

Container Handler

Used Container Handler Hayward - Also known as container ships or cargo ships, container handlers use large intermodal containers to transport their goods. Containerization is the shipping method that utilizes commercial freight transport to carry seagoing cargo in non-bulk sizes. The capacity of these specialty ships is equal to twenty-foot loads. The majority of typical loads consist of a mix of 40-foot containers and 20-foot containers. Approximately ninety percent of non-bulk cargo across the globe is transported by container ships. As one of the largest commercial sea-worthy vessels, container ships are the main rival of oil tankers among the largest ships on the ocean. Dry cargo is categorized into two main types: break-bulk cargo and bulk cargo. Grain and coal fall into the bulk cargo category. They are often moved in their raw form, package-free in large volumes in the hull of the ship. Break-bulk cargo typically is made up of manufactured items that are shipped in packaging. Before the 1950s when containerization hadn't been invented yet, break-bulk materials were loaded, secured and unattached one piece at a time in a very time-consuming process. Once cargo began being grouped into containers, between 1000 to 3000 cubic feet of cargo can be moved simultaneously after each container has been secured with standardization. Break-bulk cargo shipping has greatly increased overall efficiency. Thanks to these new systems, shipping time has been reduced by eighty-four percent and costs have come down by roughly thirty-five percent. In 2001, over ninety percent of non-bulk materials were recorded as being transported in containers. The initial container ships in the 1940s were designed from tankers that were converted post-WWII. Container ships do not rely on individual hatches, holds and dividers that are part of regular cargo ships. The hull of the container ship is similar to a sizeable warehouse that uses vertical guide rails to divide the area into cells. These cells have been engineered to hold the cargo in containers. Most shipping containers are constructed from steel; however, additional materials including plywood, fiberglass and wood are used. Designed to be completely transferred to and from trains, semi-trailers, trucks, coastal carriers and more, there is a variety of container types that are categorized by their function and size. Even though the shipping industry has been transformed by containerization, it took some time to streamline the process. Initially, ports, railway companies and shippers were concerned regarding the extensive costs that came with constructing infrastructure, ports and railways required to accommodate the cargo ships and transporting items with rail and roads. Numerous trade unions were concerned that containers would affect port jobs and manual labor associated with cargo handling for dock and port workers. Approximately ten years of legal battles occurred prior to container ships began international service. A container liner service from the Dutch city of Rotterdam to the USA first started in 1966, soon to change world trade and shipping across the globe. Container ships only take a few hours to be loaded and unloaded, compared to the days a traditional cargo vessel required. Cutting labor finances and shortened shipping times between ports has been hugely successful. It only takes a few weeks to deliver items from India to Europe and vice versa, whereas it used to take months previously. Overall, there is less damaged cargo thanks to less physical handling and reduced cargo shifting due to properly securing loads. Before shipping, containers are closed and only opened after they arrive at their new location to prevent theft and damage. There has been greater international trade growth due to the reduced shipping expenses and travel time delivered by container ships. Cargo that was previously shipped in bags, bales, cartons, barrels or crates now arrives in sealed containers from the factory. Scanning machines work with computers to trace the product code on the contents. Technological advancements have enabled this accurate tracking system to be precise within fifteen minutes on arrival of a two-week voyage. This has helped with guaranteed delivery and manufacturing times. Sealed containers of raw materials arrive in under an hour to be used in manufacturing facilities, resulting in less inventory costs and higher accuracy. Shipping companies provide boxes to the exporters for loading merchandise into. Items are delivered into the docks by road or rail or a combination to be loaded onto cargo ships. Before containerization, it would take large groups of men and many hours fitting

cargo items into different holds. Cranes are used in the shipping industry or on the pier to organize containers. After the hull has been fully loaded, additional containers can be attached to the deck. The key design element for container ships has been efficiency. Containers may travel on break-bulk vessels. However, cargo holds that have been dedicated to container ships have been carefully built to speed up the loading and unloading process and designed to keep containers secure while traveling the ocean. There is a sophisticated hatch design to allow openings from the main deck to reach the cargo hold locations. A raised steel apparatus called the hatch coaming surrounds these openings that are found along the cargo hold breadth. There are secure hatch covers situated on top of the hatch coamings. Wooden boards and tarps initially covered the hatches and held the battens secure until the 50s. Nowadays, solid metal plates comprise the hatch covers and cranes lift them onboard and off of the ship. Additional hatch models use hydraulic rams and articulated mechanisms for closing and opening. Cell guides are another main component within container ship design. The cell guides are vertical pieces constructed of strong metal that is attached to the cargo hold within the ship. These guide the containers into certain locations and offer travel support on the high seas. Since the design of the container ship utilizes cell guides in such abundance, the UN Conference on Trade and Development relies on them to separate traditional break-bulk cargo ships and container ships. To showcase a container's position on the ship, there is a cargo plan system that use three dimensions. The bay is the first coordinate, starting at the front of the container ship and increases aft. The second coordinate is the tier. The first tier begins in the lower portion of the cargo holds with the second tier found on top of the first tier and continuing in that fashion. Next, the third row forms the third coordinate. Rows found on the port side of the ship exhibit even numbers and those located on the starboard side are given odd numbers. Rows that are located along the ships' center are designated lower numbers and they increase for locations found further from the center. Container handlers carry 20, 40 and 45 foot containers. The largest size fits only above deck while the 40 foot size makes up for the majority of the load or approximately ninety percent of the container shipping. Approximately 90% of the freight moves across the globe with container shipping. It is estimated that 80% of global freight travels with 40-foot containers.