

Circular From GARD**Date: 23 December 2015****Loading of Coal Cargoes**

Gard has recently been involved in several incidents of self-heating of coal cargoes and would like to emphasize the importance of treating coal cargoes as liable to self-heat until it has been satisfactorily established that they are not. The shipper's cargo declaration containing the cargo properties and the associated hazards should be examined in detail. It should be borne in mind that the information contained in the declaration may be inaccurate. Inaccurate IMSBC Code declarations have been seen in areas such as Indonesia, where large quantities of coal are shipped. More surprisingly, Gard was involved in a recent case where a coal cargo loaded at Richards Bay, South Africa was inaccurately declared as "not self-heating coal" nor "liable to emit methane". Subsequent investigations involving cargo experts, established that the cargo did in fact possess both properties. It is therefore recommended that all coal cargoes are treated as potentially hazardous and liable to self-heat until it can be satisfactorily established that they are not. Gard recommends that, for all types of coal, the vessel implements a gas monitoring and temperature checking regime during loading.

The accuracy of shipper's declarations should be checked and the IMSBC Code sets out (1) General requirements for all types of coal and "*Special precautions*" for (2) self-heating coal and (3) coal emitting methane. Accordingly, the club has following recommendations when loading self-heating and/or high methane levels coal:

1. Prior to loading coal it is important that the vessel has multi gas detectors on board capable for measuring oxygen (O₂), methane (CH₄), carbon monoxide (CO) and hydrogen sulphide (H₂S). These gas detectors should have sufficient length on the inlet hose to reach all levels of the free space in the holds. Furthermore, the equipment should be calibrated before the operation to ensure accurate reading.
2. In addition to gas detection, the vessels fire-fighting systems should be checked to ensure they are in a state of readiness during loading and throughout the voyage. Vessels fitted with fixed CO₂ systems should blow through the lines using compressed air prior to commencement of loading to ensure that all cargo holds are well covered by the CO₂ system.
3. According to the IMSBC Code, self-heating can be controlled by sealing the holds to starve the atmosphere of oxygen. However, controlling the explosion hazard stemming from methane requires the opposite, namely ventilation, to ensure that the methane content of the atmosphere inside the cargo holds stays below 20% of the Lower Explosive Limit (LEL) for methane. The IMSBC Code states that where risks of both self-heating and an explosion are found together whilst at sea, the provision to ventilate takes precedence.
4. The importance of monitoring temperature and hold atmosphere is absolutely critical for vessels

carrying any type of coal. When faced with a situation where the master suspects self-heating and/or excess accumulation of methane in the hold atmosphere, the master should contact the owners as well as the Club immediately so that coordinated efforts to mitigate the fire hazards can be carried out.

Source of Information: Gard P&I Club

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