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Information on prohibiting the use of asbestos on board ships



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مدیریت واحد کنوانسیون‌ها و مقررات دریایی
موسسه رده بندی ایرانیان

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1. Introduction

1.1 General

This publication presents the announcement of prohibition for use of asbestos Onboard the ships. Also the details on implementation of this regulation are prescribed in this TI.

Previously, the brief explanation on this matter was described in Item 13 of Tech 2011-05 dated 2011.Feb 07. For your more information the following documents are enclosed to this document as the attachment:

- SOLAS Reg. II-1/3-5

- MSC.1/Circ.1390

The electronic files of this document and the enclosed attachments are available in the ICS network with the following address:

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1.2 Changes

This edition dated 2011.Mar 15 and any other necessary changes related to this document will be announced after this date.

2. Information on prohibiting the use of asbestos on board ships

2.1 Technical Background

The Maritime Safety Committee, at its eighty-eighth session (24 November to 3 December 2010), approved information on prohibiting the use of asbestos on board ships, as set out in the annex, with the aim of raising awareness about the dangers involved among parties concerned. Member Governments, in their capacity as flag, port or coastal States, as well as international organizations concerned, are invited to note the information provided herein and bring it to the attention of all parties concerned (including maritime Administrations, recognized organizations, port authorities, shipbuilders and ship repairers, and equipment suppliers), requesting them to make use of it as it may be deemed appropriate.

2.2 Introduction

What is Asbestos?

Asbestos is a naturally occurring mineral used in very specific applications, such as insulation, fireproofing and sealing. It has unsurpassed qualities for the jobs it used in, but as a downside, it is very harmful for humans to be around this type of material.

Asbestos has been around for centuries and after 2nd World War it was hailed as the new “Wonder material” with its fire proof properties and its extreme versatility lending itself to hundreds of applications on land and particularly at sea. It was used extensively for decades meaning that many of the world’s shipping fleets contain asbestos in some form.

This has to be eradicated or encapsulated to ensure the safety of those both on board and at shipping yards. Asbestos is known to cause very serious, often life threatening illness such as mesothelioma and lung cancer.

Even though a vessel may, since January 1st 2005, been built without asbestos containing products, a problem arises as ships travel the world, often to ports in developing countries,

where they can pick up asbestos laden products and fittings.

Asbestos on ships is now a hot topic as the International Maritime Organization looks to introduce the Inventory of Hazardous Materials and the European Union begin to crack down on safety inspections at its ports.

How can asbestos affect my health?

Asbestos will affect your health in many different ways, depending on many different aspects. Depending on many factors, someone exposed to this dangerous mineral has the risk of developing one or more of the following asbestos diseases:

- Mesothelioma
- Lung cancer
- Asbestosis
- Pleural thickening

Since 1st July 2002, the installation of materials that contain asbestos has, under SOLAS regulation II-1/3-5, been prohibited for all ships, except for some vanes, joints and insulation.

From 1 January 2011, any installation of materials that contain asbestos will, under SOLAS regulation II-1/3-5, be prohibited, for all ships without exceptions.

Where is asbestos used on a ship?

This natural material was used because of its insulating and fireproofing properties and characteristics. On board navy ships, asbestos was used inside insulation and fireproofing materials. It could be seen in some areas, such as the boilers, underwater hatches, and insulation for deck doors and for fireproofing key areas of the ship. Asbestos could also be found in underlayment on navy ships.

Before its dangers became universally acknowledged, asbestos was a valuable commodity in the shipbuilding world of the 20th century. Resistant to corrosion and heat, it seemed an ideal material to overcome many shipboard dangers. However, asbestos is now known to cause many forms of illness. Chief among them is the rare asbestos cancer mesothelioma (Including the most common

form of this deadly disease, pleural mesothelioma), in addition to lung cancer, asbestosis, and many other lung ailments. Over 300 ACMs were commonly used on ships until the 1970; many of these materials still remain in place on ships in the 21st Century. Some asbestos-containing material is still allowed during new ship construction if no good alternative exists.

The most common use of asbestos onboard has been for insulation. Asbestos could be found in pipe covering which insulated hot steam pipes, hot water lines and fuel lines. The sprayed-on form of asbestos insulation became highly friable over time. Preformed pipe insulation was a safer form but still contained asbestos that could be damaged by extreme conditions. Regardless of its form, pipe insulation was frequently cut off and replaced, exposing workers and anyone in the area to asbestos dust.

It is estimated that a ship of aircraft carrier size built prior to asbestos reforms could reasonably contain 500 to 1,000 tons of asbestos and asbestos-containing material.

Personnel exposed to asbestos during the course of their work included ship fitters, machinists, pipe fitters, pipe coverers, boiler makers, electricians, welders, riggers and engineers. In addition, onboard a ship that contains friable asbestos materials, nobody is immune from asbestos dust exposure. Close quarters and poor ventilation increase asbestos hazards, and these conditions virtually define ship life.

Despite the clear and unambiguous prohibition of ACMs, asbestos is still found on various locations on board ships. During inspections, asbestos has been found in such places as fire blankets, joints and insulation materials, types of sealants, friction material for brakes, wall and ceiling coverings, cords, remnants, electric fuses, etc. Moreover, ships that initially were free of asbestos appear to have asbestos on board as a result of repairs at shipyards and/or of purchasing spare parts at a later stage.

2.3 Purpose

The purpose of this circular is to:

1. Raise awareness among maritime Administrations, recognized organizations, shipbuilders and ship repairers, equipment suppliers and all other parties concerned of the fact that asbestos is still being used on ships, notwithstanding its prohibition as stated in paragraph 1 above;
2. Highlight that the principal means of addressing the issue of asbestos being found on board ships in contravention of the aforementioned provisions of SOLAS rests with shipyards and ship suppliers purchasing and installing asbestos free material;
3. Underline the importance of proper training of surveyors and inspectors in detecting asbestos and ACMs on board ships;
4. Prevent any further use of asbestos on board ships; and
5. Stresses the importance of maritime Administrations taking appropriate action in case ACMs are found on board ships, in contravention of the aforementioned provisions of the SOLAS Convention.

2.4 Applicability on seagoing ships

Ships built before 1 July 2002 is allowed to have ACMs on board. However, the ACMs are only allowed as long as they do not pose a risk to the crew's health. The crew should be aware of the dangers of asbestos and should know how to deal with asbestos in case disturbance of the ACMs cannot be avoided.

Since 1 July 2002, new installation of ACMs on board all ships has been allowed only in exceptional cases such as:

- ✓ Materials used for the structure,
- ✓ machinery,
- ✓ electrical installations
- ✓ equipment covered by the present Convention (Reg II-1/3-5 - SOLAS 2002)

From 1 January 2011, new installation of ACMs on board all ships will, without exception, no longer be allowed.

From 1 January 2011, for all ships, new installation of materials which contain asbestos shall be prohibited. (Reg II-1/3-5 - SOLAS 2010)

2.5 Recognizing asbestos containing materials

Asbestos is used for its specific characteristics such as fire resistance, thermal insulation, electrical insulation, strength, flexibility, etc. Therefore, asbestos is used in various locations throughout a ship. Inspectors should be aware of the large number of probable asbestos applications on board.

Asbestos is a fibrous material and can often be identified visually on that basis.

However, most asbestos is used on board in materials where it cannot easily be identified visually.

It is recommended that, whenever an item or material is to be installed, it is ensured that the item or material has a statement of compliance, or similar, with the relevant SOLAS regulation. This may take the form of an "asbestos free declaration". Due diligence should be paid to such statements or declarations and it is recommended that random confirmations are carried out.

Although asbestos in most ACMs can only be ascertained by experts in specialized laboratories, it is possible to provide training to crew members, surveyors and inspectors in identifying materials that might be ACMs. As a result of such training, the crew and ship surveyors and inspectors can avoid health risks by having the suspected material sampled and analyzed first. In case sampling and analyzing by experts is not possible, the crew and ship surveyors and inspectors should treat the material as if it contains asbestos in order to avoid possible health risks.

2.6 Training of surveyors and inspectors

Surveyors and inspectors that are charged with asbestos investigations on board ships should

be trained in recognizing asbestos and ACMs. They should also be trained in taking samples and should be instructed when to call in experts to conduct the investigation.

Surveyors and inspectors should be aware of the dangers of exposure to asbestos and should, while performing their corresponding duties, take all necessary precautions.

2.7 Action to be taken in case of contraventions of the SOLAS Convention regulation II-1/3-5

When asbestos is detected on board, in contravention of SOLAS regulation II-1/3-5, action should be taken to have it removed. The removal – assigned to professional asbestos removal companies – should take place within a time frame of 3 years from the date when the contravention is found and should be conducted in close consultation with and, where applicable, under the supervision of the flag State concerned. In such cases, a suitable exemption certificate should be issued by the flag State.

3. Reference

- ✓ MSC.1/Circ.1390
- ✓ <http://www.asbestos-ships.com/>
- ✓ <http://www.asbestosremovalcompany.co.uk>