



CJA Marine Services - Singapore & Thailand

Singapore Tel : (65) 62811986 / 7
Singapore Fax : (65) 62811966

Thailand Tel: (66) 02 7424882
Thailand Fax : (66) 02 7424883

E-Mail: survey@cjamarine.com
www.cjamarine.com

PRE-COOLING OF REEFER CONTAINERS

It is important to pre-cool the cargo but it may not be necessary to pre-cool the reefer container. Especially in tropical climate, a large quantity of water droplet (condensate) will form on the interior surfaces when the doors of a pre-cool container are open to warm ambient environment (Hot air meets cold surface / air). These condensate will subsequently be removed through the evaporator coils in the reefer machinery along with the heat from the cargo and those which penetrate through the container walls.

When the water condensate passes through the evaporator coils, ice is formed and the reefer machinery will go into a short defrost mode. As a result, the more heat and humidity the refrigeration unit must remove, the lesser the cooling capacity is available for the main objective of cooling the cargo itself.

Although there may be no hard and fast rule for pre-cooling of a reefer container, in most cases, there is no need to pre-cool the reefer box as the heat from the equipment will warm the cartons against the walls by only about 0.5°C or 1°C, depending on the ambient temperature.

Nevertheless, authorities on this subject have pointed out that pre-cooling of the reefer container is only recommended when loading / stuffing operation is carried out in a "cold tunnel" where the temperature of the reefer container and the shipper's cold store should correspond to each other.

In a nut shell, the pre-cooling of the cargo by the shipper is utmost important as the reefer containers provided by the carriers are design to maintain within range of pre-set temperature and not to achieve necessary temperature reduction. Loading without pre-cooling the cargo may cause considerable problems as the product temperature cannot be lowered quickly enough to its desired temperature, which can cause microbiological growth to take place.

Note:-The above is prepared as a guideline and CJA Marine Services shall have no liability for errors or omissions or for any damage resulting from this.