

group, the incidence of this condition increasing with the age of the individuals and the years of employment. Kranenburg observed in 1929 among 243 Dutch workers of briquette plants one case of pitch cancer and 136 cases of pitch warts. The data presented indicate that the briquette industry has remained, even during recent years, in some countries an important source of industrial pitch cancer of the skin.

Manufacturers of building material and men engaged in the building trade represent another occupational group which may be exposed to pitch and tar and consequently become affected by tar and pitch epithelioma. Such a carcinogenic hazard exists for the producers and users of weather-proof stones which are made by compressing a mixture of tar, pitch, and gravel into the shape of bricks. These are dipped into liquid tar to provide them with a coating of tar. The preparation and use of water-proof concrete, made by mixing cement with pitch and tar, as well as the painting of foundations and outside walls of buildings with tar or pitch are connected with similar dangers (Haagensen).

However, the most serious situation in this respect is in the manufacturing and use of corkstone, which has become an important building material in modern construction. Corkstones are made of ground cork waste to which various ingredients are added as binders, the nature of which depends upon the future use of the corkstones and plates. While the greyish-white corkstones contain clay and lime as a binder, pitch is used in the manufacture of the water-proof corkstones.

The main exposure to pitch occurs, first of all, before this substance is mixed with the powdered cork, and later on, in the processing and handling of the finished material. The group of workers having the most contact are, on the one side, the loaders, breakers, and grinders of pitch, and on the other side, the sawers, lathe workers, and polishers of corkstones, tiles and plates. The hazard is not restricted alone to the manufacturers of corkstone, but, also, extends to the members of the building trades who use the finished material. In both instances the exposure consists of contact with pitch dust in great quantities. As they are very durable, light in weight, elastic, fire-proof, resistant to pressure, and can be handled like ordinary brick or wood, corkstone tiles and plates are widely used for sound-proofing and insulation (temperature control) of walls and pipes, and for floor covering (tiles or under linoleum).

At present there are 17 cases of pitch cancers among corkstone workers, nine of these cases having been observed among workers in several Swiss plants employing a total of 63 workers (incidence of 15 per cent). The incidence is relatively higher (20 per cent) when only workers appreciably exposed to pitch dust are considered. When individuals of 50 years or more are considered the incidence increases to 31 per cent (Schürch; Schürch and Schrafl; Barkmeyer). One case from a Hungarian corkstone factory was reported by