Lightering, also at times called ‘Lighterage,’ is an operation that primarily deals with the transfer of wet and dry cargoes which typically includes but not limited to crude oil, liquefied gas (LPG or LNG), bulk cargo, and various petroleum products.

This transfer between ships of differing sizes, or as a cargo transfer operation at sea between the Mother Vessel and Daughter Vessel. The receiving ship is called the daughter vessel and the delivering vessel is called STBL (Ship to be lightered) or Mother vessel.

http://members.tripod.com/jahre_viking/sitebuildercontent/sitebuilderpictures/double_banking1.jpg
These days, the STS (Ship-to-Ship) transfer of oil as well as dry bulk cargoes is a fairly common practice given the size of the ships having increased in the past few decades.

Lightering takes place to primarily transfer product from a larger vessels to smaller ones for a variety of reasons. The most common are listed below:

- draft restrictions
- expedite discharging product to various locations to meet contractual delivery windows.
- Economies in transportation costs i.e. reverse lighters
- Blending efficiency
- Floating Storage Units (FSU’s)
- Lightening a vessel prior to harbor entering or for re-floating
- Bunkering operations
- Commercial reasons, i.e. the cargo changes ownership while the carrying vessel is at sea

A STS transfer becomes very economical as a ship does not have to berth at the jetty, especially for huge oil tankers, which removes the port berthing charges and also cuts short the time for berthing and mooring. But all these comes at a cost of high environmental pollution and fire risk as chances of leakage in operation is always there in open sea when ship is not moored or it is moving.

**SAFETY FIRST**

The STS transfer is considered a highly potentially dangerous operation and observance and adherence to proper procedures is imperative for the safety of all involved as well as environmental concerns.

Although the Masters of the vessels involved in the lightering operation are ultimately responsible for the safety of the crew, cargo and the environment, AmSpec field personnel are highly trained in lightering operations and provide lightering services globally as STS operations are carried out in specific designated zones in the US Gulf, Eastern and Western US ports, North Sea areas, West African region, Persian Gulf, Southeast Asian ports.
The following pre-planning requirements are concerns while conducting Ship to Ship transfer operation:

- A launch (small motor boat) or helicopter service is usually used to transport the inspector to the transfer site. Disembarking the launch can be a risky proposition especially in the open seas due to sea swell conditions when carrying bulky equipment up boarding ladders.

- Adequate training of oil tanker’s staff carrying out the operation.

- Proper STS equipment to be present on both the vessels and they should be in good condition.

- Pre planning of the operation with notifying the amount and type of cargo involved.

- Proper attention to the difference in freeboard and listing of both the vessel while transferring oil.

- Taking permission from the relevant port state authority.

- Properties of Cargo involved to be known with available MSDS and UN number.

- A proper communication and communication channel to be set up between the ships.

- Dangers associated with the cargo like VOC emission, chemical reaction etc. to be briefed to the entire crew involved in transfer.

- Firefighting and oil spill equipment to be present and crew to be well trained to use them in emergency.

- All guidelines to be followed as per MEPC 59, MARPOL Annex 1 chapter 8, SOPEP, SMPEP, STS transfer guide and operational plan.

Need more information regarding lighterage operations? Feel free to contact JohnE.Miller@amspecgroup.com or call him direct at (409) 943-5100