2nd Draft

RECOMMENDED WORK PRACTICES FOR ASBESTOS-CONTAINING GASKETS

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INTRODUCTION

The Occupational Safety and Health Act (OSH Act) in the United States and similar laws in Canada and other countries were enacted to ensure every worker a safe and healthy workplace. This legislation is far-reaching. It covers millions of employees and nearly every employer.

The information and guidance in this booklet have been developed to assist in assuring compliance with the OSH Act and the Occupational Safety and Health Administration's (OSHA) standard for occupational exposure to asbestos dust (29 CFR Part 1910.1001). Because state or local regulations may differ from the OSHA standard, they should be reviewed to ensure total compliance.

The use of good work practices is recognized as one of the means of reducing health hazards associated with exposure to asbestos dust. The recommendations that appear on the following pages were developed through experience, study, and field testing. They were designed to achieve safer and more healthful job site conditions when working with asbestos-containing gasket material.

ASBESTOS AND HEALTH

Exposure to asbestos fibers can increase the risk of developing certain diseases over a period of years. Diseases associated with inhalation of asbestos fiber are: asbestosis, a non-malignant scarring lung condition; cancer of the lung; mesothelioma - a rare cancer of the lining of the chest or abdominal cavities; and, possibly, cancer of the digestive tract.

It should be emphasized that the evidence of adverse health effects (malignant and nonmalignant lung disease) due to the combined action of cigarette smoking and exposure in the workplace is well established. Workers who handle asbestos greatly reduce their health risks by not smoking cigarettes.

We will continue to see cases of asbestos-related disease for some years because of the unfortunate legacy of excessive past exposures. However, the present state of scientific knowledge shows clearly that minimizing exposure to airborne asbestos dust reduces the risks of asbestos-related disease. Good work practices are one means of significantly reducing generation of dust.

SUMMARY OF OSHA ASBESTOS STANDARD

Under the current OSHA standard for occupational exposure to asbestos dust, it is the employer's responsibility to assure that exposure of employees to airborne concentrations of asbestos fibers does not exceed the following permissible exposure levels:

a. Eight-hour time-weighted average (TWA): Two fibers longer than 5 micrometers, per cubic centimeter (2 f/cc).

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b. Ceiling concentrations: Ten fibers, longer than 5 micrometers, per cubic centimeter(10 f/cc).

OSHA Instruction CPL 2-2.21A of February 18, 1981 states that the medical examination requirements of the asbestos standard will be required where the 7 to 8-hour TWA fiber concentration is 0.1 f/cc or greater.

Extensive field monitoring has demonstrated that the proper use of asbestos-containing gaskets can result in dust levels which are less than an 8-hour TWA of 0.1 f/cc. By following the work practices recommended in this booklet when using such products, dust levels can be minimized.

PRODUCTS AND OPERATIONS

These work practices apply to the use of non-friable asbestos-containing compressed, beater-addition, and gasket millboard material when furnished as precut gaskets or in sheets and rolls.

Operations to which these work practices apply include:

A. Storage

B. Fabrication

C. Installation

D. Replacement

E. Housekeeping and Waste Disposal

RECOMMENDED WORK PRACTICES

A. Storage

Gaskets materials are typically received in three forms: sheets, rolls, and precut gaskets. Storage areas should be kept clean

and dust free, either by wet sweeping or with the use of a vacuum cleaner fitted with a high efficiency particulate aerosol (HEPA) filter. Any information provided by the manufacturer, such as health warnings and handling requirements, should be retained.

B. Fabrication

1. Hand Punching

Bolt holes are often made with the use of a hand punch and mallet. If feasible, the material should be dampened while it is being worked. All areas where hand punching takes place should be kept clean and dust free. Scraps of waste from hand punching should be disposed of in the proper manner.

2. Hand ~~Punching~~ SCRIBING (?)

Hand shaping of gaskets is carried out with the use of a scribe, pocket knife, or scissors. Gasket sizes are scribed onto a flat sheet of asbestos gasket material and then cut by the use of scissors or a pocket knife. The gasket material should be dampened during scribing and cutting, if feasible. In this operation, as in others involving asbestos, work areas should be kept clean and dust free and waste scraps should be promptly disposed of in the proper manner.

3. Die Cutting - Hand Operated Press

Gaskets are sometimes cut to size and shape on hand operated mechanical cutting presses. The surfaces of these machines and the surrounding work area should be maintained to be clean and dust free. Gasket scraps should be promptly disposed of in the proper manner.

4. Die Cutting - Power Press

Power-operated presses used in gasket fabrication should be pro-

vided with local exhaust ventilation as needed. Maintain sharp dies to reduce burrs that will increase the potential for dust and require further handling. The work area should be kept in a clean and dust free condition.

Note: Large pieces of gasket material left after the fabrication operation may be returned to storage for future use.

C. Original Installation

No special controls are required.

D. Gasket Replacement - Removal and Installation

Replacing worn or scheduled service gaskets often requires the use of a scraper or a wire brush to remove all of the old gasket material from the flange surface before a new gasket is put into place. Begin by prying or levering off the old gasket with a scraper, such as a wood chisel, in order to remove it in the largest possible pieces. Where practicable, surfaces to be ground, scraped or brushed should be wetted. Work areas should be cleaned promptly. Unless airborne concentrations are known, respiratory protection is advisable.

Note: Some gaskets may be coated or surface treated with a parting agent so that when gaskets are removed, there is no need for excess grinding, scraping or brushing.

E. Housekeeping and Waste Disposal

Housekeeping is an essential part of any safe operation. Airborne asbestos dust created by the lack of good housekeeping has the potential for harm to employees and others. Keep work areas clean by wet wiping or sweeping, or by vacuuming with a unit equipped with a high efficiency particulate aerosol (HEPA) filter. NEVER DRY SWEEP OR BLOW ASBESTOS WITH COMPRESSED AIR.

The scrap offcuts and webs from these operations are not considered a "hazardous waste" under the Resource Conservation and Recovery Act (RCRA) and can be shipped to local landfills for disposal. Impermeable or airtight containers are recommended to make the scrap easier to transport and facilitate disposal.

AVOID CREATING DUST.