

Circular From LONDON**Date: 26 February 2016**

Bulk Carrier Ventilation

Moisture damage is the source of a significant number of cargo claims. Claimants allege that this is brought about by the ship's failure to ventilate correctly, resulting in the development of condensation (known as "sweat"). This sweat can lead to the deterioration of a number of bulk cargoes such as grain, seedcake and steel surfaces. All modern bulk carriers are fitted with some form of ventilation, either natural or mechanical, which can be used to minimize the formation of sweat.

Cargo Sweat

Cargo sweat is condensation forming on the surface of a "cold" cargo as warm, moist air enters the cargo hold. For example, if a cargo of steel is loaded in winter in North China for discharge in Singapore, the temperature of the cargo will be low. If warm moist air is later introduced in the cargo hold, condensation takes place as soon as it comes into contact with "cold" cargo.

Ship Sweat

Ship's sweat is the result of condensation forming on the ship's structure as the ship becomes colder moving from a hot to a cold climate. The warm moist air within the cargo compartment condenses as it comes into contact with the cold structure of the ship. For ship sweat to occur, the dew point in the cargo hold must exceed the temperature of the ship's structure. To eliminate ship sweat, the cargo should be ventilated if the ship is moving from a warm to a cold climate.

Shipper's Instructions

Any shipper's instructions should be complied with and the following factors considered:

1. Ensure that the shipper's declaration contains sufficient information about the cargo, particularly moisture content (MC), transportable moisture limit (TML) and ventilation requirements, and/or if the commodity is not normally carried or the areas of trade are uncommon.
2. Claims for moisture damage to cargo can only be defended if supported by properly maintained documentation. It is critical that records of hold temperatures, humidity and durations of ventilation are maintained.
3. The dew point temperature of the cargo hold and outside air should be compared.
4. Ventilation not only serves to control sweating, it can control the gases or odours emitted from cargo.
5. If there is a risk of seawater spray or rain entering the cargo holds, all ventilation should be stopped and times noted until conditions change to allow resumption of ventilation.
6. Ventilation should be continued even at night if required.
7. If circumstances allow, there should be regular inspections of the cargo space for any signs of condensation, e.g. on the underside of the hatch access covers. If condensation is found, ventilation should be continued.
8. A complete record of cargo hold temperatures and ventilation should be kept.

Maintaining accurate records when ventilation not possible

The need to ventilate especially high MC cargoes (weather and sea conditions permitting), whenever external temperatures are significantly lower than cargo temperatures - and then not only in daytime but importantly also at night. If ventilation is impossible because of prevailing sea conditions, it is of utmost importance that all relevant aspects of weather and sea conditions are fully logged.

Hazardous cargoes

The objective of ventilating cargoes is to minimize the concentration of hazardous gases within the atmosphere of a ship's hold. Some of these cargoes - for instance, certain types of ferrosilicon and coal - are listed in the International Maritime Dangerous Goods Code (IMDG Code) and/or in the International Maritime Solid Bulk Cargoes Code (IMSBC Code), with specific recommendations concerning ventilation. When readily available information on any particular cargo is lacking and doubts exist, shippers advice should be sought.

For more information, please go to below website.

<http://www.londonpandi.com/common/updateable/downloads/documents/5608lpreviewissue2february2016f.pdf>

Source of Information: London P&I Club