



Friday 26th August 2011

Bulletin 781 - 08/11 - Carriage of Lithium-ion batteries - Worldwide

The crash last month of an Asiana Airlines cargo plane has spurred interest by transport officials in the US to continue to push for an upgrading of lithium ion batteries from Class 9 to Class 4.2.

The Federal Aviation Administration (FAA) in the US was keen to pursue a path in order to upgrade the DG classification of lithium-ion batteries after the crash of a similar plane last September in Dubai. However opposition from a broad coalition of industry opponents coupled with the slow moving process of changing such a regulation has hampered efforts so far.

If the FAA is successful in its bid to reclassify these goods revisions to the relevant entries in the IMDG code would have to be made. This would obviously have an effect on transporting these goods by sea and would be a benefit to the safety of vessels a carrying these goods.

However this process is likely to be slow. In the meantime the Club would like to reinforce its position as previously stated in Bulletin 540 which the Club issued in August 2007.

540 - 08/07 - Transport hazard concerns over lithium batteries – Worldwide

Lithium batteries can provide extremely high currents and can discharge very rapidly when short-circuited. Although this is useful in applications where high currents are required, too-rapid a discharge of a lithium battery can result in overheating of the battery, rupture, and even explosion. Lithium-thionyl chloride batteries are particularly capable of this type of discharge. Lithium batteries may also cause fire due to an explosive rupture of the body caused by improper construction or reaction with contaminants.

Lithium batteries are listed in the International Maritime Dangerous Goods (IMDG) Code under class 9 – miscellaneous dangerous substances and articles. Under this classification, batteries can be stowed above and below deck, and with other dangerous goods commodities.

If lithium batteries were reclassified under the IMDG Code to class 4.3 - flammable solids (which, when in contact with water emit flammable gases), they would be subject to much more stringent segregation requirements.

Members are encouraged to ensure that, when accepting shipments of lithium batteries or equipment containing lithium batteries, their clients, as shippers, are fully aware of the packing requirements laid out in instruction P903 of the IMDG Code. The majority of incidents involving lithium batteries in containers on board merchant ships, as handled by the UK Club, are a direct result of poor packaging or wetting of the batteries.

Packaging for lithium batteries needs to meet the general provisions of 4.1.1 and 4.1.3 of the Code and must conform to the packing group II performance level.

Excerpt from the IMDG code;

P903 PACKING INSTRUCTION:

This instruction applies to UN Nos. 3090, 3091, 3480 and 3481.

The following packagings are authorized, provided the general provisions of [4.1.1](#) and [4.1.3](#) are met:

Packagings conforming to the packing group II performance level.

In addition, batteries with a strong, impact resistant outer casing of a gross mass of 12 kg or more, and assemblies of such batteries, may be packed in strong outer packagings, in protective enclosures (e.g., in fully enclosed or wooden slatted crates) unpackaged or on pallets. Batteries shall be secured to prevent inadvertent movement, and the terminals shall not support the weight of other superimposed elements

When cells and batteries are packed with equipment, they shall be packed in inner fibreboard packagings that meet the provisions for packing group II. When cells and batteries included in class 9 are contained in equipment, the equipment shall be packed in strong outer packagings in such a manner as to prevent accidental operation during transport.

Additional provision

Batteries shall be protected against short circuit.

Source of Information:

Loss Prevention Dept.

Lossprevention.ukclub@thomasmiller.com