



Risk Assessment Solutions

“Prevent, Don’t Cure”

Circular 01/02/14

Subject: Flame cutting - Important Occupational Safety/PSC Issue!

Case: Recently, a cargo vessel faced difficulties when the Port State Control Inspectors while inspecting the Engine Room noticed that the flame cutting gas hoses were not equipped with Flash Back arrestors (see picture). More specifically, the Port State Control Officers found that the subject equipment had been used several times in the past without the necessary precautions and only few engine crew members were aware of the use of the flash back arrestors. Finally, the vessel received the following deficiency:

“Flash back arrestors not fitted”, code 17

In connection to the above, and in order to assist our clients to prevent similar cases, it should be noted that the fitting of the said flash back arrestors are subject to the ISM Code and the MLC 2006. More specifically, ISM Code, Chapter 7, reads:

*The Company should establish procedures, plans and instructions, including checklists as appropriate, for key operations concerning the **safety of the personnel**....*

The MLC 2006, reg. 4.3, para. 1, reads:

*Each member shall ensure that seafarers on ships that fly its flag are provided with **occupational health protection** and live, work and train on board ship in a safe and hygienic environment.*

The MLC 2006, guideline B4.3.1, reads:

*The provisions required under Standard A4.3 should take into consideration the ILO Code of practice entitled **Accident prevention on board ship at sea and in port**, 1996, and subsequent versions...*

A flash back incident is always a sign that something is wrong either with the equipment used or the work procedures followed.

Flashback begins when the flame moves backwards from the welding tip and into the blowpipe whilst a loud or shrill hissing noise follows.

In the absence of an arrestor, the flame may travel extremely fast up to the gas supply hoses, to the regulator and possibly into the cylinders which in turn may cause explosion.

It is highly recommended, after each flashback incident, the arrestors, hoses and fittings to be inspected for damage and if necessary to be discarded or repaired according to the maker’s instructions.





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Some flashback causes:

- Blocked section in the blow
- Hoses of incorrect diameter
- Gas hoses of extensive length causing pressure loss
- Old gas hoses that have become stiff and brittle
- Incorrect selection of flashback arrestors
- Kinked hoses
- Flame held too close to work surface

Our company is offering a wide range of 'deficiencies', case studies, clarification on the PSC deficiencies through our PSC seminar which is delivered on regular intervals in our office or in-house, at client's request.

To assist further, we offer our clients the service of assessing onboard or through "Distance Assessment" if a vessel is in conformance with the MLC 2006 requirements or conducting inspections equivalent to PSC/Flag/Rightship inspections to detect and prevent unpleasant occurrences!

We remain at your disposal for more details,

Prevention at Sea