

FILE NAME: Quebec Asbestos Mining Association (QAMA)

DATE: 1978 May-June

DOC#: QAMA155

DOCUMENT DESCRIPTION: QAMA Bulletin Vol. 2, No. 4

Bulletin

PUBLISHED BY L'ASSOCIATION DES MINES D'AMIANTE DU QUÉBEC - MAY/JUNE 1978 - VOL. 2/NO. 4

Asbestosis is being overcome

There is no cause for complacency in the fact that, in a survey of almost 6 800 workers in the primary asbestos industry in Québec, the Special Committee on asbestosis of the Workmen's Compensation Board found only 161 cases of asbestosis. Indeed, if there remains even a single case of asbestosis among the asbestos mill and mine workers, it is still one case too many.

Improvement

However, what is encouraging in the results of the Special Committee's study is that the enormous effort and energy devoted over several years to eliminating the causes of asbestosis are proving effective, and that the systematic prevention, air purification and industrial hygiene programs, introduced concurrently with new technological developments, are providing results which are reflected in the workers' generally improved health condition.

To verify this, one need only to relate the number of cases of asbestosis found by the Special Committee to the number of years of exposure of the workers in question. One finds that these men started working in the mines and mills at a time when the

technology used for the extraction and processing of asbestos and the means for reaching diagnosis were relatively undeveloped.

Situation no longer comparable

Today, in view of the general conditions of hygiene, the improvement in equipment, the efficiency of the dust-removing methods and the means of rapidly detecting health hazards, made possible by scientific and technological progress, the situation of asbestos workers is no longer at all comparable with what it was 40, 30 and even 20 years ago. Since the incidence of asbestosis is mainly related to the level of exposure, it is reasonable to assume that asbestosis-related anomalies have not only considerably decreased in number but are also well on the way to being eliminated.

Moreover, the Special Committee's results derive from an extensive study, spread over two years and carried out with extreme rigour, in the light of the most up-to-date scientific and medical knowledge. The conclusions which the Committee's specialists have produced reveal the degree of levity — to put it mildly —

of the interpretations made of a short and rapid study carried out with a group of pre-selected workers by Dr. Selikoff of the Mount Sinai Institute of New York.

Scientific exactitude

It is true that Dr. Selikoff was not speaking of asbestosis but of radiological anomalies. But by not offering any interpretation of the data contained in his study, and by omitting to provide the usual definitions, he permitted the most fanciful interpretations which have spread confusion and created a climate of excessive alarmism.

Not the least of the Special Committee's merits is to have restored scientific exactitude into the debate.

It is now to be hoped that the Workmen's Compensation Board or the Labour Minister will publish, in addition to the report containing the findings of the Committee's study, a detailed description of the methodology employed by the specialists, and also issue the results of the analysis of the workers' medical files with regard to the use of tobacco, as the incidence of smoking was also studied by the Committee.

Results of the study by the Special Committee on asbestosis

A study of the medical files of the 6 785 workers employed by the Québec asbestos mining companies between October 1st, 1975 and December 31, 1976 shows that 141 workers, or 2,37% of the total, have asbestosis to varying degrees.

This is revealed in a report by the Special Committee on asbestosis of the Workmen's Compensation Board, made public at the beginning of June by Québec Labour and Manpower Minister Pierre-Marc Johnson.

The committee

The Special Committee on asbestosis was set up by the Workmen's Compensation Board on May 21, 1975 on the recommendation of the Québec Natural Resources Minister. It consisted of five medical specialists: the director of the pneumology service of the Workmen's Compensation Board, Dr. Jacques Gougoux, acting as President, three chest specialists, Drs. Jean-Jacques Gauthier, Maurice Myre and Jean Mantha, and a radiologist, Dr. Charles Bernard.

The mandate

The Committee's mandate was to review the results of all the compulsory annual medical examinations of the asbestos mine and mill workers, and to carry out a new analysis of the chest X-rays. The medical files of 6 785 workers were thus reviewed.

Relative incidence

The results of this review of the health files of all workers indicate that the incidence of asbestosis is very much less than the figures of 60 to 80 per cent. referred to after an examination of 1 200 pre-selected X-rays carried out in 1975 by the

Mount Sinai Institute of New York, under the direction of Dr. I.J. Selikoff.

Indicators

The pulmonary indicators which the Committee took to be relevant to its study are a dry r  le, respiratory difficulties or shortness of breath (dyspnoea), and drumstick fingers (digital hippocratism). Other lung-related symptoms, in particular coughing, spitting and chest pains, cannot be considered sufficient evidence for the diagnosis of a pneumoconiosis, as is made clear in the Committee's official report.

International classification

The X-ray analysis was carried out in accordance with the international ILO/UC 1971, Cincinnati, classification, by means of matching film controls from the ILO at Geneva. The X-rays analysis was made in relation to the other medical data and to the details of work activity in each case, in order to reach a diagnosis requiring the agreement of all five members.

Findings

The analysis revealed that 79% of the X-rays were normal and that 21% of the X-rays presented abnormalities. Of these, 435 — or 6,41% of the total — showed signs which may have been due to asbestosis. These 435 cases (6,41%) occurred almost exclusively among workers whose exposure had been over a period of more than 20 years,

and in 38% of these cases the exposure was over a period of more than 40 years. All these cases were studied in depth by the pneumoconiosis committee of the Workmen's Compensation Board or by the Special Committee. After a final analysis, a positive diagnosis of asbestosis was made in 181 cases, and all the other cases were declared free from this disease.

Other indicators

The results of the Committee's study also deal with dry r  les, hippocratism and dyspnoea. Thus 3,9% of the workers, 265 in number, were found to be suffering from dry r  les, while 113 cases of hippocratism were found, being 1,67% of the total number of cases examined.

The Committee identified 1 438 cases of dyspnoea, or shortness of breath, that is 21,2% of the total, which were graded from 1 to 4 according to their seriousness; the majority of cases came into category 1, that is, they were considered minor.

Lung diseases unrelated to asbestosis

The Committee also studied a number of lung ailments unrelated to asbestosis, such as emphysema, lung cancer and tuberculosis. A total of 26 cases of pulmonary emphysema were identified by X-rays, with two cases of lung cancer (no mesothelioma) and 14 cases of possible but probably inactive tuberculosis; these patients were referred to their personal doctor.

Reference document

According to the members of the Committee, "the study proved to be

Development of research on asbestos

A study on the possibilities and means of developing asbestos research in Québec has been commissioned by the Association des mines d'amiante du Québec (AMAQ) and will be carried out by the Centre de développement technologique (CDT) of Montréal's Ecole Polytechnique.

The AMAQ has also asked the CDT to prepare a comprehensive project outlining the steps to be taken for developing this research, including financing and operational procedures.

Purpose of the study

The purpose of this study is to

speed up the process of developing research into asbestos in Québec, so that the best possible performance is obtained in viable economic conditions, by making optimum use of the human, material and technological resources available.

Inventory and prospects

To this effect, experts from the Centre de développement technologique, who may be joined by specialists from other research and study organizations or agencies, will make an exhaustive survey of all research activities relating to asbestos, and will assess the possibilities and

limitations of their development in Québec.

Report in 4 months

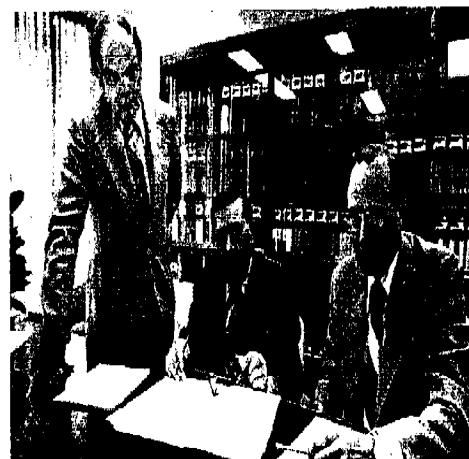
The CDT has set up a team of four experts, headed by Laurier Juleau, engineer, resident Professor at the Ecole Polytechnique who was a member of the Comité d'étude sur la salubrit   dans l'industrie de l'amiant   (the Beaudry Committee), and the results of their work, together with specific recommendations, will be given in a report to be issued within four months.

Evaluation committee

In addition the Association has asked the CDT to act as advisor in the formation of an independent evaluation committee, consisting of Québec scientists and research workers, which would be responsible for analyzing all aspects of the research projects or proposals submitted to the Association and for making recommendations.

Constructive contribution

By virtue of this initiative, the Association des mines d'amiante du Québec will be able to make a more constructive and better informed contribution to the elaboration of asbestos research development programs in Québec, coming from either the public or the private sector, and will be better equipped to appreciate the value and relevance of the projects submitted for consideration and to identify those areas where the member companies might consider undertaking research work in common.



Present at the signing of the agreement by representatives of the AMAQ and the CDT were, from left to right, Laurier Juleau, eng., project leader, Michael Messel, President of the Association des mines d'amiante du Québec and President of Lake Asbestos of Black Lake, and Robert Hay, Director of the Centre de développement technologique.

extremely useful in verifying the pulmonary health of workers in asbestos mines and mills. The study is currently being used as a basis for the annual issue of certificates, and it allows for a fuller interpretation of the medical, clinical and X-ray data in the workers' files. It has

given specialists in industrial chest diseases the opportunity to develop a much clearer idea of the nature of asbestosis and other pulmonary ailments. The study will also be the starting point for the setting up of a central data bank on all mine and quarry workers."

The relevant information emerging from the 6 785 cases studied has been placed on computer, and other data could be added to the program, such as years of exposure, and the clinical and X-ray indications of each of the persons studied.

Asbestos and its many uses

Asbestos-vinyl: strong and durable

With its resistance to smoke, flames, humidity and mildew, together with its dimensional stability, asbestos is the additive preferred by manufacturers of vinyl floor tiles used in commercial and industrial premises and places of frequent transit.

Homogeneous mixture

These asbestos-vinyl tiles, which are strong and durable, are made up of 15 per cent vinyl plus a homogeneous mixture containing a thermoplastic binding agent, asbestos, mineral additives and pigments. The proportion of asbestos thus used in the tiles varies between 10 and 20 per cent, according to the formula employed, the thickness of the product and its quality. However, this is sufficient to make the tile fireproof, unless subjected constantly to an intense flame, and to protect it from the deterioration caused by numerous chemical agents.

The manufacturers themselves declare that for the production of this kind of tile there is no substitute offering the advantages to be had with asbestos, particularly as regards dimensional stability and durability.

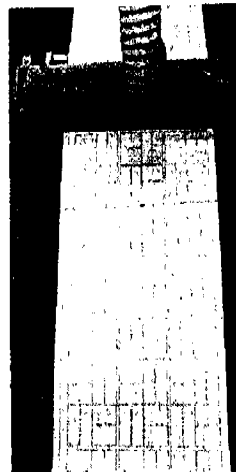
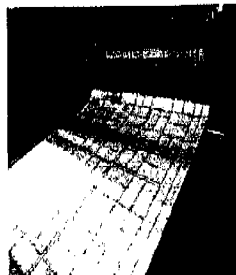
Canadian production

There are four asbestos-vinyl tile producers in Canada, of which three are located in Québec and a fourth is in Ontario. Their production in 1977 amounted to 90 million square feet of tile, using some 5 000 tons of short fibres, generally of grade 7. Though most of the production of asbestos-vinyl tiles comes from the Québec plants, almost 80 per cent of the sales, totalling approximately \$22.5 million in 1977, are

made in the other Canadian provinces.

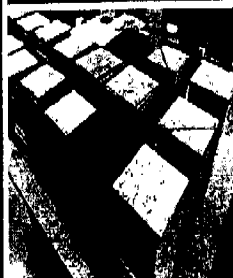
Stabilization

In the last few years the manufacturers, most of whom also pro-



At the Armstrong Cork plant in Montréal, presses print the desired design on the asbestos-vinyl sheets as they come out of the mixer on conveyors, this operation precedes the cooling process and the cutting of the tiles

duce vinyl floor coverings with flooring felts containing up to 85 per cent asbestos, have encountered a fall in demand for asbestos-vinyl tiles due among other things to the increased



Above, after being cut, the tiles are subjected to a series of tests. Below, a range of asbestos-vinyl tile samples

popularity of industrial and commercial carpeting. However, market surveys show a decline in the use of carpeting for these specific purposes, which promises a stabilization of the asbestos-vinyl market, in which the Canadian production is sufficient to meet the domestic demand.

The manufacturers

The asbestos-vinyl companies in Québec employ some 1 100 people, comprising 300 at Domco Ltd., at Farnham, which is the oldest firm

manufacturing floor coverings in Québec, 400 at the Montréal subsidiary of Armstrong Cork, and 400 at American Bitrite in Sherbrooke, a subsidiary of the American company of the same name.

Domco devotes 10% of its activities to the production of asbestos-vinyl tiles; the corresponding proportion for the production of both Armstrong Cork and American Bitrite is about 45 per cent.

Method of manufacturing

Though each manufacturing firm may add its own particular variations as regards the mixture of ingredients which are used in the products, or when it comes to pressing or adding the adhesive products, their method of manufacturing asbestos-vinyl tile is basically the same.

When it leaves the mixers, the mixture of asbestos, vinyl, binding agents and pigments is cast into long sheets which are cooled and then cut to the required dimensions. Depending on the type of equipment there is a period of about ten minutes between the moment when the mixture is submitted to the heating process and the cutting of the tile. This is then checked with regard to thickness, size, colouring, stability, resistance to heat, and design. All defective tiles are rejected and recycled.

Variety

The designs that are used on asbestos-vinyl tiles can be applied to the surface only or through the whole thickness of the sheet. The range of designs is as wide as that of the tiles themselves, of which some manufacturers offer more than 150 different samples.

Québec asbestos-cement in Africa



Part of the university complex at Abomey-Calavi, in Bénin, consisting of nine buildings. Asbestos-cement is the principal covering material used in their construction.

Asbestos-cement is the principal covering material used in a new university complex in Africa, built under the auspices of the Canadian International Development Agency and designed by the Montréal architects Labelle, Marchand, Geoffroy.

The fibrocement products used in the construction of the nine buildings of the Collège Polytechnique universitaire in Bénin (ex-Dahomey) amount to nearly 316 000 000 square feet (29 340 m²) of asbestos-cement, and were all manufactured at the Atlas Asbestos plant in Montréal. The supply and the installation cost close on \$452 000.

No maintenance

The architects chose asbestos-cement "because it is sturdy, exceptionally resistant to climatic and other forms of erosion, and

apart from being easy to install, requires no further maintenance."

The roofing on the buildings consists of corrugated *Trafford* tiles: 6 800 sheets, 2 417 moulded parts and 2 819 standard accessory parts were needed to complete this part of the work. In addition the capping of the roofs and the oblique walls are covered with 2 091 flat asbestos-cement sheets, and 4 934 moulded louvers were used in the construction of the wind-shield walls which close off the ends of the two-sided roofs.

800 students

The Collège Polytechnique universitaire is located at Abomey-Calavi, 18 km. to the north of Cotonou, the capital of Bénin. There are 800 students of the humanities, of administrative studies, of biological sciences and techniques, and of industrial sciences and techniques.

A delegation of the Canadian asbestos industry visits the USSR

A delegation of the Canadian asbestos mining industry, accompanied by representatives of the Federal departments of Industry, Trade and Commerce, and of Energy, Mines and Resources, made an official visit to the Soviet Union in May, at the invitation of the Soviet government and in particular of the USSR Committee for Science and Technology.

The visit, lasting from May 14 to May 23, consisted mainly of a tour of the asbestos mining facilities at the two largest mining complexes in the USSR, located in the Republics of Russia and Kazakhstan.

UralAsbest

The UralAsbest industrial complex, which is the largest of its kind in the world with its three adjacent asbestos mines, has an annual production of 1 750 000 tons of fibre, of grades 1 to 6. It is also believed to produce 350 000 tons per year of grade 7 fibre, not included in the official Soviet production figures.

Soviet officials estimate that with the proposed construction of a new mill, the production capacity at UralAsbest will increase to nearly 3 million tons by 1983.

In the course of its visit to this Siberian mining complex, the Canadian delegation witnessed a primary blasting in the largest of the three mines, which is as much as 190 metres deep over a length of 2,8

kilometres and a width of 1,2 kilometres.

The delegates also visited the processing plants, one of which was



Part of the asbestos mining complex of UralAsbest in USSR

built less than ten years ago, which employ in mining, maintenance and auxiliary services, a total of 20 000 people and operate day and night 365 days per year.

Considerable equipment

The UralAsbest complex uses a considerable amount of equipment,

including 130 locomotives and 800 one-hundred-ton wagons which cover a total of 500 kilometres of railway to transport the ore to the mills and the waste material to the tailings. 112 mechanical shovels are used for loading the ore.

The tour of the UralAsbest installations lasted three days and included a visit to an important asbestos extraction and processing research centre (VNII proektasbest).

During this stay in the Siberian region, the Canadian delegates were the guests of Mr. A.A. Korolev who is manager of the mining installations and also responsible for all activities relating to the life of the complex and of the town of 110 000

inhabitants which has grown up around it.

Koustanaï

The delegation also visited the Koustanaï installations, in the Republic of Kazakhstan, about 2 500 miles to the south east of Moscow.

They were received there by Mr Vladimir Federovitch, Director of the whole of this mining complex

which has been in operation since 1965. The mine and the mill at Koustanaï employ 2 500 people and the annual production is of 700 000 tons, due to increase to 1 150 000 by 1985.

The Koustanaï mill, like the most recent processing plant at the UralAsbest complex, has very similar characteristics to the installations in Asbestos, from which the Soviets

Moscow

The Canadian representatives had a short stay in Moscow, where they were received by Mr. Anpilov, Soviet deputy minister for construction materials. Mr. Y.P. Fokeev, also of the Ministry for construction materials, asbestos division, and Mr. Ivan I. Ischenko, Vice-President of the construction Committee of the

representatives. "We observed that the Soviet authorities had installed new equipment and modern technological systems," he said, "in their effort to reduce as much as possible the emission of dust in their plants and in other related installations."

Demand for asbestos-cement

There is currently a substantial increase in industrial and residential construction in the Soviet Union, and over the last few years investments of the order of \$200 million (120 million roubles) have been assigned to the construction of asbestos-cement plants whose products are used in new buildings. Between 800 000 and one million new buildings are completed each year.

The Soviet Ministry for Construction furthermore requires that asbestos-cement materials be used in all new buildings.

The Canadian delegation

The Canadian industry and government representatives were: Marcel Dorais, President of Bell Asbestos Mines Ltd. and Vice-President of the Association des mines d'amiante du Québec; J.R.M. Hutcheson, Chairman of the Board of Directors of Canadian Johns-Manville Ltd.; Nick Gritzuck, Chairman of the Board of Directors of Cassiar Asbestos Corp.; André Gauthier, Vice-President, Operations, of Lake Asbestos Ltd.; Paul-A. Filteau, AMAQ Executive Vice-President, G.O. Vagi, of the Department of Energy, Mines and Resources, Ottawa, and P.C. Slinn, Deputy Director of the industrial minerals division at the Department of Trade and Commerce, Ottawa.

The Commercial Attaché to the Canadian Embassy in Moscow, Mr. Ian Wood, travelled with the delegation during its visit. The Canadians were accompanied by two Soviet government representatives, Mr. Victor Boranov and Mr. Y.I. Glazunov, from the asbestos industry division.



The Canadian visitors leaving the town of UralAsbest, in the company of their Soviet hosts. From left to right: L.M. Remennik, Assistant Manager of the UralAsbest mines; Y.K. Korolev, Production Manager; G.O. Vagi, of the Department of Energy, Mines and Resources, Ottawa; A. Siderov, Mills Manager; A.A. Sokolov, of the VNII proektasbest Research Centre into extraction and processing of asbestos; A.I. Milyavsky, Deputy Director, Sales and Marketing Section; B. Zarubin, interpreter; N. Gritzuck, Chairman of the Board of Directors of Cassiar Asbestos Corp.; P.C. Slinn, Deputy Director, industrial minerals division, Industry and Trade, Ottawa; A.S. Polushin, Personnel Manager at UralAsbest; A.A. Korolev, Director of mining installations; A. Atamanenko, interpreter; P.A. Filteau, Executive Vice-President of the AMAQ; M. Dorais, President of Bell Asbestos Mines Ltd. of Thetford Mines and Vice-President of the AMAQ; V. Boranov, of the USSR Asbestos Industry division; A. Gauthier, Vice-President of Lake Asbestos of Black Lake; I. Wood, Commercial Attaché at the Canadian Embassy in Moscow; J.M.R. Hutcheson, Chairman of the Board of Directors of Canadian Johns-Manville Ltd.; Y.I. Glazunov, of the USSR Asbestos Industry Division.

drew both the technology and the design.

It should be noted however that, in grades 1 to 6, the Soviet Union only produces about 20 different types or mixtures of fibre, whereas in Québec there are around 150 types.

Soviet Council of Ministers. The Canadians and their hosts expressed the wish to cooperate in technical and scientific matters.

AMAQ Vice-President, Paul-A. Filteau, stated that asbestos and health were also discussed at meetings between Canadian and Soviet

The asbestos textile manufacturers at Québec City

The *Asbestos Textile Institute*, an American association, whose membership consists of asbestos textile manufacturers, not only in the United States and Canada, but also in Japan, Mexico, Brazil and Great Britain, in June held its quarterly meeting at Québec City for the first time.

Most of the Canadian asbestos mining companies are associate members of the Institute, and one of them, Canadian Johns-Manville of Asbestos, which owns an asbestos textile plant in Québec, is a full member. The manufacturers who are members of the *Asbestos Textile Institute* use substantial quantities of long fibres in the manufacture of their products, and Québec is an important source of supply for them.

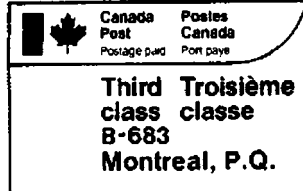
Research and information

Since it was founded in 1944, this organization has set up and developed a continuous research and testing program intended to guarantee a high level of quality in the products manufactured by its members. The *Institute* serves also as an important clearing house for the dissemination of useful information relating to asbestos textiles and as a medium for familiarizing the public with the numerous uses and characteristics of the various products that can be made from them.

The Québec City meeting consisted mainly of workshops on environment, on research, and on a variety of technical matters. Québec Minister of Natural Resources Yves Bérubé was the guest of honour at the closing dinner.



Québec Minister of Natural Resources Yves Bérubé was the guest of honour at the closing dinner at the meeting of the *Asbestos Textile Institute*. From left to right: Walter Smith, sales and technical services Manager at Bell Asbestos Mines Ltd. of Thetford Mines, M. J. Scanlan, President of the *Asbestos Textile Institute* and Vice-President of Amatex Corp. (U.S.A.), Yves Bérubé, M. J. Messel, President of Lake Asbestos of Black Lake and President of the *Association des mines d'amiante du Québec*, and Paul A. Filteau, Executive Vice-President of the AMAQ.



Bulletin

This *BULLETIN* is published by l'Association des mines d'amiante du Québec, 1130 Sherbrooke Street West, Suite 410, Montréal H3A 2M8.

The Post Office Department in Ottawa has authorized postage paid in cash and forwarding of the publication by third class mail.