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The OSHA Act makes it mandatory for each employer to furnish to each of his employees a place of employment that is free from recognized hazards that can cause (or are likely to cause) death or serious physical harm to his employees, and to comply with occupational safety and health standards promulgated under the Act.

This places a burden on the safety professional to take prompt steps to eliminate any hazardous situation he is faced with. Extensive engineering revision of processing or manufacturing methods may be involved, or only a simple change in materials handling methods may be necessary.

A machine so designed, for instance, that it effectively confines flying particles eliminates a cause of accidents. This is a more basic treatment of the problem than the use of goggles designed to prevent injury, for confinement stops particles at their source.

Reducing noise to acceptable levels by quieting down a machine or enclosing it is far superior than depending on personal hearing protective devices. (See Chapter 40, "Noise and Hearing Conservation.")

Likewise, dangerous solvents, chemicals and other vapor or fume hazard substances should be confined to a pipe or closed tank, or their vapors or fumes should be exhausted mechanically, instead of depending on a respirator to

protect an operator required to work in a hazardous environment. Protection by mechanical means is generally more reliable than protection dependent upon human behavior.

If it is impractical to eliminate a cause of accidents by engineering revision or by safeguarding, or to limit exposure time to hazardous dusts, mists, vapors, or excessive noise to acceptable levels by administrative procedures, use of personal protective equipment is mandatory.

Equipment Selection and Use

Once the safety professional decides that personal protective equipment is needed, he must

- 1 Select the proper type of equipment, and then
- 2 Make sure that the supervisor sees to it that the employee uses and maintains the equipment correctly.

Selection of proper type

After the need for personal protective equipment has been established, the safety professional is faced with the second problem, that of selecting the proper type. Two criteria should be used: the degree of protec-