

Testing Iron Ore Fines for the Presence of DRI(C)

In response to cargoes being mis-declared as iron ore fines after being blended with DRI(C), the Association published a Notice to Members in December 2012 regarding the [Information Required When Offered a Shipment of Iron Fines that may Contain DRI\(C\)](#).

Further to the above, there is a simple test that may be carried out to check whether or not DRI(C) is present in a cargo of iron ore fines. The test involves the use of sulphuric acid, as would normally be kept on board a vessel for maintaining lead-acid batteries.

When handling sulphuric acid it is recommended that suitable personal protective equipment, including a face shield, apron and gauntlets, all suitable for handling chemicals, be worn by the crewmember(s) carrying out the test.

The process for testing a sample of iron ore fines for the presence of DRI(C) is as follows:

- 1. Cover the bottom of a clean glass container with a thin layer of cargo.**



- 2. Carefully add sulphuric acid, covering the cargo sample to a depth of 3 to 5 cms.**



- 3. Check whether the sulphuric acid causes bubbles (hydrogen gas) to rise from the cargo sample.**



4. If nothing happens right away, keep checking for bubbles periodically as it may take time for signs of a reaction to appear.
5. The formation of bubbles indicates that the cargo may contain DRI(C).



6. If there are no bubbles it is unlikely that the cargo contains DRI(C).

If bubbles are observed after carrying out such a test, the Managers should be notified immediately as expert advice and a full chemical analysis of the product may be required. In such an event and until proved otherwise, the requirements of the International Maritime Solid Bulk Cargoes (IMSBC) Code for DRI(C) and the guidance set out in the Notice to Members concerning [Information Required When Offered a Shipment of Iron Fines that may Contain DRI\(C\)](#) should also be followed.

Members requiring further information should contact the Loss Prevention department.