

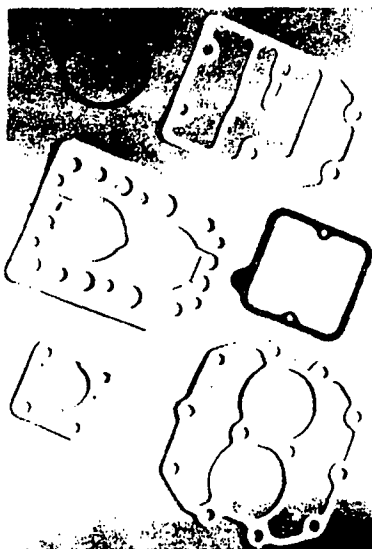


Figure 3 illustrates gaskets made of an asbestos-free material, GP/duroid 7102, a homogeneous blend of chloroprene latex and a reinforcing material. (Photo: Courtesy of Rogers Corp.)

and roll board.

"We use one-eighth-inch-thick 550-J paper for the removal of dross from the babbitt pots (see Figure 2). We also use this paper as a heat shield between the resistance ring and the work coil in the brazing of rotors. Another application is as a cover to protect rotors and generator shafts from any form of spillage. We use 550-F paper to fill ventilating holes of the rotors temporarily during removal of the retaining ring while

hot. The flexible 440 paper also soaks up flux in the tin pots. We split the one-fourth-inch-thick GH board into one-eighth-inch sheets and use it between the bearing shell and the bearing as a high-temperature, temporary gasket while pouring molten babbitt," Ruffing explained.

Varying thicknesses of paper and board are used by Westinghouse's Aerospace Electric Division, Lima, OH, as insulators. The division notes on its specification information:

Suitable for continuous use up to 1,260 C (2,300 F). Has good resistance to most chemicals, with the exception of hydrofluoric and phosphoric acids and strong alkalis. If wet by water, thermal properties remain unaffected after drying. Melting point: 1,793 C (3,260 F).

The Fiberfrax® papers also are used for insulating purposes at Westinghouse's Systems Division, Baltimore.

The United States Stove Co., East Pittsburgh, TN, producing approximately 600 wood-burning stoves daily, uses Fiberfrax® rope as a seal on the feed and ash doors. Stoves with steel doors use a three-eighths-inch-diameter rope, and stoves with cast iron doors use rope of one-half-inch diameter (one inch equals 2.54 centimeters). The stoves require air-tight seals. The company began using ceramic fiber three years ago to replace

the asbestos, which would deteriorate and break down after constant use. Approximately seven feet (2.1 meters) of rope is used for the two seals.

In Cleveland, Ballantruff Home Products Co. switched to the Fiberfrax® felt insulation from asbestos millboard to line home security boxes.

At Groton, CT, the asbestos replacement program at the Electric Boat Division of General Dynamics Corp. began three years ago, and asbestos has been totally phased out.

According to Production Engineer Hal Blanchard, Fiberfrax® 550-J paper, Durablanket® insulation with density of six pounds (2.7 kilograms) per cubic foot (0.03 cubic meter), and Duraboard insulation have replaced asbestos in a number of production areas. The paper is used to protect materials from heat transfer within containers that have their lids welded on. The Durablanket® insulation is used during a brazing operation, serving as a heat shield against the sustained heat of the torch.

"We wet down the blanket first, then drape it and stuff it into openings and around the structures and painted surfaces that we want to protect," Blanchard explains. The Durablanket® and Duraboard® are used interchangeably for similar applications during heavy burning operations to catch molten slag and metal, and to protect electric cables and wiring.

Featured at the Design Engineer-



Figure 4 shows Intumastic 285 being troweled on to grouped electrical cables to serve as a fire-proofing coating. It also may be applied by spray, roller, or handgloving. (Photos: Courtesy of Carboline Co.)



Figure 5 shows Intumastic 285 in place after being applied to electrical cables. The fire-proofing agent is claimed to provide a hard but flexible surface that will not dust, flake, or spall.