

Environment

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- Initiatives to Reduce Waste and Resource Usage Charges

Co-creation with External Parties

- Participation in Ship Recycling Information Disclosure Platform
- Recycling of Used Vehicle Lashing Belts on Pure Car and Truck Carriers Commenced

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The NYK Group is advancing its initiatives by striving to collaborate with diverse stakeholders throughout the value chain, working to conserve resources and energy, reduce waste and recycle, encouraging responsible ship recycling in a transparent manner that takes safety, the environment, and human rights into consideration in ship recycling, and stipulating our commitment to the circular economy in the "NYK Group Environmental Policy."

Organization

Please see "Environmental Management" for the governance structure of environment-related issues.

For more information, click on the link below.

[P.030 Environmental Management](#)

Strategies and Risk Management

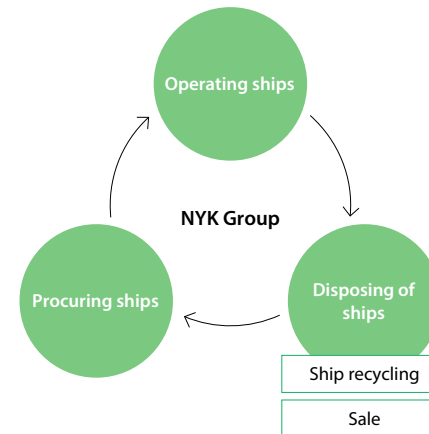
In our marine transportation business, we are pursuing initiatives with an eye on the circular economy at every stage of our operations, including "procuring ships," "operating ships," and "disposing of ships."

Ships contain a large amount of high-quality steel materials, and more than 90% of the medium or large sized ships are recycled on a weight basis. Appropriate disposal of these valuable recyclable resources is important for the realization of a circular economy.

Ahead of entering the Ship Recycling Convention, we have incorporated the convention's standards and created a list of hazardous substances used on board our ships. In addition, we are

working on ship recycling in certified yards that meet our standards, taking into consideration environmental measures, occupational health and safety, and respect for human rights.

Image of the Circular Economy



Flow of Ship Recycling



For more information, click on the link below.

[P.061 Ship Recycling](#)

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Ship Recycling

• Towards Enactment of Hong Kong Convention

Environmental pollution and industrial accidents in India, Bangladesh, and other countries in which vessels are dismantled, became an international concern in the 1990s. Subsequently, as a major shipbuilding and shipping nation, Japan focused on creating an international framework for solving this issue under the International Maritime Organization (IMO), resulting in the adoption of the Hong Kong Convention in 2009.

Since then, to build momentum for the early entry into force of the Convention, we have been a pioneer in incorporating the Convention's standards and working to establish the Convention as a standard among all stakeholders in ship recycling. With the expectation that Bangladesh, the world's largest vessel dismantling country, will ratify the convention, we began dismantling a vessel owned by our group at a yard in Bangladesh, and became the first Japanese shipping company to do so. Dismantling of the vessel was successfully completed in June of that year.

In June 2023, the conditions for the treaty's entry into force were met following ratification by Bangladesh and Liberia, a country with a large number of flag-of-convenience ships.

India has also ratified the Hong Kong Convention in 2019. Prior to this, in 2016, Japan Marine Science Inc., a member of the NYK Group, had provided consulting services to 70 ship-recycling yards in India. The consulting included civil engineering work for renovation, selection of equipment such as waste incinerators and hazardous material treatment equipment, assistance in bidding, and assistance in construction management in the "Preparatory Survey on the Ship Recycling Yard Improvement Project in India" conducted by JICA.

Although the Ship Recycling Convention came into effect in

June 2025, we continue to regularly visit recycling countries as we have done in the past. Through on-site inspections of yards, we seek to promote understanding of our certification standards, while working to maintain the quality of our certified yards and expand the number of yards certified by our company.

*Flag-of-convenience ship: A ship registered in a flag-of-convenience country (such as Panama or Liberia) that allows ships owned by foreign individuals or corporations to be registered.

For more information, click on the link below.

P.062 Bangladesh Ship Recycling Yard Added to NYK's Certified Yards

• Our Ship Recycling Policy

We implemented the following ship recycling policy prior to the Convention's ratification, and we continue to enhance our efforts by conducting ship dismantling at our certified yards and monitoring the process to exceed the Convention's standards.

Ship Recycling Policy

- An inventory of hazardous materials (IHM*) is to be prepared for all ships owned by NYK and its group companies and kept on board.
- We will visit yards that have been issued a Document of Authorization to Conduct Ship Recycling (DASR*) and assess them based on the presence of a Statement of Compliance under the convention issued by the classification society, as well as ISO 14001/9001/30000/45001 certifications. Yards will be certified by us only if they meet our own standards.
- We will periodically visit our certified yards to confirm that the level of occupational safety and health, environmental protection, and respect for human rights is maintained in accordance with our standards.
- We will fully monitor the entire ship recycling process after delivery to the yard to ensure that safety, environmental, and human rights measures are properly implemented in accordance with our own contract format.

*1 IHM (Inventory of Hazardous Material): A list detailing the location and approximate quantities of hazardous materials, waste and stockpiles on board

*2 DASR (Document of Authorization to Conduct Ship Recycling): A certificate that verifies a yard's compliance with the Ship Recycling Convention.

Link For more information, click on the link below.

- ▶ **List of our certified yards**
<https://www.nyk.com/sustainability/pdf/environment012.pdf>
- ▶ **NYK's Ship Dismantling Performance**
<https://www.nyk.com/sustainability/pdf/environment013.pdf>

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● Bangladesh Ship Recycling Yard Added to NYK's Certified Yards

NYK has added the PHP Ship Recycling Facility (hereinafter "PHP Yard"), a ship recycling yard operated by PHP Ship Breaking and Recycling Industries Ltd. in Bangladesh, to the list of certified yards that meet NYK's standards for environmental measures, occupational health and safety, and respect for human rights in December 2022.

The NYK Group deploys supervisors to ship recycling yards that have been issued a certificate of compliance under the Convention by Nippon Kaiji Kyokai or other organizations. If the yard passes an audit based on NYK's own stricter standards, it is certified as an NYK-approved yard, and NYK Group-owned vessels are dismantled at that facility. While yards in India and Turkey have previously been certified, PHP Yard is the first ship recycling yard in Bangladesh to become our certified yard.

In March 2023, NYK Group's NYK Bulk & Projects Carriers Ltd. brought its heavy lifter named "Kamo," to the PHP yard, and successfully completed the dismantling of the ship in June of the same year. The Bangladesh government ratified the Hong Kong Convention on June 26 of the same year, and this is the first time a Japanese shipping company has conducted vessel dismantling at a yard in the country that meets the standards of the Hong Kong Convention.

In addition to supervisors from NYK SHIPMANAGEMENT PTE LTD, a member of the NYK Group, NYK dispatched navigation officers and engineers to oversee the recycling of the vessel. They ensured that hazardous substances, including bunker oil, were properly managed and that safety procedures for ship recycling were strictly followed, while also providing guidance for continuous improvement. As a result, the recycling was completed without any accidents or incidents. We also confirmed that human rights were thoroughly respected through human rights due diligence

conducted by a third party, following the UN Guiding Principles on Business and Human Rights.

● Future-Oriented Green Ship Recycling Project

The NYK Group is working in collaboration with Ohno Development Co., Ltd., a company engaged in onshore dismantling and industrial waste treatment, to study the "Future-Oriented Green Ship Recycling" project.

Amid the global shift toward green transformation—transitioning from fossil fuels to clean energy—the steel industry is moving from blast furnaces that use iron ore to electric furnaces that use steel scrap. As a result, global demand for steel scrap is expected to increase, and there are concerns about a future shortage of high-quality scrap with clear traceability and low impurity levels.

This project aims to provide an integrated service from ship dismantling to industrial waste treatment, with full consideration for occupational health and safety, environmental protection, and human rights. In 2024, NYK and Ohno Development signed a memorandum of understanding to jointly explore the commercialization of ship recycling at a dry dock owned by Ohno Development in Chita City, Aichi Prefecture. The facility is capable of handling vessels and large structures of all sizes. After operations begin in 2028, the project aims to dismantle 20 vessels annually and supply approximately 300,000 tons of high-quality steel scrap per year. This would represent a processing capacity about seven times greater than that of existing ship recycling operators. The project also aims to achieve zero environmental pollution through strict waste management during the dismantling process and to contribute to sustainable energy supply by installing a high-efficiency waste-to-energy incineration facility that uses waste as a power source.

While the project faces many challenges, NYK will continue to work with partners across various industries to realize a circular

economy for ships and contribute to building a sustainable society for future generations.

Circular Economy in Space

Satellites have become essential for communications and data collection, and the development of satellite constellations that cover the entire Earth is rapidly progressing. To meet the growing demand for satellite launches, the reuse of rockets has become a critical challenge. The NYK Group was the first shipping company selected for the Space Strategy Fund project by the Japan Aerospace Exploration Agency (JAXA), and is currently engaged in the development of vessel technologies that enable the recovery of rocket first stages at sea. Reusing recovered rockets will help reduce both manufacturing costs and lead times.

At the same time, the increase in satellites has led to a growing concern over space debris. Currently, tens of thousands of large debris objects are orbiting Earth, posing a significant collision risk to satellites. To address this issue, Astroscale Japan Inc. is developing satellites for debris removal. Through its partnership with Astroscale, NYK Group company Yusen Logistics Co., Ltd. supported the transport of a commercial debris inspection demonstration satellite. This effort ensured high-quality logistics and the management of complex customs procedures, contributing to the advancement of a circular economy in space.

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Initiatives to Reduce Waste and Resource Usage Charges

Honma Corporation, one of our Group companies, is working to reduce waste and resource consumption through intermediate treatment and recycling of waste collected mainly in Tokyo and Yokohama. In addition to intermediate processing of industrial waste, the company has been engaged in the recycling of household plastic containers and packaging since 2006 on behalf of the city of Yokohama. In addition, the company manufactures and delivers RPF* (solid fuel) made from waste plastics and wood waste to paper manufacturers and other customers.

* RPF fuel (Refuse derived paper and plastics densified fuel): Solid fuel made primarily from wastepaper and plastics generated from industrial waste that are difficult to recycle. With its high calorific value, it is used as a substitute for fossil fuels such as coal and coke. RPF fuel reduces GHG emissions by about 33% compared to coal, and Kayama Kogyo Co., Ltd. further contributes to the reduction of GHG emissions by using renewable energy sources for electricity used in the production of the fuel.

[Link](https://www.hnm.co.jp/business/environment/) For more information, click on the link below.

Co-creation with External Parties

Participation in Ship Recycling Information Disclosure Platform

With the aim of achieving a circular economy through appropriate recycling of recyclable resources and preventing industrial accidents and environmental pollution, in May 2021, NYK became the first Japanese shipping company to join the “Ship Recycling Transparency Initiative” (SRTI), which is organized by the Sustainable Shipping Initiative, an international non-profit organization that conducts cross-industry activities to contribute to a sustainable maritime industry.

SRTI, which consists of shipping companies, shippers, and investment institutions from around the world, is a platform for disclosing information on ship recycling policies and practices of shipping companies to stakeholders. Through information disclosure with SRTI, NYK strives to improve transparency in the ship recycling process and promote responsible ship recycling that takes into consideration safety, the environment, and human rights in the maritime shipping industry.

Recycling of Used Vehicle Lashing Belts on Pure Car and Truck Carriers Commenced

In April 2024, NYK and its group company, NYK Trading Corporation, together with Azbil Yamatake Friendly Co., Ltd. and Kayama Kogyo Co., Ltd., began recycling old vehicle lashing belts used on pure car and truck carriers.

We collect lashing belts that have reached the end of their service life from NYK-operated vessels. Azbil Yamatake Friendly separates the belts into metal parts and plastic components, and Kayama Kogyo manufactures RPF fuel from the plastic belts. Previously,

lashing belts that exceeded NYK's proprietary safety standards were either disposed of as industrial waste or sold as used products. Through this initiative, discarded lashing belts are now recycled into RPF fuel and reused as an energy resource.

Since the start of the recycling initiative in April 2024, approximately 80,000 used lashing belts have been collected and converted into around 8 tons of RPF fuel.

■ Recycling Scheme

