



Marine Cargo

## Vessel selection: Picking the right ship for your cargo

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Shipbuilding dates to the earliest civilizations.

Significant developments have occurred since that time. Vessels are now stronger and safer than ever. When it comes to insuring ships and their contents, however, the stakes are still high.

Marine insurers assume many risks: losing a ship or its cargo, damage to the environment, and the lives of seafarers lost at sea. The need to protect the interest of shipowners and cargo owners gave birth to the modern Marine Insurance industry. Yet, insuring a vessel and its contents often relies on having confidence in the vessel itself.



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## A condition of coverage

Cargo owners or freight forwarders typically work with a broker (ship, freight, or charterer) to find the right ship at the right price. Insurers can help clients select quality ships suitable for their specific shipments.

The insurer must approve the vessel, however, in order for the cargo (especially project cargo) policy to be in effect. The Institute Classification Clause (1/1/2001) requires cargo to be carried by vessels with a specific classification society - a member or associate member of the International Association of Classification Societies (IACS). This ensures ships are not aged and are maintained well. The clause also stipulates flag requirements.

Many industries - oil and gas, wind power, mining, aerospace, and construction - need to move massive amounts of material on the right vessel(s). These complex shipments require thorough planning. They also need project cargo coverage backed by a strong insurance company. For example, some wind turbine component manufacturers send engineers from the factory to oversee and inspect the loading and stowing process.

## Making wise choices

Choosing the appropriate vessel for shipping cargo is a critical decision that can significantly impact any business. Whether distributing goods internationally or domestically, understanding the vessel types available and their respective advantages and limitations is key to ensuring your cargo reaches its destination safely and efficiently.

There are a number of important factors to consider when selecting the right vessel, starting with the nature of the cargo itself.

For businesses shipping containerized cargo, vessel selection is most often in the hands of the freight forwarder, logistics provider, or NVOCC (non-vessel operating common carrier). Container vessels offer secure and controlled environments appropriate for valuable or highly damageable cargo. Yet not everything can be shipped in containers. Bulk carriers are ideal for commodities such as coal, grain, or ore. Refrigerated vessels (reefers) are designed for perishable goods like fruits, vegetables, or seafood.

When shipping activity peaked during the global pandemic, space was at a premium. Some shippers opted to put cargo on whatever vessel had room. Bulk carriers started transporting containers or project cargo materials – inappropriate from a quality or a safety standpoint. Cargo losses mounted and lessons were learned.

## Vessel suitability

Verifying vessel suitability may be an easy or a meticulous endeavor. It may require firsthand knowledge of maritime operations and shipping.

Too much or too little information can be equally confusing. No single criterion will give an underwriter absolute assurance that the risk is acceptable. Older tonnage may not disqualify the risk but being neglected certainly will. Dangerous goods may require [special certification to be carried on board](#). Quality risk consultants and surveyors can help an underwriter consider the risk in the best context possible.

Other important parameters to consider when assessing the quality and suitability of the vessel for cargo-specific transportation include:



- **Type of the ship:** The ship type may predefine the quality. LNG/LPG/Tankers/Product carriers are built to higher standards and are subject to stringent requirements, driven by Classification Societies and Chemical/Oil Companies (CDI/OCIMF) periodical regime of surveys.
- **Age:** This is an important indicator of vessel condition. Older vessels typically are in a poorer state and require more investment and maintenance.
- **Dimensions/Size:** Larger size vessels can sustain harsher weather conditions, but represent higher risk in terms of collision/grounding in channels/rivers.
- **Engine Maker, Number of engines and total HP:** Some engine types may be more susceptible to failure than others; some cargo or trading patterns may require vessels with specific maneuvering capabilities and/or power.



- **Quality of Classification Society:** Classification societies monitor the condition of vessels through a wide variety of inspections, but not all societies are created equal. The International Association of Classification Societies (IACS) is composed of 12 of the largest class societies and handles more than 90 percent of the world's tonnage. Other societies may not offer the same inspection and supervision standards.
- **Quality of Shipbuilder:** The ship builder must have experience in constructing the vessel to the required specifications. Some shipyards have a very good reputation, while others do not.
- **Quality of Technical Manager:** The company that supplies technical supervision (and often mans the ship) plays a critical role in the vessel's upkeep.



- **Flag Performance:** This is based on publicly available information (denominated as white, grey, and black). It's related to detentions and deficiencies recorded by Port State Control; AMSA & USCG inspection history, deficiencies, and percentage of detentions over last 5/10 years; port state inspection history and trading routes. Vessels that abruptly stop calling at some of those ports may be avoiding such rigid Port State inspections.
- **Frequency of changing Flag and/or Class:** Frequent changes may indicate that the owner or technical manager is seeking easier avenues or more flexible regulations.



- **P&I Club:** Mainly for subrogation purposes, association with the International Group (IG) of P&I Clubs provides confidence in the vessel owner's financial stability. Other P&I clubs may be commercially more attractive for shipowners, but cannot necessarily offer the same broad financial protection and range of cover.
- **Casualty/Loss history:** Some online services provide information on whether the vessel was involved in either severe or minor accidents.

## And the survey says

Physical surveys are the best method to assess the risk and suitability of a ship to carry specific cargo. [Different surveys are available.](#)

The ship's inspection system consists of a mandatory part (statutory and class) and a non-mandatory part (industry-driven). The former is based on the international legal framework. This was previously enforced by the flag and Port states but is now more often performed by recognized organizations.

Industry driven inspections include surveys carried out on behalf of insurance companies, P&I Clubs, terminal operators, cargo owners, and shipowners. These inspections will usually comprise of:

- **Suitability survey**, which determines a vessel's suitability for operations or for carrying cargo. [Such inspection identifies](#) any potential areas of concern, lack of equipment and/or features required for specific operations, and/or cargo carrying fitness.
- **Condition survey**, which reports on the condition of a particular vessel's hull and machinery, condition of other equipment, certification status, and management system.

## Technical assistance

Technology is playing a bigger role in monitoring and assessing ships. Analyzing the behavior of vessels at sea and accessing historical data can help "paint the ship's picture". For example, two identical ships may (seemingly) present the same level of risk. Because one spends crosses the North Atlantic and the other navigates benign tropical waters, however, the weather conditions each vessel encounters are quite different.

Here are some things to consider:

- **Days spent at sea and at which region:** Some geographic regions are characterized by harsh weather (North Atlantic during winter or Hurricane/Cyclones/Typhoons exposed waters), which can lead to greater wear and tear.
- **Days of dark activities:** This indicates the time when the vessel's AIS (automatic identification system) wasn't transmitting, which may indicate hiding of the ship's position due to illicit activities.
- **Drifting days at high seas:** This information may indicate problems with engines and propulsion.
- **Port calls, days spent in ports versus days at sea:** This indicates port efficiency, vessel turnaround, and trade intensity. Frequent port calls and short port stays suggest an intense regime of trading and potentially higher wear and tear. Such ships may be more likely to experience a navigational accident.

Various risk scoring services, bespoke tools, or platforms also provide valuable information. SeaWeb, from S&P, supplies comprehensive data on more than 200,000 ships. FleetMon and AISLive both provide an interactive tool with vessel tracking.

## Environmentally suitable

Evaluate the environmental impact of the vessel and shipping line you choose. In recent years, environmental sustainability has gained prominence in the shipping industry. Some companies prioritize eco-friendly practices, such as fuel-efficient vessels or those equipped with emissions-reducing technologies. Opting for greener options aligns with corporate social responsibility goals and may positively impact your brand image.

Soon, a vessel's environmental impact will become an even greater part of the selection process. As of January 1, 2023, all ships must obtain their attained Energy Efficiency Existing Ship Index (EEXI). They must measure energy efficiency, and start collecting data to report their annual operational Carbon Intensity Indicator (CII) and CII rating. The CII measures how efficiently a vessel above 5,000 GT (gross tonnage) transports goods or passengers. It is provided in grams of CO2 emitted per cargo-carrying capacity and nautical mile. CII will be managed on an annual basis.

The first reporting of CII based on 2023 data is due no later than March 31, 2024. Vessels will receive a rating of A (major superior), B (minor superior), C (moderate), D (minor inferior) or E (inferior performance level). The rating thresholds will become increasingly stringent towards 2030. In the future, some ports might not accept vessels with low ratings or may be charged more to enter – even more reason to pay attention to vessel quality.

By thoroughly evaluating these aspects and working closely with experienced shipping professionals, businesses can ensure their cargo arrives safely and on time, while optimizing efficiency and cost-effectiveness.

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