

## Container Handler

Used Container Handler Mesa - Also known as container ships or cargo ships, container handlers use large intermodal containers to transport their goods. This type of shipping is called containerization and it is a specific kind of freight transport that carries non-bulk types of seagoing cargo. The capacity of container ships is measured in units equivalent to twenty-foot equivalent loads. Typical loads range with a mixture of 20-foot and 40-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 falls into two main categories: bulk cargo and break-bulk cargo. Coal and grain are considered to be bulk cargo items. They are typically transported in their raw form within the hull of the ship, free from packages in immense volume. Break-bulk cargo items normally consist of manufactured goods that are transported in packages. Before containerization was invented in the 50s, break-bulk items were loaded, secured and unlashd one item at a time. When the cargo was grouped into containers, there were approximately 1000-3000 cubic feet of cargo that can be simultaneously moved after each unit has been standardized and secured. Efficiency has tremendously increased break-bulk cargo shipping. It is estimated that shipping time has been reduced by eighty-four percent and costs have been reduced by approximately thirty-five percent. In 2001, over ninety percent of non-bulk materials were recorded as being transported in containers. The first cargo ships were born in the 1940s as redesigns from World War II tankers. Container ships eliminate the individual holds, hatches and dividers normal within traditional cargo vessels. 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. As containers have been designed to completely transferred to and from coastal carriers, semi-trailers, trucks, trains and more, these containers are categorized due to their function and size. Containerization has revolutionized the shipping industry; however, it did not start out in the easiest fashion. Railway companies, ports and shippers were initially concerned about the extensive costs associated with building the railway infrastructure and ports required to accommodate container ships, along with moving the containers via road and rail. There was skepticism regarding potential dock and port worker job loss when containerization was announced for fear that numerous manual jobs would disappear. 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. Initially, it took days to unload and load traditional cargo vessels. Container ships have transformed timelines by only requiring a few hours for loading and unloading. 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. There is generally less damage to goods due to less handling. Less cargo shifting during a voyage is also beneficial. Containers are closed before shipping and opened once they arrive at their destination to prevent disruption, damage and theft. Container ships have reduced shipping time and lessened shipping expenses, resulting in enhanced international trade growth. Cargo that was previously shipped in bags, bales, cartons, barrels or crates now arrives in sealed containers from the factory. A product code on the contents is traced with the help of computers and scanning equipment. Amazingly, technology has advanced with this accurate tracking system to be so exact that a 2-week voyage can be timed for arrival with accuracy less than 15 minutes! Manufacturing times and delivery have been greatly enhanced with these advancements. Raw materials show up in sealed containers from factories in under an hour prior to being used in the manufacturing industry; resulting in fewer inventory expenses and greater accuracy. Boxes are provided by shipping companies to the exporters to facilitate loading merchandise. They are delivered into

the docks by rail or road or a combination of both to be loaded onto container ships. Before containerization, it would take large groups of men and many hours fitting cargo items into different holds. The ship relies on cranes either on the pier or installed on board to organize the containers accurately. More containers can be loaded onto the deck after the hull is loaded. An efficient design has been a huge priority for shipping containers. Containers may travel on break-bulk vessels. Designated cargo hold on container ships have been built to increase efficiency during loading and unloading to ensure safe travel. There is a sophisticated hatch design to allow openings from the main deck to reach the cargo hold locations. These openings are situated along the entire cargo hold breadth, surrounded by a raised steel structure called the hatch coaming. There are hatch covers located on top of the hatch coamings. Until the 1950s, wooden boards and tarps were responsible for securing the hatches and holding down the battens. Hatch covers are made of secure metal plates and cranes are used to lift them on and off of the ship. Additional hatch models use hydraulic rams and articulated mechanisms for closing and opening. Another important cargo ship design feature is cell guides. Attached to the cargo hold in the ship, cell guides are vertical pieces of metal that help organize the cargo. These guide containers into specific rows during the loading process and offer support during sea travel. 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. There is a system used in cargo plans consisting of three dimensions to outline a container's position aboard the ship. The bay is the first coordinate, starting at the front of the container ship and increases aft. The tier forms the second coordinate. It starts in the bottom area of the cargo holds and the second tier is located on top of the first one and continues to grow. The third coordinate is found in the third row. Rows are situated on the ship's port side have even numbers while those found starboard have odd numbers. Rows found along the centerline are given lower numbers and these numbers increase for slots situated 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.