PRESS RELEASE

Calculation programs developed by OCTARVIA Project released

National Maritime Research Institute, National Institute of Maritime, Port and Aviation Technology (NMRI, Director General, Akinori Abe) has released the calculation programs developed by Japan Maritime Cluster Collaborative Research on Evaluation of Ship Performance in Actual Seas "OCTARVIA Project" on March 31, 2022. These will be widely used as a "Scale" in Japan and overseas, and we will promote to build and operate ships with high performance in actual seas.

Japan Maritime Cluster Collaborative Research on Evaluation of Ship Performance in Actual Seas "OCTARVIA Project" was carried out from October 2017 to March 2021 with the 25 organizations in the Japanese maritime industry, and calculation programs was developed to evaluate the ship performance in actual seas through validations by a large number of ship monitoring data, wind tunnel tests, and tank tests with round robin tests. NMRI has opened the programs to public via the NMRI Cloud service to Japan and overseas, and we will promote to build and operate ships with high performance in actual seas.

The following three programs have been released, and all of them can be used in the limited version (free version) and the full version (paid version).

(1) Calculation program to predict the ship performance in actual seas and evaluate the life cycle fuel consumption: OCTARVIA-web

(2) Calculation program to analyze the ship monitoring data: SALVIA-OCT.-web

(3) Calculation program to estimate the hull form and the calm sea performance from the principal dimensions which is used for the input data of the above programs: EAGLE-OCT.-web

The features of each program are as follows. In addition, each program operates in cooperation with input and output.

(1) OCTARVIA-web (*See* attachment 1)

➢ Users can evaluate the economy of a ship and the energy-saving technologies based on the life cycle fuel consumption.

➢ Users can examine EEXI (*1) and CII (*2) for each individual ship, analyze the influence by winds and waves in the operating condition, and evaluate the operation plan such as the route and maintenance by implementing the world's highest accurate performance model in actual seas (*3).

➢ Even shipping company users who do not have detailed hull data can evaluate the ship performance in actual seas by connecting with EAGLE-OCT.-web and SALVIA-OCT.-web.

(2) SALVIA-OCT.-web (*See* attachment 2)

➢ Users can obtain calm sea performance (relation between ship speed, engine speed and engine output), since the program implements a data filtering function and a wind/wave correction function for ship monitoring data.

➢ Users can analyze ship monitoring data with high objectivity and no arbitrariness by the quality assessment for the obtained calm sea performance.

(3) EAGLE-OCT.-web (*See* attachment 3)

  ➢ Users can estimate the waterline shape, cross section data and the calm sea performance from the ship type (select from container ship, pure car carrier, bulk carrier and tanker) and principal dimensions. These data are required for the input of OCTARVIA-web and SALVIA-OCT.-web.

  ➢ Even shipping company users who do not have detailed hull data can evaluate the ship performance in actual seas.
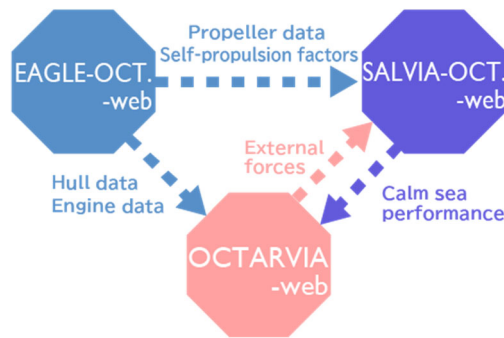
Cooperation between each program

Please apply from the NMRI Cloud service (https://cloud.nmri.go.jp/portal/pub/top).

The usage fee for the full version is as follows.

Usage fee for the full version

Name of program	6 months usage	12 months usage
OCTARVIA-web	225,000 yen	300,000 yen
SALVIA-OCT.-web	225,000 yen	300,000 yen
EAGLE-OCT.-web	112,500 yen	150,000 yen

* Consumption tax is required for Japan residents.

*1 EEXI (Energy Efficiency Existing Ship Index) is an index for operating ships, and will be regulated in 2023 as part of measures to prevent global warming from ships.

*2 CII (Carbon Intensity Indicator) is a rating system for ships, and will start in 2023 as part of measures to prevent global warming.

*3 Each prediction method for wind forces and added resistance in waves is recognized as the most accurate method through the validation study at International Towing Tank Conference (an international organization which predicts the hydrodynamic performance of ships and marine installations by physical and numerical experiments). The programs implement the methods developed by NMRI.
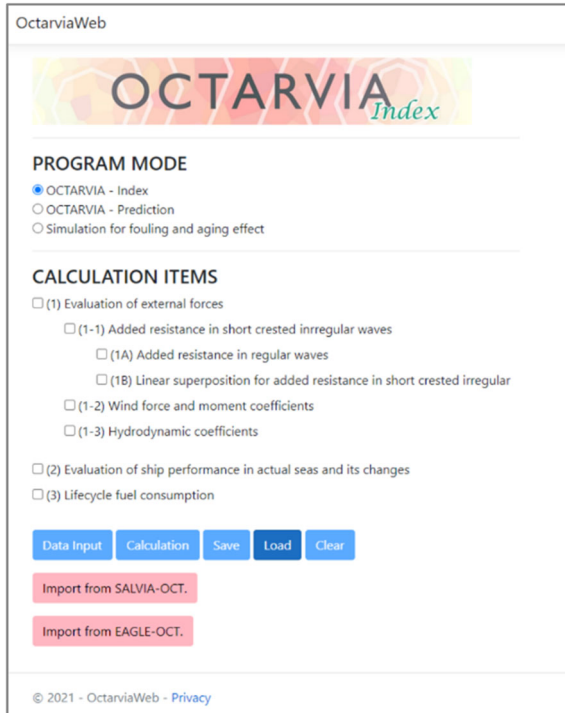
OCTARVIA-web
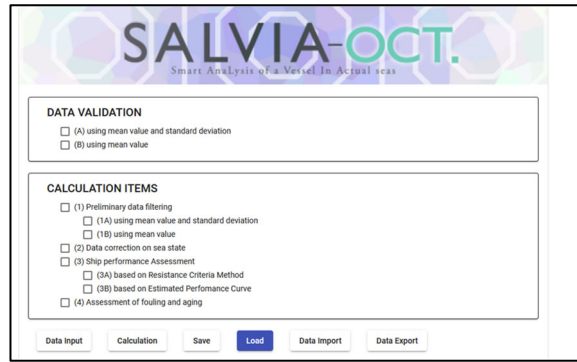
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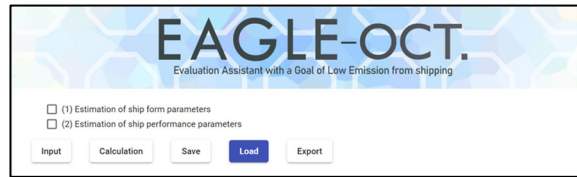
EAGLE-OCT.-web

Display on NMRI Cloud service

Attachment 1 Introduction of OCTARVIA-web

Attachment 2 Introduction of SALVIA-OCT.-web

Attachment 3 Introduction of EAGLE-OCT.-web

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