used in the proximity of high temperature, such as slagging, coking, furnace repair work with hot ingots, and fire fighting where the flame area is not entered. These suits are seldom of 1-piece construction. They depend primarily on the reflective ability of an aluminized coating on a base cloth of asbestos, glass fiber, or synthetic fiber. *Never use fire proximity clothing where fire entry suits are required.*

Ordinary clothing can be protected against flame or small sparks by flameproofing. One of the commercial preparations can be applied in ordinary laundry machinery after the garment is washed. Flameproofing will make the material highly flame-resistant and will not add much to the weight or stiffness of the cloth.

These compounds are usually water soluble, and must be replaced after each laundering. An effective flameproofing solution can be made by dissolving 8 oz of borax and 4 oz of boric acid in 1 gal of hot water. If stiffening of the fabric is not objectionable, more durable flameproofing methods can be applied, some of which are resistant to both laundering and dry cleaning.

Durable flame-retardant work clothes which will withstand many launderings are available. Their flame-retardant treatment, based on tetrakis phosphonium chloride (THPC), was developed by the U.S. Department of Agriculture Research Laboratories.

Flameproofed clothing should be marked or otherwise made distinctive to reduce the chance that untreated garments may be used by mistake.



Fig. 36-31. More than a dozen types of gloves, made of materials ranging from asbestos to cotton, are made for protection of hands. In photo, girl tries on neoprene gloves used for acid-handling work.

Protection against impact and cuts

It is necessary to protect the body from cuts, bruises, and abrasions on most jobs where heavy, sharp, or rough material is handled. Special protectors have been devised for almost all parts of the body and are available from suppliers of safety equipment.

Pads of cushioned or padded duck will protect the shoulders and back from bruises when men carry heavy loads or objects with rough edges.

Aprons of padded leather, fabric, hard fiber, or metal will protect the abdomen against blows. Similar devices of metal, hard fiber, or leather with metal reinforcements provide protection against sharp blows with edged tools. For jobs requiring ease of movement, aprons may be split and equipped with fasteners to draw them snugly around the legs.

Guards of hard fiber or metal are also widely used to protect the shins against impact.

Knee pads should be worn by mold loftsmen and others whose task requires continual kneeling.

The material to be used for gloves depends largely upon what is being handled. For most light work, a canvas glove is both satisfactory and cheap. For rough or abrasive material, leather or leather reinforced with metal stitching will be required.