vessel design and related project infrastructure development will be known as “e<sup>5</sup>” which captures the five core elements of;

1. Electrification

The ship's core energy source will be electricity, achieved by way of adopting lithium-ion batteries.

2. Environment

Emission controls such as CO<sub>2</sub>, NO<sub>x</sub>, SO<sub>x</sub> together with minimizing noise and vibration along with improvements in vessel operation environmental controls at sea and in port.

3. Economics

Achieving economic efficiency through installment of IoT and digital tools coupled with improved propulsion performance from using electricity.

4. Efficiency

Simple hull construction and installment of automated equipment can reduce work load for the crew.

5. Evolution

Digitalization and technological advancement leading to the most advanced design concept for the future of domestic shipping.

**【e<sup>5</sup> vessel outline】**

(1) Total length: 60.00 m

(2) Overall width: 10.30 m

(3) Propulsion machinery: 2 x 350 kW azimuth thruster, 1 x 130 kW bow thruster

(4) Gross tonnage: 499 tons

(5) Cargo tank capacity: Approximately 1,300 cubic meters

(6) Vessel registration: Japan

(7) Concept designer: Groot Ship Design (Hull)

Kawasaki Heavy Industries, Ltd. (Power Plant)





### **【Company outlines】**

Asahi Tanker Co., Ltd.

We are a shipping company mainly involved in the transportation of oil related products. In dealing with such products which are indispensable for daily living, and dangerous goods, we provide both foreign and domestic services by considering the global environment and safety measures as a top priority. Asahi Tanker Co., Ltd. will be in charge of the operation and management of the e5 vessels.

Exeno-Yamamizu Corporation.

We are a shipbroking and cargo broking agent in Japan. In recent years, we have expanded our focus into green business sectors such as LNG chartering and clean energy marine equipment sales. Exeno-Yamamizu Corporation is acting as project manager, shipbuilding development consultant, ship equipment sales consultant and infrastructure development coordinator for the e5 vessels project.

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