PLAINTIFF'S EXHIBIT UR-598
PENGAD-Bayonne, N.J.

Was asbestos 37

Health Progress in an Asbestos Textile Works

JERRY MITCHELL
CHARLOTTE, N.C.

62 1931 LV

Asbestos textile, a cloth made from a fibrous mineral, is fascinating to almost everyone. Made in China before Marco Polo and used for wicks for the "eternal fires" in Grecian and heathen temples, its resistance to fire has produced wonder and even awe for centuries.

Few people know the extent to which their safety and even their lives depend on this fire- and heat-resistant textile. It touches their lives in heaters and ironing cords, in heating pads, or the element around which the glowing wires are wound in electric heaters. It covers ironing boards; it forms the insulation on the wire in the kitchen range. A small tube may be on the carburetor of automobiles or the small thread that ties the mantle on the gasoline hunting lantern. The extent to which it is used on ships and submarines of the U.S. Navy and on airplanes constantly involved in defense is seldom suspected. Asbestos is an integral part of American industry and of nationa defense. Glass products, cherry red fron molds, are carried on asbestos belts to an nealing lehrs, where the temperature i gradually lowered to prevent checking o warping. This might include automobil headlights or television tubes. The coat of steel worker made from asbestos may pro tect him from molten metal splashes; glove made from asbestos were used in the las war to handle shell cases from antiaircraf guns.

But asbestos dust can be a killer, and in the manufacturing processes of asbesto textiles, it has been deadly in the past.

Imagine a small asbestos textile plant i 1936, employing 175 to 200 persons, sud denly finding that possibly one-half th work force was affected to some degree b asbestosis. Many men were known to be i the first and second stages, and some, pos sibly, even in the third stage. At the sam time, surrounding property owners wer entering suits for damage claimed as th result of air pollution. All this was attende

Submitted for publication April 3, 1961.

Manager, Charlotte Works, Thermoid Division, H. K. Porter Company, Inc.

59040007

TABLE 1.—*Dust Counts from Records of North Carolina State Board of Health, January, 1936*

Samples	Million Particles Per Cu. Ft. of Air	Location
84	62.7	Small card room
86	139.0	Back of cards in small room
87	138.0	Back of cards in small room
90	94.5	Screened exposure (fly willow wind, open place, draughty)
118	53.8	Cotton picker
123	210.0	Stock bin (closed quarters, exhausted, but very dusty)
124	167.4	Same as 123
190	120.0	Dry weaving, unit No. 8 worst loom; started especially for sampling; many asbestos fibers noted
192	45.0	Dry weaving, unit No. 8 next to No. 8 running
238	48.5	Dry weaving around loom No. 283
240	46.8	Dry weaving around loom No. 4

with the newspaper publicity that might be expected to accompany such disclosures.

Dust controls were very, very meager, and it was accepted as part of "holding a job" that operators would work in a room so dust-laden that, at times, it was not possible to see to the other end of the row of machines or to recognize fellow employees at that distance. Jobs were important, and the hazards were largely accepted for the sake of dependent families. Welfare payments were not a part of the way of life before the thirties.

Turning the dust which may have been sucked out by the few fans into the open air, to be carried by the prevailing southerly breezes into the nearby homes, was also accepted as part of the price for having industries providing payrolls. Homes also were as close as possible to the mills.

Records of the company which became the Charlotte Works of H. K. Porter Company, Inc. 22 years later are not available, but what actually did happen may have roughly compared with such a situation as outlined above. The difference would be in degree and in the vividness of the story-telling of the narrators.

In the year 1936, the North Carolina State Board of Health set up a procedure for x-ray and medical examinations of employees in North Carolina engaged in the mining of granite and mica, carving tombstones, working in aggregate plants, or working with asbestos. The procedure was expanded to include issuing work cards to employees in

TABLE 2.—*Latest Dust Counts from Records of North Carolina State Board of Health, July, 1960*

Samples	Million Particles Per Cu. Ft. of Air	Location
1,354	0.4	General atmosphere at stock condenser—one man loading carts
1,355	0.7	General atmosphere around batch-mixing machines
1,356	0.9	Exposure of one man tending sargent cleaner, condenser at reclaim
1,357	0.7	General atmosphere at electrical roving cards Nos. 30-34
1,358	2.9	General atmosphere around lap cards Nos. 21-26
1,359	0.6	General atmosphere at cards Nos. 18, 19, 20, 27, 28, & 29
1,360	1.3	General atmosphere at cards Nos. 6-12
1,361	0.8	General atmosphere Nos. 1-5, 13-15, 3, & 5 not in operation
1,362	0.4	General atmosphere around spinning machines Nos. 13-24; Nos. 15 & 20 not in operation
1,363	2.8	General atmosphere around Nos. 1-12 winding machines
1,364	0.3	General atmosphere at spinning frames Nos. 7-12; No. 12 being doffed for sample
1,366	1.2	Exposure of one man tending cloth looms No. 37 (wet) and No. 39 (dry)
1,367	3.1	General atmosphere along aisle by cloth looms Nos. 36, 38, 40, 42, 44, 46, 48; Nos. 44 & 38 not in operation
1,368	0.7	General atmosphere along aisle by tape looms Nos. 17, 18, 19, & 20
1,369	1.9	Operator's exposure of No. 4-W3 automatic cloth loom (dry)
1,370	4.6	General atmosphere along aisle between Nos. 29 & 30 tape looms; No. 29 had wet warp, dry fill, and local exhaust; No. 30 all wet, no exhaust
1,371	1.6	General atmosphere along aisle of looms Nos. 1, 34, 35, & 54 in the basement; No. 5 not in operation; Nos. 1 & 54 all wet; No. 34 dry fill, wet warp

50040008

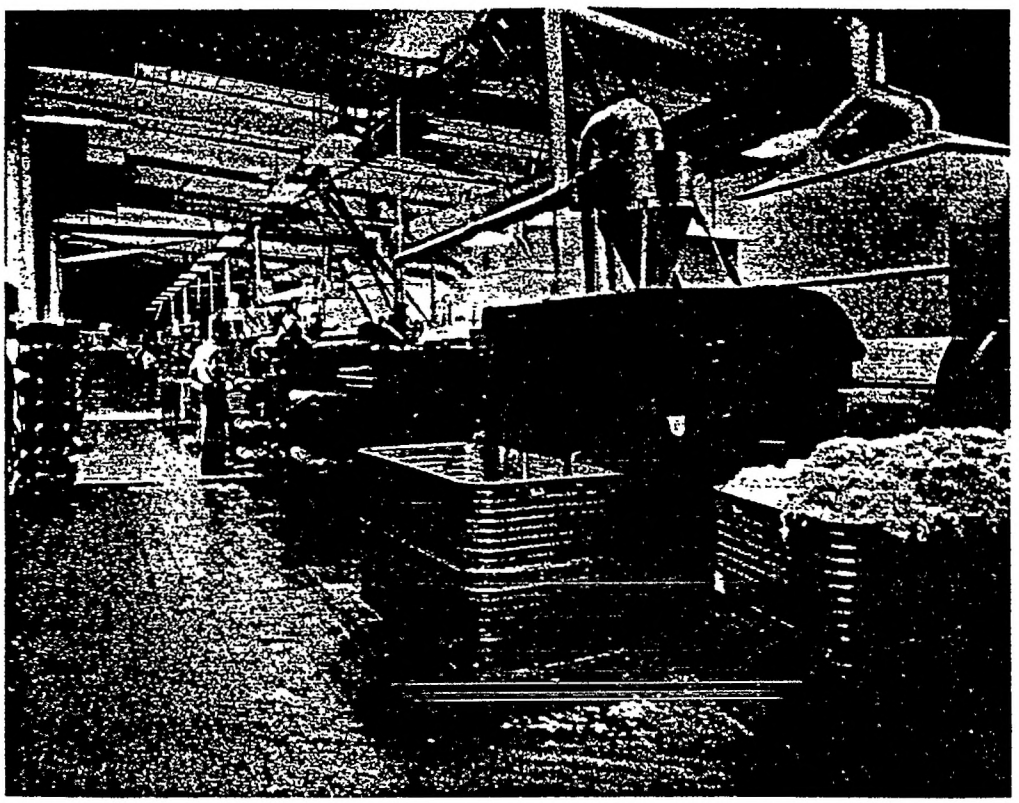


Fig. 1.—View of the card room showing dust hoods and pipes. Department air conditioned. Temperature maintained at 78 F. Relative humidity held between 35% and 40% while 80,000 cu. ft. of air per minute is being filtered. Air in this room circulated completely 6 times per hr.

these trades or withholding cards where circumstances dictated that the issuance of work cards was not advisable.

The number of asbestos textile plants has always been small, and this is still true today. This plant has increasingly represented a very substantial segment of this vitally necessary industry.

Today the Charlotte Works of the Thermoid Division of H. K. Porter, Inc., with modern equipment and employing more than 400 persons, is one of the largest producers of asbestos textiles in the United States or, in fact, in the world.

The threshold limit of 5,000,000 particles per cubic foot must have seemed utterly unattainable when the North Carolina State Board of Health records showed such dust counts as those given in Table 1, taken in January, 1936.

These are extremes, of course, but few figures were within the 5,000,000 considered the threshold limit. These compare with the latest dust counts of the North Carolina State Board of Health, taken in July, 1960 (Table 2).

Much credit is due the insurance carrier who took the risk in 1936 and the North Carolina State Board of Health for the institution of corrective measures beginning in 1936. These have been carried on rigorously. The program led to the statement by Governor Hodges in his address to the 1958 Governor's Conference on Occupational Health in Chapel Hill: "Going back a few years great progress has been made in the fight against the two main dust diseases in North Carolina—silicosis and asbestosis. The latter one has been almost licked and

5004000

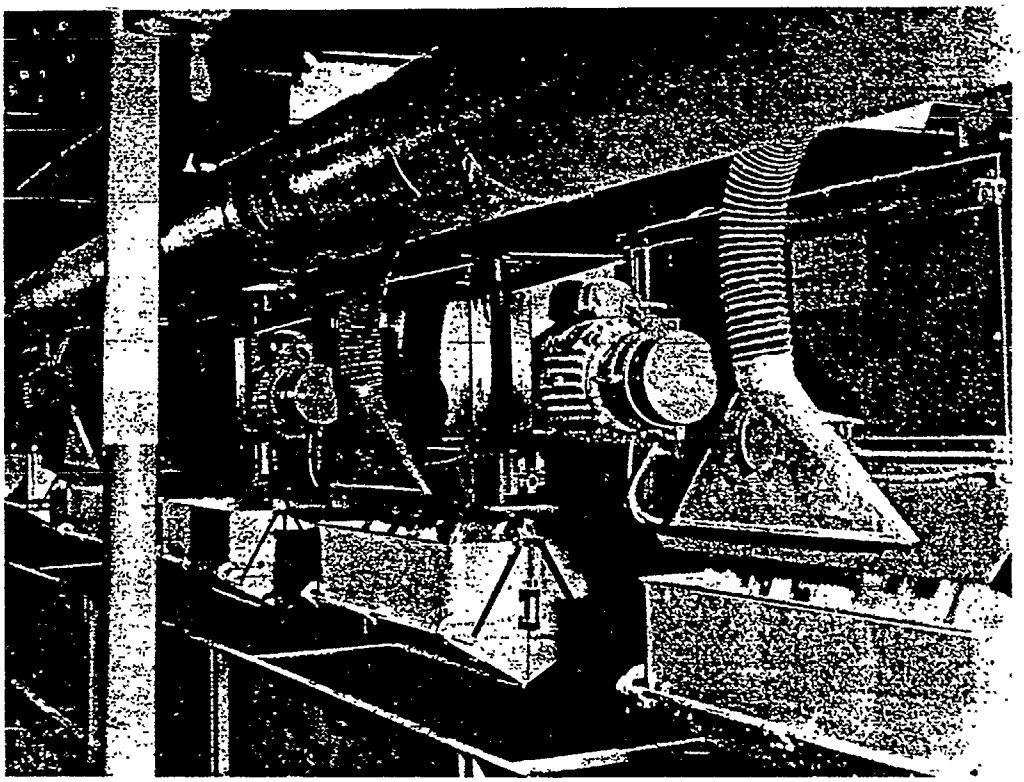
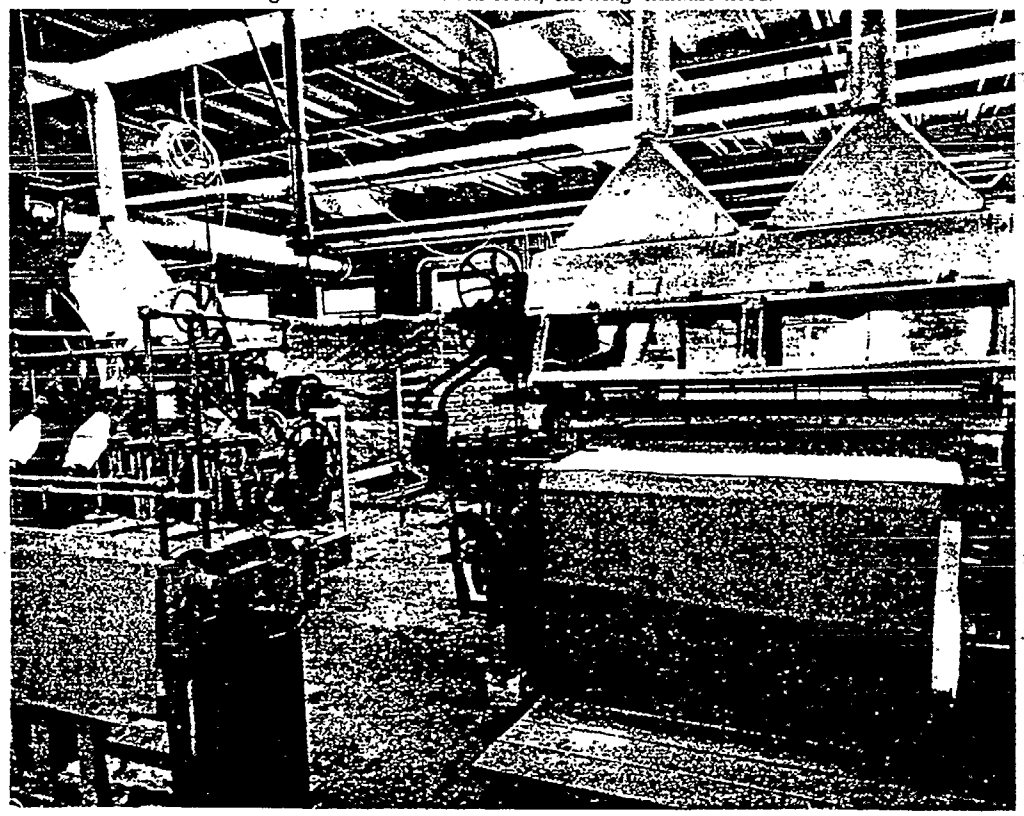


Fig. 2.—Completely automatic fiber-blending line, showing air suctions to each dumping pan.

Fig. 3.—Automatic cloth loom, showing exhaust hood.



5004003.0

the incidence of silicosis has been greatly reduced."

The North Carolina working conditions of 25 years ago have given way to air conditioning and atmospheric controls. Employees give little thought to the periodic visits of the mobile x-ray unit of the North Carolina State Board of Health, and accept as routine the regular dust collecting and dust counting procedures of engineers.

Shortly after the annual visit of the x-ray unit, employees receive from the North Carolina Department of Health a work card certifying to the state of their health and stating that they may safely continue to work in the industry. This means more to workers than the statement of our own doctor, who freely discusses with employees the 14×17 chest x-ray pictures we, ourselves, make. This is an outside assurance with the authority of the State Board of Health of North Carolina.

Under the system exercised by the North Carolina State Board of Health the occurrence of any lung injury would be quickly detected, and an individual with asbestosis, even in the first stages, would be refused a work card. Compensation for even this degree of injury is equally as certain.

A by-product, but equally important to the health and well-being of our employees, is the detection of other health problems which come to light in the examinatons.

All of this has resulted in our employees receiving a degree of medical attention above average. Medical attention and advice should be, and we believe is, free of suspicion of deception in self-interest.

Jerry Mitchell, Charlotte Works, Thermoid Division, H. K. Porter Company, Inc., P.O. Box 10516, Charlotte, N.C.

50040011