



1

Widespread contamination of surrounding areas in the cargo hold.

Misdeclared or undeclared Dangerous Goods cargoes



2

Possible outcomes of a contravention of the IMDG Code and the IMO Bulk Cargo Code are loss of life, injury and material damage.

Ignorance, incompetence and...

■ ■ ■ In recent years there has been a noticeable increase in serious fires, explosions and chemical incidents involving containerised and bulk cargoes. Investigations carried out on container ships in the wake of some of these accidents have found that shippers are flouting the provisions of the IMDG Code on an alarming scale*. Motives for failing to declare a dangerous cargo or for providing a misleading description of the material include avoiding higher freight charges and circumventing restrictions on the carriage of the material. In this article I shall provide a few examples of the serious consequences of such behaviour.

Undeclared hazardous cargo

In July 1993 a catastrophic explosion among deck containers on the Kapitan Sakharov eventually caused the vessel to sink. The container from the Far East identified as the source of the incident was shown on the manifest to contain rubber tyres and inner tubes and the

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surrounding containers had no declared dangerous cargo. Ownership of the suspect container was never claimed and the consignees made no claim!

There have been several incidents involving the spontaneous exothermic decomposition of thiourea dioxide manufactured in China. The material, carried in drums in containers, was not originally listed as an IMDG cargo. Products of the reaction are highly toxic sulphur dioxide gas and sulphur, the latter of which caused widespread contamination of surrounding areas that required expensive remedial action (see photograph 1). For these reasons the material was frequently refused

for carriage. In the circumstances some Chinese shippers simply changed the name of the chemical to "thiourea DE" or "thiourea D", claiming incorrectly that these materials had a different chemical formula from thiourea dioxide and that they do not have the same hazardous properties. In one incident the container of decomposed thiourea dioxide shown in photograph 2 was declared on the manifest to contain toys.

Misdeclared cargo and misleading cargo description

In February 2000 the Thor Emilie, a single hold bulk cargo vessel of 1655 GRT, loaded 2000 metric tonnes "oxyde zinc ore" from Dunkirk to Porto Vesme, Italy**. The cargo was actually zinc secondaries that had been standing in piles in the open for several months before being transported in barges to Dunkirk. It was raining during loading. The vessel sailed on February 9th 2000 and on Feb-

*<http://www.lloydslist.com>

**<http://soefart.inforce.dk/graphics/synkron-library/sofartsstyrelsen/publikationer/oke/ulykker2000/THOREMILIE.pdf>



This container was declared to contain toys!



3

Spectacular fire – in this case DRI derivatives are involved.

Photos: DR J H BURGOYNE & PARTNERS LLP

ence or deceit?

ruary 17th, when she was off Ibiza, there was a catastrophic explosion in the cargo space that caused the ship to sink rapidly and only the Master survived. "Oxyde zinc ore" is a contrived cargo description that does not appear in the IMDG Code or other standard references such as Thomas on Stowage. There is little doubt that the very violent explosion resulted from the ignition of hydrogen gas generated from a reaction between zinc and moisture in the wetted cargo, which should properly have been listed as IMO Class 4.3 in Appendix B of the IMO Bulk Code.

In February 2004 the Ythan, a 35,310 dead weight bulk carrier, loaded a cargo variously described as "metallic HBI fines" (the bill of lading), "Orinoco iron remet fines", "remet fines (HBI)", "Orinoco remet fines in bulk" and "HBI fines". The master was given written advice that "Orinoco Iron remet fines, to be loaded on your vessel are safe to transport without the use of inert gas or other special precautions". On February 28th 2004 the motor vessel Ythan experienced a series of violent

explosions in the cargo holds when the vessel was north of Santa Martha, Columbia. The vessel's master and five engine room personnel were killed and the ship sank. The cargo should have been described as a DRI (Direct Reduced Iron) derivative (e.g. DRI fines) that evolve hydrogen when wet and yet the term DRI was absent from any of the cargo descriptions given in this case. The more cynical amongst us may wonder whether the term HBI Fines was chosen to claim the relaxation in conditions of transport afforded to HBI. Fires involving DRI derivatives can be very spectacular as illustrated in photograph ③.

Those in the transport chain should be more accountable

Manufacturers are responsible for preparing accurate Material Safety Data Sheets (MSDSs), to include the assignation of correct UN Numbers and IMDG classifications. MSDSs prepared by some chemical companies, particularly those in the Far East, have been found wanting in this regard. Shippers, cargo bro-

kers, freight forwarders, freight consolidators and shipping lines are also important links in the transport chain. Each has a responsibility for ensuring that dangerous goods are correctly and honestly declared and, where necessary, segregated. The loss of revenue to shippers and commodity brokers created by an embargo on the shipment of a suspect hazardous material may encourage a greater responsibility on their part to investigate the authenticity of cargo information received further up the chain.

Recommendations to members

When there are uncertainties about the true identity of a chemical cargo offered for carriage, members are encouraged to seek assistance from The Swedish Club without delay so that advice can be sought from experienced consultants. Advice can also be sought from consultants engaged by The Swedish Club on behalf of its members about appropriate action to be taken when an incident involving a dangerous cargo occurs on board a ship at sea.