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MEMORANDUM

Re: Minimum First-Year Extra Premium for Group Life Insurance on Asbestos Milling and Manufacture of Asbestos Cord and Fabric

This will make record of a conference in Mr. S. J. Vane's office on October 20, 1948 concerning the industrial hazard in the asbestos industry. Present were Mr. Vane and Mr. J. William Fehnel, Director of Industrial Hygiene Laboratory and Field Service, and the undersigned.

After consideration of the asbestos industry in general, and based on Mr. Fehnel's report to Mr. Perry with respect to the Turner & Newall Company, Montreal, Quebec, Canada, and supplemental by our discussion with Mr. Fehnel, Mr. Vane agreed that if it is possible where working or other conditions differ/between employers in the same industry for purposes of Group Life Insurance, to differentiate that the Turner & Newall Company could be accepted as a standard risk without any extra premium required for industrial hazards. Considerations which supported this conclusion were:

1. There are no backlog of asbestosis cases since the employer is following the practice of not hiring anyone who was formerly employed in the asbestos industry or/in any other industry in which there is a dust hazard.

2. The dust count in the plant will be well below the threshold at which the hazard actually begins to exist. Mr. Fehnel assured us that in his opinion there was no asbestos hazard in this plant.

3. Chest X-rays of the employees are taken both at the original hiring and at frequent intervals thereafter. Mr. Fehnel told us that such X-rays are taken by a mobile unit which is brought right into the plant and it is not necessary for the employee to either take time off from work or to make any trip in order to avail themselves of the X-ray examinations as commonly occurs in an asbestos plant in this country.

4. The employer was starting out in this plant very much aware of the potential hazard and had taken active steps to eliminate it.

5. Our experience on Asbestos-Manhattan for the Life portion during the last seven years at T rates has been satisfactory.

6. Dr. McConnell assured Mr. Vane that in their studies of the asbestos cases in this country, which work he has been doing for the past twenty years, they have not been able to find any new cases developing and that the cases they have are not showing a progression.

Therefore we have decided to quote the Turner & Newall Company at "T" rates. We will file with the New York State Insurance Department a change in the classification of asbestos milling and manufacture of asbestos cord and fabric from the minimum extra of $2 to "Refer to Home Office".

It is intended that the T rate will only be considered for cases which are select in every respect and which measure up to the strict requirements of the Turner & Newall Company case, and that for other cases there will be an extra premium of $2 or more.

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W. S. Thomas
Group Actuarial Division

October 21, 1948
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MEMORANDUM

October 18, 1948

MR. N. R. PERRY
REGIONAL SALES MANAGER

Re: Turner Newall Company
Montreal, P.Q., Canada

Mr. N. R. Perry, Regional Sales Manager, Mr. Gordon Pfeiffer, Group Supervisor, and I made a visual survey of this plant on Tuesday afternoon, October 12, 1948.

We met Mr. Jackson, President, who introduced us to Mr. Anderson. Mr. Anderson conducted us through the plant and through his conversation showed that he was familiar with the many details of the plant processes.

The plant is housed in a one-story reinforced concrete building with monitor type roof. Skylights provide excellent natural illumination while artificial illumination is provided by properly hung and spaced fluorescent type lamps.

The floor is of concrete and has an area of ten acres.

The textile department is partitioned off from the rest of the processes.

The manufacturing operations comprise:

1. Textiles

   a. Carding
   b. Ring frame, spinning, and twisting
   c. Spooling
   d. Weaving of tape, brake band material and cloth

2. Manufacture of magnesia insulation

   a. Calcining of magnesia
   b. Mixing of asbestos fibre and magnesia with water
   c. Steam pressure forming of pipe coverings
   d. Slitting and cutting to length
   e. Packaging for shipping

3. Manufacture of molded brake lining

   a. Weighing and mixing of asbestos fibers
   b. Disintegrating mixing and bagging
   c. Mixing with binders and solvents
   d. Steam press forming of brake bands
   e. Grinding, drilling, and finishing of brake bands
   f. Packaging of brake bands for shipment

4. Asbestos cement manufacture

   This process is not in production. The machinery is being installed. The process will produce a wet refractory or insulating cement.

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1. Textile Department

This department has a mechanical humidifying system in which humidified air is distributed to the room through ducts. Air is withdrawn from the room, passed through the bag filters and recirculated to the room during the winter months in order to conserve heat. During the summer months the air is discharged to the outside atmosphere.

Cotton is opened by passing it through a picker in a room separated from the textile department. The opened cotton is mixed with asbestos fiber on the floor of a balcony at one end of the department.

A garnet machine and a waste yarn chopper are used to reclaim waste materials. These machines are efficiently hooded and exhausted.

The carding machines are hooded and exhausted to prevent the dispersion of dust.

No dust control measures are applied to the spinning, twisting, and spooling machines and visually no dust, of any consequence, is generated by these machines.

Exhaust is applied to the looms and in some instances the warp is passed under a water spray.

No "doped" brake band lining is woven in this department. This is of extreme importance in evaluating the health hazards associated with the manufacturing operations in this department because the "dope" material usually contains lead compounds and harmful solvents. The "dope" is applied by passing the warp through a pan of the material. Naturally solvent vapors and lead compound bearing dusts are dispersed into the work room atmosphere. In many weave rooms of textile departments, a greater potential lead hazard than an asbestosis hazard was found.

2. Manufacture of Magnesia Insulation -

The calcining of magnesium carbonate (dolomite) is done in a rotary kiln in a separate room. The rest of the processes are wet and dust dispersion is negligible. Any material spattered upon the floor is washed down a floor drain so the drying out and dispersion of the dried material, as dust, is kept to a minimum.

The formed pipe insulation is shit and cut to length on circular saws that are well exhausted.

3. Manufacutre of Molded Brake Lining

The weighing, batch mixing, and bagging of asbestos fiber generates some dust at the present time. Although exhaust is applied to these operations, to prevent the dispersion of dust, the system is not complete. Until such time that the exhaust system is fully installed, respirators are furnished to employees working at these operations.

The asbestos fiber is mixed with binders and petroleum naphtha in a hooded and exhausted chaser.

The blended mix is then put into autoclaves to complete the solution of the binders, and is then molded on steam presses after which it is sized on grinders and finally drilled for the rivet holes.

The grinding operations are efficiently exhausted.

4. Asbestos Cement Manufacture

This process is not in production at this time.

The type of machinery installed and the fact that a wet type of cement is to be made indicate that the dust production will be kept to a minimum.

Medical Services

A well equipped hospital staffed by a full-time nurse and a part-time physician is maintained.

The medical program includes a premedical examination including a chest X-ray of all employees. Periodic physical examinations including chest X-rays are planned for all employees on the basis of three months, six months, and one year, depending on the degree of dust exposure of the employee. No applicants from competitive asbestos industries or those afflicted with any respiratory diseases are accepted.

Conclusions

Factory Layout and Manufacturing Processes

This is undoubtedly the most modern and best laid out plant on the American continent.

Potential Health Hazards

The generation and dispersion of all types of dust are kept to a minimum by types of machines constructed so as to generate a minimum of dust and by a scientific application of exhaust hoods to points of dust generation. No potential health hazards other than a minimum of asbestos dust exposure were found.

Recommendations

On the basis of observations made of the medical setup and manufacturing operations in this plant, in comparison with the experience gained in surveying similar plants during the past twenty years, I would recommend that the Group Division of the Metropolitan Life Insurance Company grant this company a preferred rating in quoting any forms of group insurance.

J. Vm. Fehrel, Director
Industrial Hygiene Laboratory and Field Service