



NIPPON KAIJI KYOKAI

No. KB23WD00010

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Independent Assurance Statement GHG emissions intensity for the fiscal year 2022

NIPPON KAIJI KYOKAI (“the Society”) was commissioned by Mitsui O.S.K. Lines (“the Company”) to provide independent assurance on the Company’s GHG emissions intensity of transportation by vessels operated by the Company in the fiscal year 2022 (April 1, 2022 - March 31, 2023).

Procedures Performed

The following procedures were carried out for this assurance engagement:

- Verifying the datasets in the business form (“the GHG emissions datasets”) submitted by the Company on a sample basis; and
- Verifying the calculation procedure of GHG emissions intensity undertaken by the Company.

Note: Energy Efficiency Operational Indicator (EEOI) is used as a metric to measure GHG emissions intensity. GHG emissions identified herein are lifecycle GHG emissions that is calculated in accordance with the Global Logistics Emissions Council Framework for Logistics Emissions Accounting and Reporting (Ver. 2.0). The company-wide average GHG emissions intensity values are obtained by two methods: a value obtained by weighting the EEOI of each voyage by the ton-miles of the same voyage (“Reference Method”), and a value obtained based on the percentage increase or decrease from the base year GHG emissions intensity of each segment, developed by the Company (“Standard Method”). Typical EEOI values for each segment differ significantly from segment to segment due to differences in weight per transport volume, as also recognized in the Fourth IMO GHG Study 2020. The company-wide average GHG emissions intensity value obtained by the Reference Method is significantly affected by the EEOI values of segments with large portfolios, whereas the value obtained by the Standard Method reflects rates of change in GHG emissions intensity for each segment in the company-wide average GHG emissions intensity, independent of differences in the size of the portfolios of each segment¹. For the Reference Method, the scope of GHG emissions intensity and its calculation procedures are the same as those for the GHG emissions intensity for the fiscal year 2019 as referred to in the “MOL Group Environmental Vision 2.1 and 2.2”. On the other hand, the Standard Method has the same scope of calculation as the GHG emissions intensity for the fiscal year 2019 as referred to in the “MOL Group Environmental Vision 2.1 and 2.2”, but only the calculation method has been modified to the Standard Method described above.

Conclusion

The appropriateness of the GHG emissions datasets submitted by the Company and the GHG emissions intensity of transportation for the fiscal year 2022 calculated by the Company based on the GHG emissions datasets has been ensured by the Society.

**GHG emissions intensity
for the fiscal year 2022**

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10.32
gCO_{2e}/ton-mile
10.81
gCO_{2e}/ton-mile

Company-wide average value obtained based on the percentage increase or decrease from the base year (Standard Method)
Company-wide average value obtained by weighting the EEOI of each voyage by the ton-miles of the same voyage (Reference Method)

Responsibilities

The responsibility for the preparation of the GHG emissions datasets and the calculation of GHG emissions intensity rests with the Company, while the responsibility for the assurance about the appropriateness of the GHG emissions datasets and the calculated GHG emissions intensity rests with the Society.




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¹ The annual EEOI average values by segment for the fiscal year 2019 (base year) and 2022 were obtained by weighting the EEOI values for each voyage by segment with the ton-miles of the same voyage conducted in 2019 and 2022, respectively. Then, the percentage change from the base year GHG emissions intensity of each segment were identified. The percentage change by segment is weighted by the energy consumption of the same segment in the fiscal year 2022, and then multiplied by the 2019 GHG emissions intensity of the fiscal year 2019 to obtain the GHG emissions intensity for the fiscal year 2022. Energy consumption is calculated in accordance with the 2022 Guidelines on the method of calculation of the Attained Energy Efficiency Design Index (EEDI) for new ships (Resolution MEPC.364(79)) (IMO EEDI Guidelines).

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