

available that has been made fire-retardant to combat this danger.

Other special clothing

Safety experts have been very ingenious in developing many highly specialized types of clothing for protection against special hazards. A partial list includes:

- High visibility and night hazard clothing for construction, utility, maintenance workers, police, and firemen whose work exposes them to traffic hazards;

- Disposable clothing made of plastic or reinforced paper is available for exposure to low level nuclear radiation and for use in the drug and electronic industries where contamination (to the product) may be a problem.

- Leaded clothing of lead glass fiber cloth, leaded rubber, or leaded plastic for use by laboratory workers and other personnel exposed to X-rays or gamma radiation.



Combination hard hat/face shield, gauntlet-style gloves, safety shoes and high-temperature-resistant garments (made of DuPont Nomex) protect this worker from radiant heat and molten metal splashes.

- Electro-magnetic radiation suits provide protection from harmful biological effects of electro-magnetic radiation found in high level radar fields and similar hazardous areas;

- Conductive clothing, made of a conductive cloth, is available for use by linemen doing bare-hand work on extra-high voltage conductors. Such clothing keeps the worker at the proper potential.

For special applications, manufacturers have a vast number of materials they can draw upon to meet specific hazards.

Other body protection

Knives and cleavers—Aprons are made of various materials, such as leather or fabric, with padding or stays, to offer protection against light impact and against sharp knives and cleavers, such as used in meat processing.

Machine shop aprons—An apron worn near moving machinery should fit snugly around the waist. Neck and waist straps either should be light strings or instant-release fasteners in case the garment is caught. Split aprons should be worn on jobs that require mobility on the part of the worker. Fasteners draw each section snugly around the legs.

Hot sparks and molten metal—Welders are often required to wear leather vests or capes and sleeves, especially when doing overhead welding, as protection against hot sparks and bits of molten metal. Flame-proof gauntlet gloves and aprons are desirable. Woolen clothing is preferable to cotton. Trousers or overalls should not be rolled up, as this could catch sparks. Asbestos coats and aprons are often used by those who work around hot metal or other sources of intense conductive heat.

Chemicals, acids, and caustics—A rubber apron protects the body against ordinary hazards of handling acids or caustic solutions in small quantities. Some liquids harm natural rubber, but synthetic rubber — especially neoprene — and some plastics give satisfactory resistance.

Whenever the danger of splash is present, precaution should be taken to see that all parts of the body that might be exposed are protected. Hands and arms should be protected by rubber gloves. A rubber or rubberized coat and hat should be worn for overhead hazards. Special precautions must be taken to decontaminate the clothing that has been used in corrosive atmospheres before it is used again. Before clothing is removed, it should be thoroughly washed with a hose stream.

Policy For Care and Use of Personal Protective Equipment

The employer, regardless of the size of his operation, must establish and post a clear-cut policy with respect to the company's personal protective program. It is essential that such policy be consistent with prevailing regulations as to availability, selection, proper use, inspection, care, and maintenance of the equipment. Because the law makes the employer responsible for "employee-owned equipment," such equipment must of necessity receive the same attention as company-owned equipment to assure its adequacy, safety, use, and proper care and maintenance. A clearly defined policy assigning responsibility to supervisors to enforce the use of personal protective equipment is essential as a rigid policy for employee compliance.

Employee training

Once an effective personal protective equipment program has been established, employees must be trained in the proper use, care, and limitation of the equipment. Further, it must be assured that such training is satisfactorily completed before the employee is permitted to operate the equipment.—End.

This article is adapted from a chapter in *Handbook of Occupational Safety and Health* (1973), published by the National Safety Council. For a free descriptive brochure of this manual, write NSC, 425 N. Michigan Ave., Chicago 60611, and ask for 113-74.