National Safety Council

Automotive, Tooling, Metalworking and Associated Industries Newsletter

FEBRUARY 1980

Minimizing Asbestos Exposures and Hazards in the Workplace

In the Federal Register of October 17, 1979, a notice appeared that the Consumer Product Safety Commission (CPSC) and the Environmental Protection Agency (EPA) were publishing proposed rules regarding asbestos exposure in consumer products. Both these agencies have previously taken action to control human exposure to asbestos, but are still concerned about asbestos exposure from many separate sources.

In industry, we must also be concerned about asbestos exposure. The following safety information data will hopefully serve as a reference for you to investigate potential sources of asbestos exposure in your facilities.

The information that follows comes from the safety information sheet of a member company in the Automotive, Tooling and Metalworking Section.

Definition

The term "asbestos" applies to the minerals of chrysotile, amosite, crocidolite, tremolite, anthophyllite and actinolite. Ninety percent of the asbestos used in industry is chrysotile.

Hazard

Asbestos is a known cancer-causing agent and can cause other related diseases such as asbestosis, mesothelioma of the pleura or peritoneum and gastrointestinal disease. Smoking significantly increases the risk, although not every person exposed to asbestos will develop cancer.

Allowable Concentrations

Asbestos is measured in fibers greater than five microns in length per cubic centimeter of air. The current OSHA allowable concentration in effect since July, 1972 is two fibers longer than five micrometers per cubic centimeter of air over an eight-hour time weighted average. The ceiling concentration is ten fibers longer than five micrometers per cubic centimeter of air; however a lower level has been proposed, but not yet promulgated.

Procurement

The inhalation of asbestos-containing materials is potentially hazardous. Therefore, asbestos-containing materials should be replaced with substitute material whenever possible. If substitution is impossible, then engineering or administrative controls shall be attempted or personal protective equipment shall be used.

Certain products used in injustry contain asbestos. Some of those listed in the Federal Register are: acoustical ceiling tile, roofing, piper and boiler coverings, insulation materials, electric switch boxes, gasket or seal materials, oven or kiln linings, some types of electrical wiring, flame resistant clothing, adhesives, caulks, certain cements and patching compounds, clutch plates, brake linings and radiator sealant.

Storing and Handling

Asbestos-containing materials shall be stored in areas designated and identified for these materials only. Such materials shall be stored in closed containers or otherwise packaged in such a way to prevent generation of asbestos fibers.

Asbestos-containing materials shall be transported in the least hazardous manner feasible, meaning sealed, totoally packaged, labeled, covered, and so on.

Using Asbestos

Prior to starting any job in which asbestos-containing materials are to be used or handled, either for production or maintenance, the safety department should be notified. These also include any jobs that are subcontracted.

The safety department, in turn, must:

1. Provide personnel monitoring as needed;
2. Determine engineering needs or personnel protective equipment as needed;
3. Assure that personnel are informed and properly trained;
4. Recommend appropriate control measures;
5. Assure that the appropriate control measures are followed;
6. See that compressed air or gases are not used for cleanup;
7. Assure that all asbestos-containing materials, including wastes, are labeled, treated and properly disposed of in impermeable containers;
8. Assure that proper signage, barriers and barricades are posted at

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Asbestos

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all approaches and entrances to the work areas affected;

9. Arrange for medical examinations as required by appropriate regulatory agencies; and

10. Retain all records for at least 20 years.

Other Precautions

The agencies estimate that there are 2,000 to 3,000 separate and unrelated products that contain asbestos, but in general, there are three areas in basic metal operations where asbestos may be present:

- In products manufactured: such as clutch plates, brake discs and bands, and gaskets.
- In buildings, around furnaces and boilers, in insulation of steam or hot water pipes, in patching materials used to repair hot jobs or machinery, and around asbestos material-handling operations.
- In foundries, in some protective clothing, such as gloves, jackets and hoods, and around furnaces, ladles and hot jobs.

It is suggested that substitute materials be used whenever possible in production parts, insulating or patching materials and clothing.

If substitution of an alternate to asbestos is not possible, then engineering means are needed to control exposure. These might be ventilation or collection systems.

In collection systems, the fibers must be collected and disposed of properly. For operations where limited or periodic exposure takes use "wet" materials or processes rather than dry.

There should be no smoking, eating or drinking in any asbestos-contaminated area.

Older Building Hazards

Many older building have asbestos insulation or pipes wrapped with asbestos insulation. In the event than any building which has friable asbestos materials within it is renovated or demolished, a written notification must be sent to the EPA administration at least 20 days prior to commencement of the work.

If you are planning such a move, please notify your corporate safety department at least one month prior, so that the appropriate notification to EPA is initiated. If the inspection uncovers any asbestos usage, the applicable OSHA standard is 1910.1001 for determining compliance.

Whenever work is done in these areas, the following steps are recommended:

1. Asbestos material should be wetted down prior to being torn apart to prevent fibers from dispersing into the air.

2. The employees must be trained in the proper procedures to be used, and made aware of the hazards of asbestos.

3. Special precautions must be taken if clothing becomes contaminated with asbestos. Plastic bags, labeled with appropriate asbestos warning labels, must be used to transport or discard such clothing. These clothes must not be mixed with other work or dress clothing.

4. Approved vacuuming equipment that will not recirculate the asbestos dust must be available to clean up the fibers when the work is finished.

5. The work area must be barricaded off and warning signs must be posted.

6. The correct protective equipment must be worn at all times.

7. Replaced insulation or patching material should be a non-asbestos type.

8. The work should be done during low exposure times, such as third shift or on weekends.

After your company has made a thorough inspection of its plants, individual "asbestos action plans" should be developed. Readers are invited to submit their own plans to the ATM Executive Committee for review and further recommendations.

—ATM Member Company

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Vehicle's Color Contributes to Visibility

"You can have any color you want as long as it is black" is a quotation attributed to the late Henry Ford regarding the limited color selection a customer had when buying a new automobile. And for many year, black was the only color used for motor vehicles. Fortunately, attitudes change and automobiles are now manufactured in a rainbow of colors.

Because of their color, certain vehicles are usually recognized easily by other drivers and pedestrians. The most noticeable colors, listed in order of visibility, are shown below:

1. Luminous orange
2. White
3. Light yellow
4. Light orange
5. Dark yellow
6. Light gray
7. Light blue
8. Light red
9. Light brown
10. Light green
11. Dark gray
12. Dark red
13. Dark blue
14. Dark brown
15. Black
16. Dark green

In recent years, much attention has been focused on "underride accidents." In an underride accident, a truck or passenger car drives under another truck or trailer on the highway. A recent study by the University of Michigan's Highway Safety Research Institute found that most car-truck fatal crashes occur at night. Inclement weather is a minor contributor to these accidents, but low visibility at night is a major factor. The collisions studied were almost always surprise events in that the passenger car driver did not expect to find a

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