

The presence of asbestos in ships still navigating

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Although asbestos is now banned by law, its presence on many ships still continues to be a problem for many countries worldwide. Checks of contaminated ships still sailing are scanty, and in some countries ships have been broken up while still containing large quantities of asbestos - a definite safety hazard.

It is therefore emphatically necessary to protect crew members, passengers and all workers, of whatever kind, who are required to work on such ships, particularly because the probable owners of the the highest numbers of ships travelling all over the world are multinational industries.

1914 was a crucial year for the safety of seafarers: after the tragic sinking of the "Titanic", regulations entitled "Safety Of Life At Sea" (SOLAS), the result of an international convention to guarantee common safety standards on ships, were adopted for the first time. Since then, many other conventions have been stipulated: the last, in chronological order, goes back to 1974, and has been constantly updated with various amendments. The December 2000 amendment forbade the use of materials containing asbestos (MCA) on board ships. This ban came into force in 2002, preventing once and for all the use of asbestos in ships, even by countries in which its use was otherwise still permitted. In the European Union, the asbestos ban goes back to January 2005,

although it was operative in many countries before that date (see Table 1).

A dangerous fleet

In this scenario, because the average age of ships worldwide is about 20 years, the problem of ships navigating with considerable amounts of asbestos still on board is clearly far from being resolved. According to the International Labour Organization, old ships in which asbestos was used during construction contain on average six tons of it.

According to the database of the International Maritime Organization, more than 92,000 ships with an average age of about 20 years are still sailing. In the last few years, some international organisations have deplored the fact that ships containing asbestos and other toxic substances are sent for demolition to countries where shipbreaking is carried out without any precautions regarding health. In order to combat this traffic, Greenpeace and similar associations have set up the European NGO Platform on Shipbreaking.

Greenpeace has also published a list of 50 ships which must be kept under constant surveillance, because they are shortly destined to be sent for break-up to India or Bangladesh. These two countries are the ones in which this kind of demolition is most frequently carried out, without any kind of protection for workers: asbestos is removed by hand, without gloves, and without masks to protect the respiratory system. Women and children are involved in transporting and drying asbestos and other dangerous

substances in the open air, so that they can be offered for resale.

Asbestos and tumours

In general, the field of naval engineering (construction, repairs and maintenance) is one considered at high risk of exposure to asbestos fibres. This hazard was and still is applicable to those engaged in any kind of maritime work. The first report of the *Registro Nazionale Mesoteliomi* (Italian Mesothelioma Register), compiled in 2001 and covering the period 1993-99, stated that maritime activities (both mercantile and military) were classified as third for frequency of reports of such cancers, together with metal-working and metallurgy. According to literature reports, the shipping environment is the one in which MCA are most frequently found, particularly in garages, corridors, stairways, crew accommodation, passenger saloons, engine-rooms, rooms for auxiliary equipment, and various other on-board facilities. That is, asbestos is not only found in the expected places - those requiring insulating substances with the specific characteristics of asbestos, like engine-rooms, etc. - but also in places usually frequented by passengers or crew (cabins, bathrooms, gymnasiums, restaurants, garages, etc.).

Among sailors and maritime personnel, occupational exposure overlaps life exposure, due to the presence of asbestos even in crew quarters. The scientific literature identifies engine-room personnel as the most highly exposed, due both to the considerable quantities of asbestos in such environments and to their particular features: confined rooms with forced ventilation. Other

crew members and, to a lesser degree, personnel working in areas generally occupied by passengers are less exposed. Personnel working on maintenance and repairs involving MCA are at particular risk.

During navigation, maintenance operations are routine, and generally directly involve MCA removal without the necessary precautions. Many studies report that sailors and other maritime personnel are at high risk of developing tumours of the respiratory apparatus, particularly mesotheliomas, which are definitely related to exposure to asbestos. Some studies also demonstrate that there is a significant risk of exposure even for passengers.

On-board protection

These data clearly highlight the need to invest in prevention. From on-board personnel, especially engine-room and maintenance workers, to passengers, there are many categories of people who may be exposed to asbestos if they are often on board old ships, e.g., those involved in goods handling and external maintenance, police, customs authorities, etc. It is therefore necessary to define how to protect everyone, whoever they may be, who are on board such ships. Preventive measures should first of all cover the state of preservation of any MCA present, in order to avoid situations of degradation which, in view of the particularly hazardous environmental conditions, may lead to significant amounts of asbestos being dispersed into the air. Workers taking jobs on ships still containing MCA must be told that handling them can only be carried out by fully trained personnel. All these

precautions may appear superfluous; however, even the most elementary principles of prevention are very often far from being respected and, of all large-scale industries in which asbestos is still found, shipping is probably one of the most ubiquitous.

References

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SNOP (Società Nazionale Operatori della Prevenzione) is an Italian association for those occupationally involved in the sector of environmental surveillance and health protection (doctors, biologists, chemists, technicians, etc.). Its aim is to promote the dissemination of correct, updated literature and an informed approach to the prevention of disease

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TABLE 1*Year when the use of asbestos worldwide was banned*

Year	Country	Year	Country
1983	Iceland	2001	Argentina
1984	Norway	2000	Lettonia
1986	Denmark	2001	Chile
1986	Sweden	2002	Spain
1988	Hungary (partial)	2002	Luxemburg
1989	Switzerland	2002	Uruguay
1990	Austria	2003	Australia
1991	The Netherlands	2004	Cyprus
1992	Finland	2004	Czech Republic
1992	Italy	2004	Estonia
1993	Germany	2004	Greece
1995	Japan	2004	Hungary
1996	Kuwait	2004	Lithuania
1996	France	2004	Malta
1996	Slovenia	2004	Portugal
1997	Poland	2004	Slovakia
1998	Belgium	2004	Honduras
1998	Saudi Arabia	2005	Egypt
1999	United Kingdom	2005	Jordan
2000	Ireland		