All Hands on Deck:
A Harbor Education Program
Brought to you by New Jersey Sea Grant Consortium
and the NJDOT Office of Maritime Resources

CONTAINERS and CONTAINERIZATION

Have you noticed those large colorful boxes stacked near the water as you've driven along the highways that link Northern New Jersey to New York City? Did you ever wonder why all those big metal boxes were collecting along our Port? Where did they come from? Where were they going? And, most importantly, what's in them?
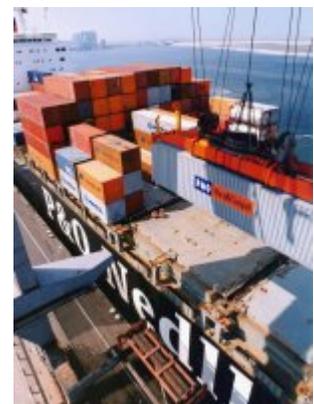
Those colorful boxes are containers, and although it may seem like a simple idea, this invention has allowed international trade and shipping to greatly improve and grow. Up through the 1950's, loading and unloading ships was a slow, hard, tedious process. Cargo or goods arrived in a myriad of shapes, sizes, and weights. The cargo was in constant threat of damage or theft during shipping and especially when it was being loaded or unloaded. Goods was easily scattered, damaged by bad weather or lost among other shipments.

In 1956, New Jersey resident Malcom McLean came up with the idea of a container. This trouble-free metal-box allowed cargo to be shipped clean, dry, safe and complete, especially when it was at sea. Today's containers are strong, weatherproof, one standard size, and can be loaded upon ships, trucks, and train to rapidly shuttle them to their destination. With the invention of the container, loading and unloading a cargo ship went from several weeks to just a few hours. Huge cranes were developed to load and unload the containers, stacking them along the docks for smaller cranes and forklifts to move to warehouses or truck-beds or trains that then move across the country to their final destination.

Today's containers are of a standard size, called a TEU. TEU stands for Twenty Foot Equivalent Unit. This is the amount of freight that can be carried in a 20 foot long container. A standard dry container has the dimensions of 20 foot long by 8 foot wide by 8.5 foot high. Some containers are 40 feet long. They are the size of 2 TEU's and are called an FEU (Forty Foot Equivalent Unit). Standard- sized containers help shipping companies and ports measure how many loads of cargo they are shipping. Most containerships can carry 2000 to 6000 TEU's. The newest container ships being built now can carry up to 12,500 TEU's!

Containers are used to ship many types of goods. Things that we use everyday such as TV's, VCRs, video games, tennis shoes, toys, chocolate and more can be shipped in a container. Even cotton, grain, paper and car parts can be shipped in containers.

Special refrigerated containers, called reefers, are made specifically to ship goods that must stay cool. Food products such as fruit, vegetables and meat are shipped in reefers that keep them at the optimal temperature, humidity and ventilation levels needed for the specific product. Reefer containers are loaded in special areas on ships where there are electrical outlets.

Some containers are like giant closets, allowing clothing to be shipped hung on a hanger. Others are ventilated for crops such as corn or coffee. Still others are outfitted to safely and comfortably ship large animals like horses, zebras and even elephants.

Another advantage of containers is that they can be locked and sealed after being filled. Then each container is strapped or hooked securely into place on the ship. In this way, the container's contents will not be disturbed until the cargo reaches its final destination.

Containers are owned by carrier companies. Most businesses that ship cargo via a container rent the amount of containers that they need. The company that rents the containers also fills the container and gets it loaded on the ship, truck or train to ship to its destination.

Once out at sea, containers go to ports all over the world. So the next time you see a container on a ship it could be coming from or going to England, Japan, Australia, Puerto Rico, Africa or Greece—virtually anywhere in the world that has a port!

Generally a container ship makes about 20 stops on one trip which lasts for about one month. The ships don't stay in port long. They are quickly unloaded and then reloaded with more containers to send to the next port.

Containers

Containership

Container Terminal