



# 日本油化工業株式会社 NIPPON YUKA KOGYO CO., LTD.

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## NYK and Nippon Yuka Kogyo Develop New Additive

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Nippon Yuka Kogyo Co., Ltd.

NYK

Nippon Yuka Kogyo Co., Ltd., an NYK Group company, and NYK have jointly developed a new fuel-oil additive effective in dispersing sludge\* and reducing fuel consumption in VLSFO (very low sulfur fuel oil; sulfur content below 0.5%).

### Background

Nippon Yuka Kogyo and NYK have been investigating the properties of VLSFO as one of the measures to comply with SOx emission requirements,\*\* and in 2019 developed the sludge-dispersing fuel oil additive Yunic 800VLS.\*\*\*

We observed Yunic 800VLS is effective against most of deteriorated compliant fuel oil, and with taking account into present fuel problem situations, we feel our main target needs to be changed to reduction of fuel for contribution of environmental protection, from sludge trouble prevention.

Since we were aware of it, the both companies had been developing Yunic 800VLS “grade-up” version, which is having not only more powerful sludge dispersion characteristics to cover the rest of stubborn deterioration fuel, but fuel consumption reductions.

### About Yunic 800Eco

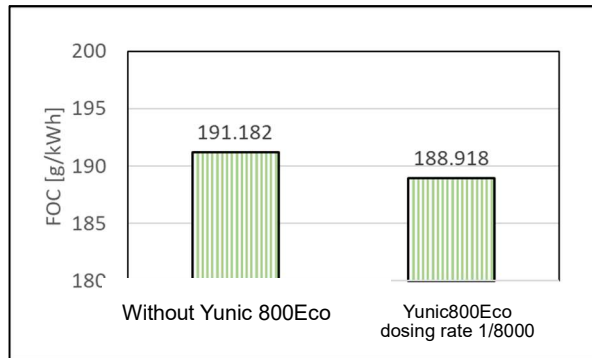
Yunic 800Eco enhances sludge dispersion and improves combustion. In three fuel consumption ratio reduction tests conducted with compliant fuel oils in Japan and overseas, we observed fuel consumption was reduced by up to 1.2% compared to when the additive was not used, and carbon monoxide (CO) emissions were also reduced.



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Sludge Trouble



Fuel consumption test results

## Future Development

We will continue to work to develop additives that are more fuel-efficient and versatile, while maintaining the current sludge dispersion effect, and contribute to the reduction of CO<sub>2</sub> emissions from ships.

In February 2021, NYK released the “NYK Group ESG Story,” which aims to further integrate ESG into the company’s management strategy and promotes activities that contribute to the achievement of the SDGs through business activities. In March this year, NYK released the updated “NYK Group ESG Story 2022,” which introduces initiatives for integrating ESG into the Group’s management strategies set forth in the “NYK Group ESG Story” and provides a partial explanation of the Group’s sustainable growth strategy from a long-term perspective. To strongly promote ESG management, NYK will actively engage in research and development for environmental conservation.

<NYK Group ESG Story>

A guideline detailing concrete efforts to integrate ESG principles into management strategies of the NYK Group. Details: <https://www.nyk.com/english/esg/esg-story/>

<The NYK Group ESG Story 2022>

Details: [https://www.nyk.com/english/news/2022/20220324\\_01.html](https://www.nyk.com/english/news/2022/20220324_01.html)

\* Solids generated in fuel oil that can clog filters

\*\* An international regulation that mandates a reduction in the sulfur content of fuel oil for ships from the current 3.5% or less to 0.5% or less from January 2020 onward



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\*\*\* Fuel oil additive that efficiently disperses the unique components (asphaltenes and waxes) contained in compatible fuel oils and is effective in inhibiting solidification. Patented.

[https://www.nipponyuka.co.jp/sludged\\_dispersant.html](https://www.nipponyuka.co.jp/sludged_dispersant.html)

### <Nippon Yuka Kogyo Co., Ltd.>

Head office: Yokohama

President: Kobune Goto

<https://www.nipponyuka.co.jp/>

### <NYK's Efforts to Prevent Air Pollution and Global Warming>

<https://www.nyk.com/english/esg/envi/warming/>