News Release

DAIHATSU INFINEARTH MFG.CO.,LTD.

November 6, 2026

AiP Obtained for Methanol Dual-Fuel Engine Boosting Pump Configuration

We are currently developing a methanol dual-fuel engine with the first commercial unit scheduled for delivery in 2027.

This engine adopts an engine-mounted methanol boosting pump configuration, in which the methanol fuel is pressurized to the required injection pressure (several tens of MPa).

This design significantly reduces the methanol fuel pressure from the fuel preparation room to the engine.

In adopting this configuration, we engaged in extensive consultations with ClassNK and DNV regarding the necessary safety measures, including mitigation of the risk of methanol fuel leakage from the boosting pump. As a result, we have obtained Approval in Principle (AiP) from both classification societies for the design outlined below.

We will continue to advance the development of engines compatible with next-generation fuels, contributing to the realization of zero emissions and decarbonization in the international maritime industry while supporting safe and secure lives for people and helping build a sustainable society.



ClassNK
NIPPON KAIJI KYOKAI

Document No. KC26MM0353-HI
Date: 6 August 2026

APPROVAL IN PRINCIPLE

Safety Concept for Methanol Dual Fuel Engine
developed by DAIHATSU INFINEARTH MFG. CO., LTD.

THIS IS TO CERTIFY THAT Approval in Principle is granted to DAIHATSU INFINEARTH MFG. CO., LTD.

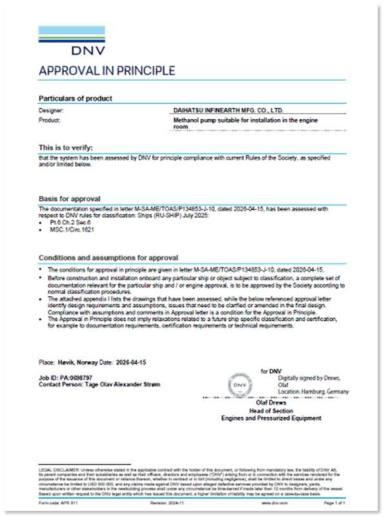
The AiP is for the Safety Concept of Methanol Dual Fuel Engine based on "Guidelines for Ships Using Alternative Fuels: Part A Guidelines for Ships Using Methyl, Ethyl Alcohol as Fuel (Edition 3.1.1)", "Annex 1.1.1-3, Part GF of NK Rules (based on IACS UR M78 Rev.2)" and other applicable class Rules.

The documents specified in the annex of this AiP have been reviewed, and it has been verified that the design and development concept of the methanol dual engine is feasible for the intended application.

Conditions on this approval are set out in the annex of this AiP.

For the final approval of the engine, a complete set of documentation is to be approved by the Society in accordance with relevant class rules.

(Taro Okamoto)
General Manager of Machinery Department
NIPPON KAIJI KYOKAI



DNV

APPROVAL IN PRINCIPLE

Particulars of product

Designer: DAIHATSU INFINEARTH MFG. CO., LTD.
Product: Methanol pump suitable for installation in the engine room

This is to verify:

that the system has been assessed by DNV for principle compliance with current Rules of the Society, as specified and/or limited below.

Basis for approval

The documentation specified in letter M-SA-ME/TOAS/P134853-J-10, dated 2026-04-15, has been assessed with respect to DNV rules for classification: Ships (RU-SHIP) July 2025:

- Pt.6 Ch.2 Sec.6
- MSC.1/Circ.1621

Conditions and assumptions for approval

- The conditions for approval in principle are given in letter M-SA-ME/TOAS/P134853-J-10, dated 2026-04-15.
- Before construction and installation onboard any particular ship or object subject to classification, a complete set of documentation relevant for the particular ship and / or engine approval, is to be approved by the Society according to normal classification procedures.
- The attached appendix I lists the drawings that have been assessed, while the below referenced approval letter identify design requirements and assumptions, issues that need to be clarified or amended in the final design. Compliance with assumptions and comments in Approval letter is a condition for the Approval in Principle.
- The Approval in Principle does not imply relaxations related to a future ship specific classification and certification, for example to documentation requirements, certification requirements or technical requirements.

Place: Høvik, Norway Date: 2026-04-15

Job ID: PA.0008797
Contact Person: Tage Olav Alexander Strøm

for DNV
Digitally signed by Drewe, Olaf
Location: Hamburg, Germany
Olaf Drewe
Head of Section
Engines and Pressurized Equipment

AiP certificate : ClassNK

AiP certificate : DNV

・ClassNK : Safety Concept for Methanol Dual Fuel Engine developed by DAIHATSU INFINEARTH MFG. CO., LTD.

・DNV : Methanol pump suitable for installation in the engine room

【Contact Information】

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