

ASBESTOS HANDLING PROCEDURES

For EUSA Marine

Asbestos is a general term used to describe a group of fibrous minerals that do not burn and are excellent thermal insulators. Up until 1972, asbestos had been used for a number of purposes aboard our vessels with no special handling procedures involved. Circular Letter M-78-09 established the company policy that asbestos containing materials should no longer be used as either a replacement in maintenance or in new ship construction. Because of the extensive exposure potential involved in removal, it was decided not to remove all of the existing asbestos on the older vessels. However, in recent years, rip-out for maintenance has been more common. This letter is to standardize work procedures and to reduce the risk of exposure to asbestos.

Some of the major uses of asbestos on our ships have been for thermal insulation, fireproofing, brake lining, and gasket materials. Recent industrial hygiene studies by Maritime Administration, of exposure during various types of maintenance done aboard merchant vessels, have yielded a ranking of exposure potential of asbestos-containing shipboard materials using existing work practices (the number "1" being the highest exposure potential):

<u>Type of Repair of Maintenance</u>	<u>MARAD Ranking</u>	<u>EUSA Maine Ranking</u>
Dry clean up of Brake Housings	1	4
Dry clean up after insulation repair	2	1
Dry handling of asbestos - containing scrap	3	2
Dry removal of insulation	4	3
Routine clean up of shop areas	5	5

The MARAD ranking is based only on asbestos fiber concentration in air. Exposure potential ranking should, however, consider frequency of occurrence of the operation as well. Based on our experience, we believe that cleaning up after insulation repair, handling asbestos-containing scrap, and removal of old insulation are the operations with greatest exposure potential. Therefore, the EUSA ranking above differs from the MARAD ranking because brake housing clean-up occurs relatively infrequently.

The current U.S. Coast Guard recommended exposure limit for airborne asbestos fiber concentration is 2.0 fibers per cubic centimeter of air averaged over an eight hour work day and 10.0 fibers per cubic centimeter of air for fifteen minutes as a ceiling. While the time weighted average exposure of shipboard workers does not normally exceed 2.0 fibers/cc for most short term jobs, exposure can exceed the limits if the job is particularly long or dusty. Therefore, the following procedures must be followed when handling asbestos-containing materials or suspect asbestos-containing materials.

1. All insulation on old vessels must be treated as asbestos unless it is certain the material is a man-made fiber (glass fiber or rock wood based).

2. Personnel engaged in the work must wear an approved dust respirator and impermeable coveralls (such as Du Pont TYVEK TYPE 14, constructed like Durafab #2127 or equal, specify Asbestos Suit) that can be disposed of each day. Do not use same coveralls two consecutive days in a row. The following respirators are the only ones for use in asbestos atmospheres: 3M Company #8710 and American Optical #R 1050. These coveralls and respirators are available through marine stores.

The manufacturer's fitting and use instructions on the respirator package MUST BE FOLLOWED.

3. Approaches to locations or jobs must be posted at approximately twenty-five feet with warning signs. The job should be segregated from general access by the use of ropes or other suitable barriers so that unprotected personnel will not inadvertently enter and be exposed. Only personnel directly engaged in asbestos handling (and properly protected) should be allowed within the segregated area.
4. Insofar as practical asbestos must be handled, cut or otherwise worked in a wet state sufficient to prevent the emission of airborne fibers.
5. Power operated tools must not be used to remove asbestos thermal insulation.
6. Insofar as practical, drop cloths must be used to prevent or contain the spread of asbestos contamination and be disposed of per item #9.
7. Areas that become contaminated by asbestos insulation scrap and debris must be wet down before sweeping to assist in the control of asbestos dust.
8. Asbestos waste, scrap, debris, equipment, and asbestos contaminated clothing consigned for disposal must be collected and disposed of in sealed impermeable bags.* Such bags must be affixed with a warning label stating:

CAUTION -- CONTAINS ASBESTOS FIBERS -- AVOID CREATING DUST -- BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM.

*Bags can be ordered through marine stores.

9. Waste asbestos materials must be retained in sealed bags in a secure location or receptacle until disposed of. The agent at the next Exxon Terminal should be notified that the asbestos needs to be taken off the vessel and disposed of properly.
10. When re-insulating a red undercoat sealer must be used to identify asbestos-free thermal insulation prior to final painting.

It must be pointed out that it is very important that asbestos be wetted, if possible, for clean-up and handling. In general, where wetting of materials is practical and used, the airborne exposure potential is not significant.

It is clear that several shipboard repair and maintenance operations can involve potential exposure to airborne fibers. At this point, data does not reveal that shipboard personnel are frequently exposed. Neither the eight-hour time-weighted average limit of 2.0 fibers/cc or the ceiling exposure limit of 10.0 fibers/cc for fifteen minutes is regularly exceeded and, in most cases, the fiber levels are well below the allowable levels.

However, since exposure can occur, and protective measures are readily available, common sense says that the above procedures be followed. Please review these procedures with all personnel so that protection from asbestos fibers can be achieved.

GML:jml:es
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