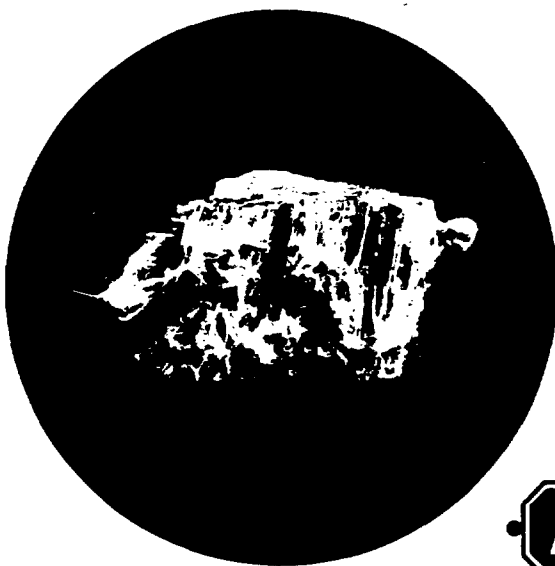


**PLAINTIFF'S
EXHIBIT**

KM-319

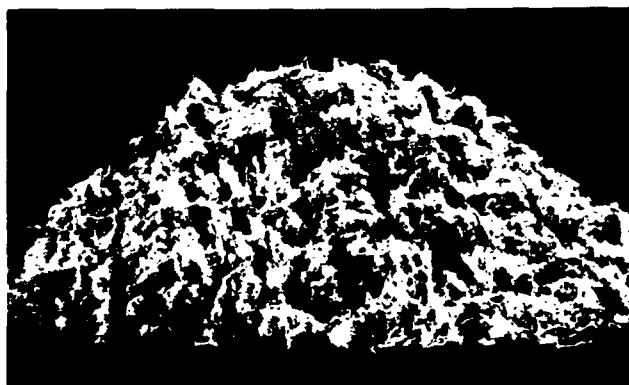


KMX 00445

ASBESTOS

ASBESTOS CORPORATION LIMITED

**THE COMPANY AND ITS PRODUCTS
REVISED MARCH 1961**



THETFORD MINES, QUEBEC, CANADA

MINERS OF CHRYSOTILE ASBESTOS SINCE 1878

ASBESTOS CORPORATION

KMX 00446

BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in Canada

5¢ POSTAGE WILL BE PAID BY

**General Sales Manager,
Asbestos Corporation Limited,
Thetford Mines, P.Q.,
Canada.**



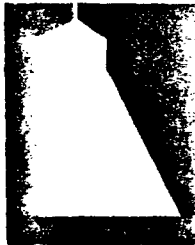
BUSINESS REPLY CARD
No Postage Stamp Necessary if Mailed in Canada

5¢ POSTAGE WILL BE PAID BY

**General Sales Manager,
Asbestos Corporation Limited,
Thetford Mines, P.Q.,
Canada.**



KMX 00448



Date.....

Gentlemen:

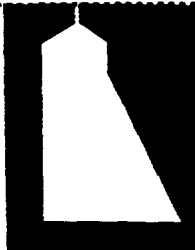
Please forward to the undersigned.....additional copies of your
1960 catalogue.

.....(Name)

.....(Position/Title)

.....(Company)

.....(Address)



Date.....

Gentlemen:

Please forward to the undersigned sample(s) of the following grade(s)
of Asbestos Fibre.

.....(Name)

.....(Position/Title)

KMX 00447(Company)

.....(Address)



THETFORD MINES, QUEBEC, CANADA

INCORPORATED IN 1925

Cable Address: "AMASCOLIM"

Telephone: Thetford Mines, FEderal 5-9171

Codes: A.B.C. 6th and 7th; Bentley's; Bentley's Second; Acme

LIMITED



THE COMPANY AND ITS PRODUCTS

(THIRD EDITION Revised March 1961)



KMX 00449

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London, S.W. 1 - England

GERMANY: Becker & Haag,
AUSTRIA: Ferdinandstrasse 58 (Hapag-Haus),
NETHERLANDS: Hamburg 1, Germany

JAPAN: Asano Bussan Company,
6 Marunouchi 1-Chome,
Chiyoda-ku, Tokyo

ITALY: Soc. Fibrantiato a.R.L.,
Piazza P. Clotilde 6,
Milano (501)

AUSTRALIA: C.H. Slade & Co.,
Myrtle & Wiley Streets,
Sydney

FRANCE: Geo. Parly & Cie.
BELGIUM: 10, rue de la Pépinière,
Paris

INDIA: G. Williams & Co.,
PAKISTAN: Steelcrete House,
CEYLON: Dunshaw Vachha Rd.,
BURMA: Backbay Reclamation,
MALAYA: Bombay 1
SINGAPORE:

KOREA: Dongmee International
P.O. Box: International 1224
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TURKEY: Danon & Danon,
P.O. Box 166,
Istanbul

FORMOSA: Yah Sheng Chong Yung Kee,
36 Kuan Chien Lu,
Taipei, Taiwan

CANADA

MONTREAL, QUEBEC Albion Asbestos Packings (1959) Ltd.,
2195 Ekers Avenue

TORONTO, ONTARIO Canadian Asbestos Ontario Ltd.,
27 Front St. East

UNITED STATES OF AMERICA

BALTIMORE, MD. Wallace & Gale Co.,
115 South Gay St.

BUFFALO, N.Y. James O. Meyers & Sons
290 Larkin St.

CHICAGO, ILL. The Starkie Company,
5461 W. Division St.

CINCINNATI, O. C. L. Zimmerman Co.,
N. 303 Cincinnati Union Terminal

CLEVELAND, O. Carl T. Schuster Co.,
3540 Norton Road

DETROIT, MICH. Gerald J. Fahey,
2591 W. Grand Boulevard

LOS ANGELES, CALIF. L. H. Butcher Co.,
3628 East Olympic Blvd.

NEW YORK, N.Y. Whittaker, Clark & Daniels Inc.,
100 Church St.

PITTSBURGH, PA. E. E. Zimmerman Co.,
1704 Keenan Building

PORTLAND, ORE. L. H. Butcher Co.,
2750 N.W. 31st Ave.

SAN FRANCISCO, CAL. L. H. Butcher Co.,
15th & Vermont Sts.

SEATTLE, WASH. L. H. Butcher Co.,
1703 - 6th Ave. South

SALES DIVISION

General Sales Manager

J. A. D. MARCOTTE

Asst. Gen. Sales Manager

A. C. STEELE

Regional Sales Manager

PAUL E. LECLERC

Sales Office Manager

J. P. LAFONTAINE

Traffic Manager

G. R. BIRON

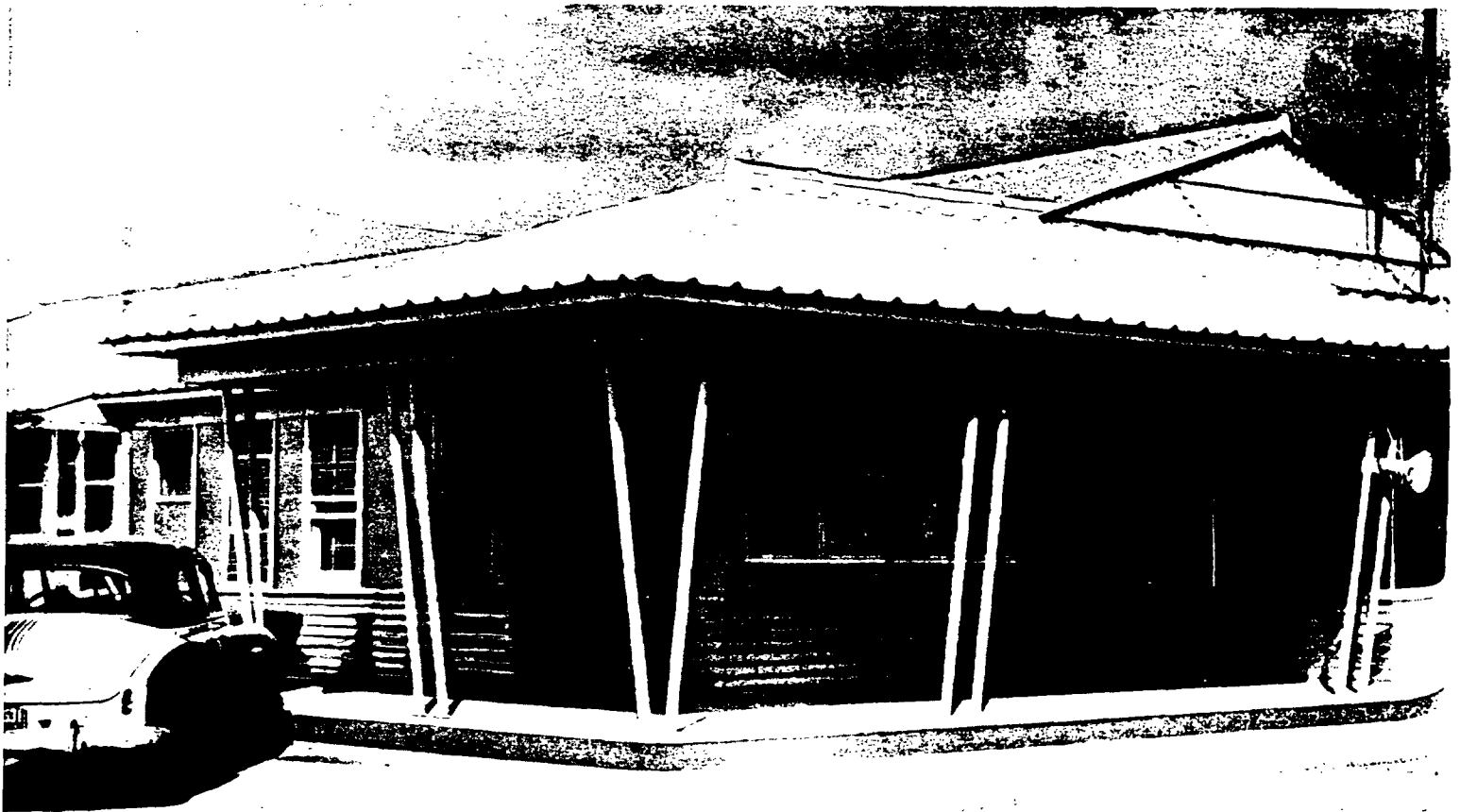
QUALITY CONTROL DEPARTMENT

Manager

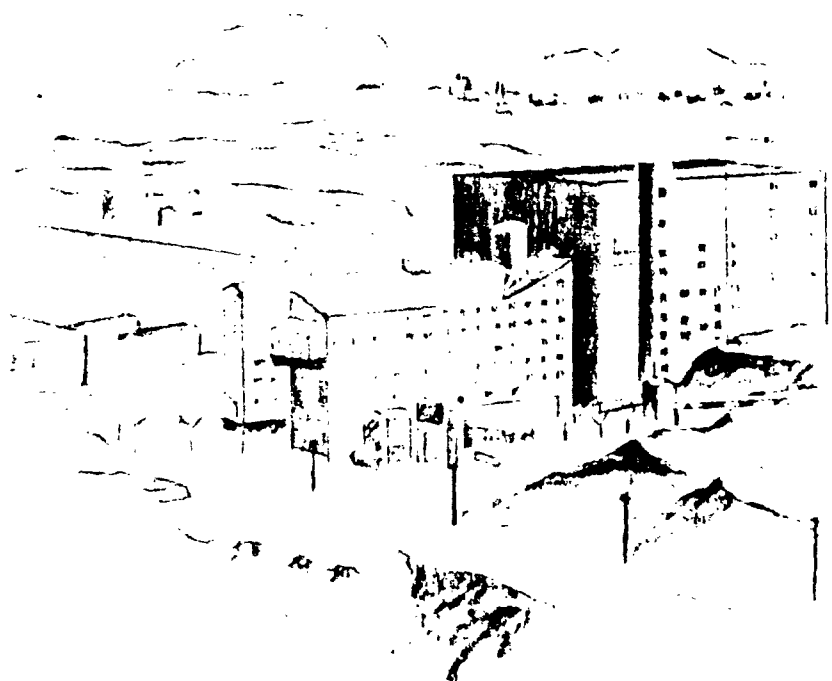
G. F. A. BRINK

KMX 00451





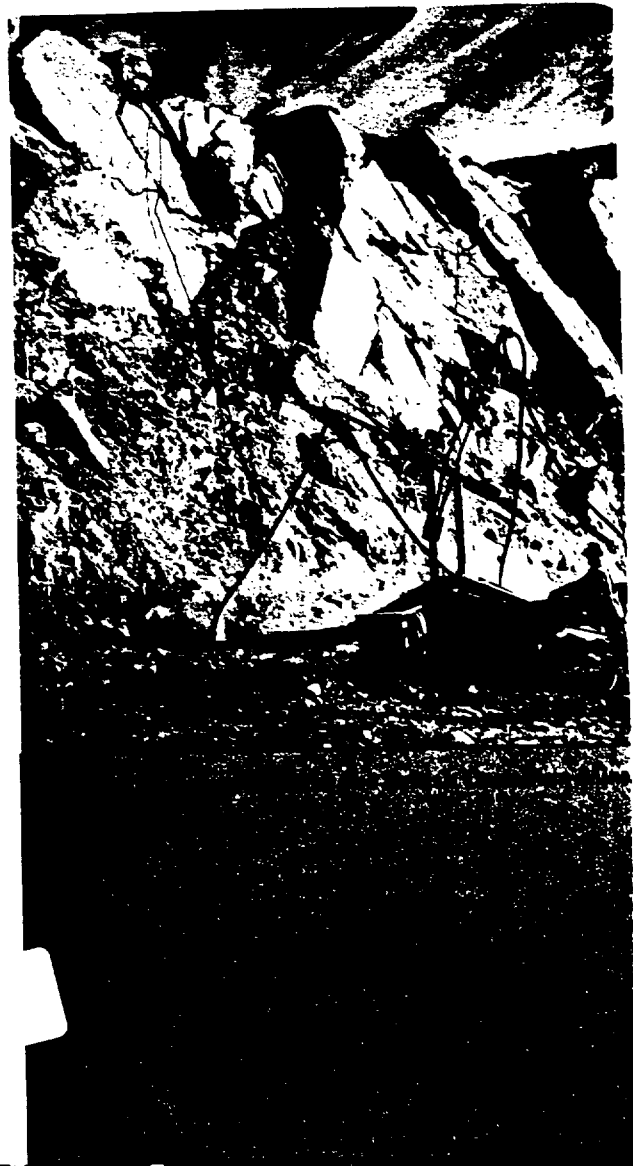
Normandie Mine Office—showing use of asbestos cement building materials.



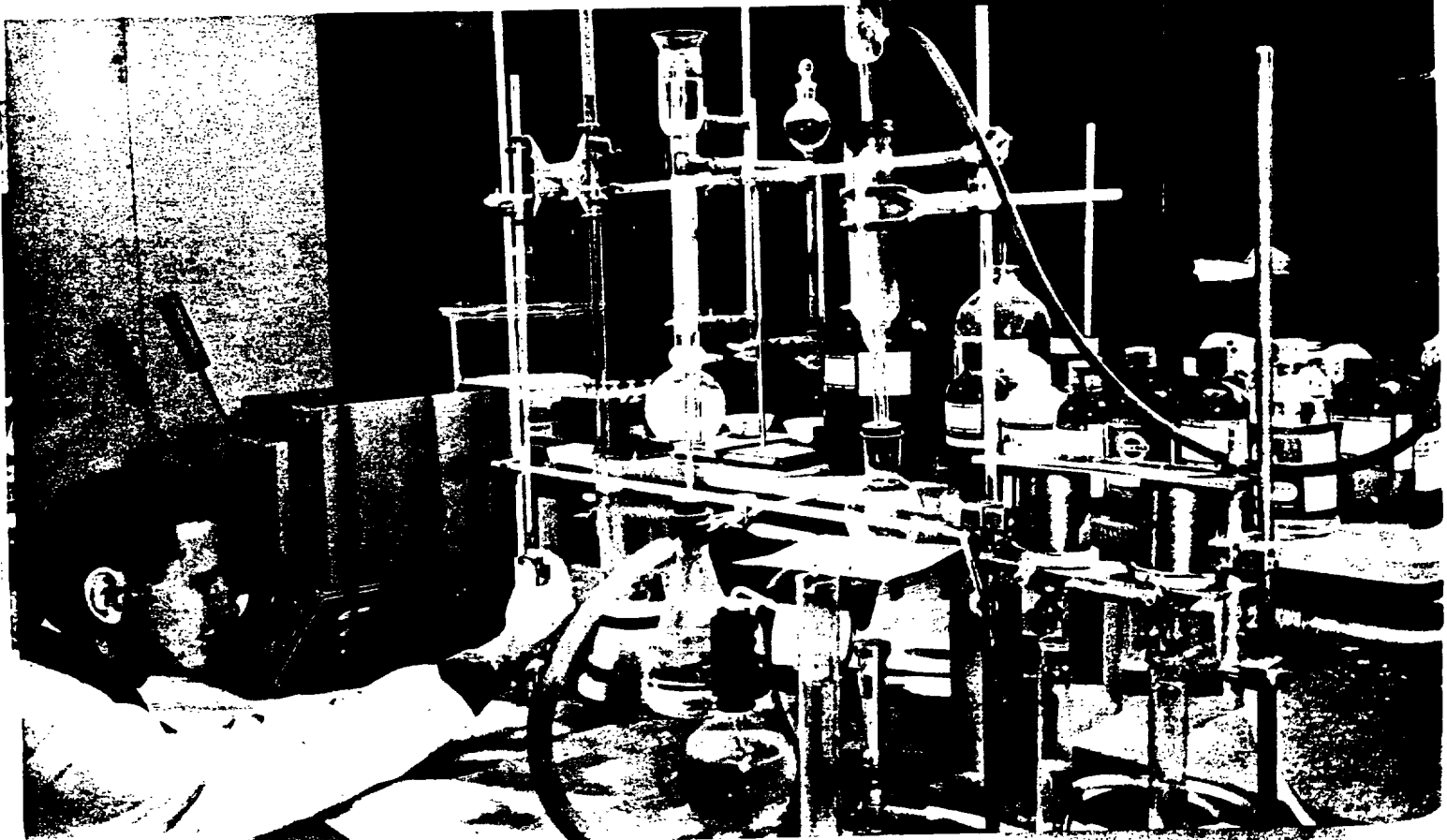
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7	Introduction
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22	System of nomenclature for A.C.L. fibres
24	List of A.C.L. grades and their general purposes
28	Physical and chemical properties of asbestos
29	Special characteristics of A.C.L. fibres
30	Shipping information



KMX 00454





The current edition of this booklet
was first published in May 1960, but
since that time there have been certain
changes in the official Canadian
chrysotile asbestos classification, and
accordingly this third edition has
been reprinted to show this revision.

We hope that this brochure will
prove to be of interest and
use to all our customers.



GENERAL SALES MANAGER

March 1961

KMX 00455



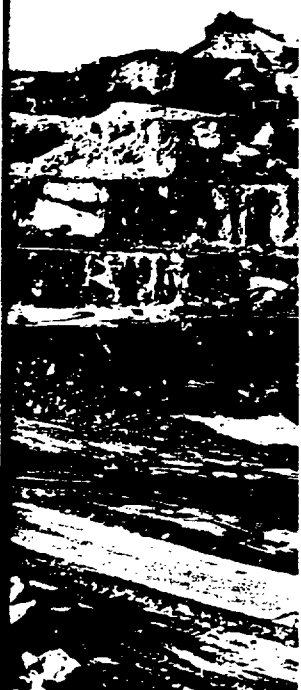
General view of the Normandie Mine Pit.

HISTORY

Even today there is some dispute as to who really discovered asbestos in this area. It is, however, known that among the first to exploit it commercially were the King Brothers from Quebec City. These men were not miners and came across their asbestos deposits only by accident—what they were really after was timberland. They did, however, recognize the commercial value of asbestos and in 1878 opened the King Mine in Thetford Mines. It is here that the history of the Asbestos Corporation Limited really starts.

The mine was operated under their name until 1909 when the Amalgamated Asbestos Corporation was formed, which, along with

KMX 00456



the King Mine, acquired the Beaver, the British Canadian and the Fraser Mines. It is an indication of the amount of asbestos in the area that today the present company is still extracting ore from all but the Fraser Mine. In 1912 the Amalgamated became the Asbestos Corporation of Canada Limited and it, in turn, became the Asbestos Corporation Limited in 1925. At the same time the present company also took over 7 other companies which were the results of earlier mergers themselves.

Today the Company operates three open pits and one underground mine. The open pits are the Beaver, the British Canadian and the Normandie. The King Mine was originally an open pit but as it became bigger and deeper the cost of extracting the ore became excessive and a cheaper system of underground mining was necessary.

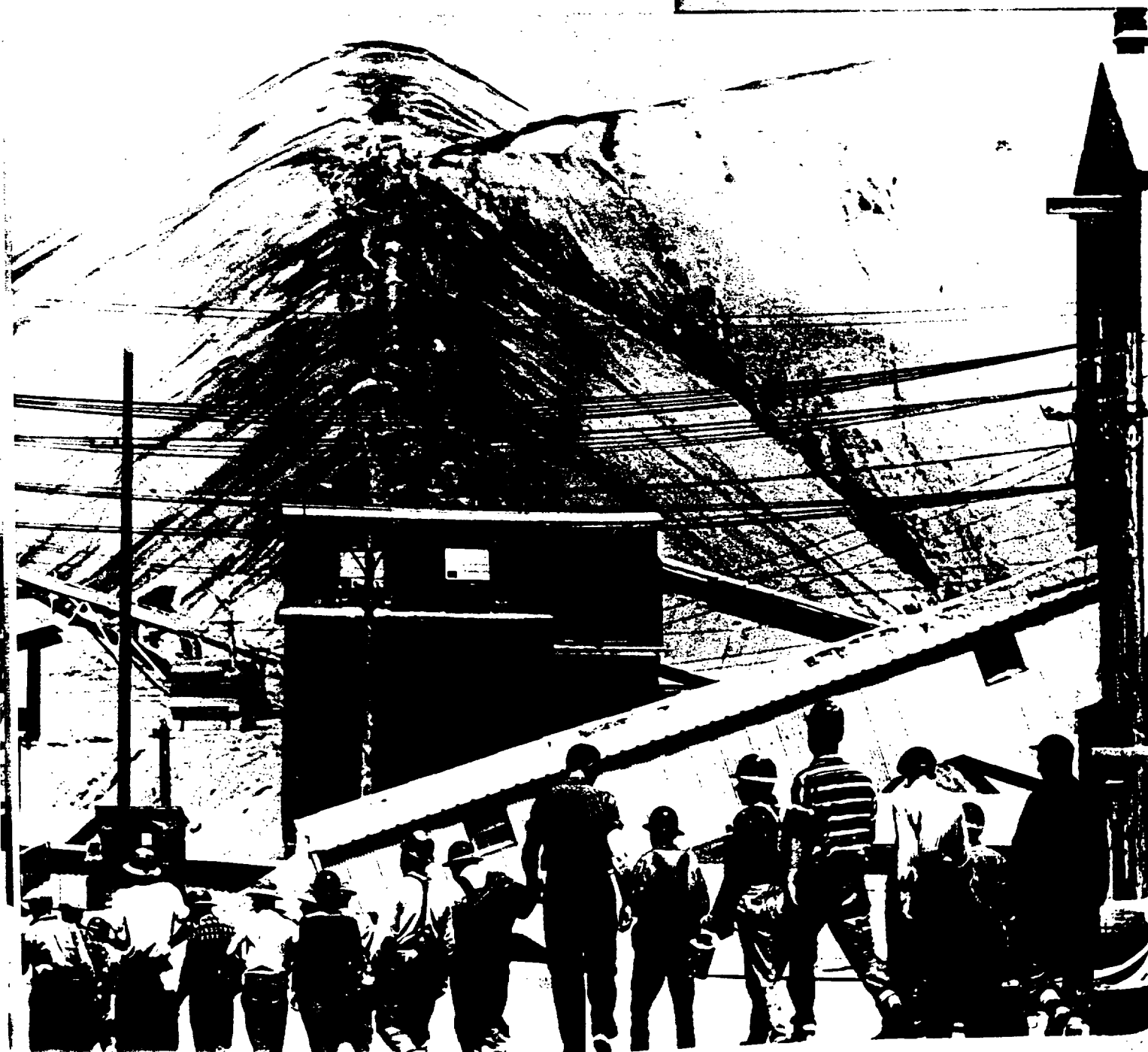
Since late 1958, the ore from both King and Beaver mines has been milled at the newly expanded and modernized 5,000 ton-a-day Beaver Mill and the whole plant is now called the King-Beaver Mine. The British Canadian Mine located at Black Lake, P.Q., and the Normandie Mine, about 3 miles to the west, each have mills of 5,000 ton-a-day capacity. Along with these operating mines the Company owns mining rights to over 30,000 acres of land in five townships around Thetford containing millions of tons of proven ore reserves.

Asbestos Corporation Limited is incorporated under the Dominion Companies Act and has an authorized issue of 3,600,000 shares of no par value common stock of which 1,800,000 shares are outstanding. The shares are quoted on the Montreal Stock Exchange and the Company has no long term debt. 93.5% of the Company's shareholders are residents of Canada.

KMX 00457

KMX 00458

Coming off shift at the British Canadian Mine.

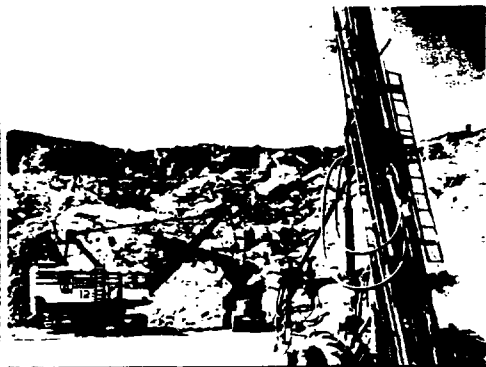


PRODUCTION

The name "asbestos" is applied to several classes of fibrous minerals, by far the most important of which is Chrysotile, the fine, white, silky fibre produced from our mines. Ninety percent of the world's asbestos used in industry is of the chrysotile variety which is the type produced in Canada.

Chrysotile asbestos normally occurs in serpentine rock and is usually seen in the form of irregular veins in the rock, varying from microscopic thickness up to as much as 2 or 3 inches. The fibre runs across the vein at right angles to it from wall to wall and generally, therefore, the length of the fibre is governed by the width of the vein. The longer the fibre, the greater its value.

The comparatively low yield of asbestos, which in Canada averages less than 5% of the rock mined, means that enormous tonnages of ore must be treated in large plants with a great deal of equipment before a reasonable output of finished fibre can be attained. The capital investment in the average asbestos mine is consequently



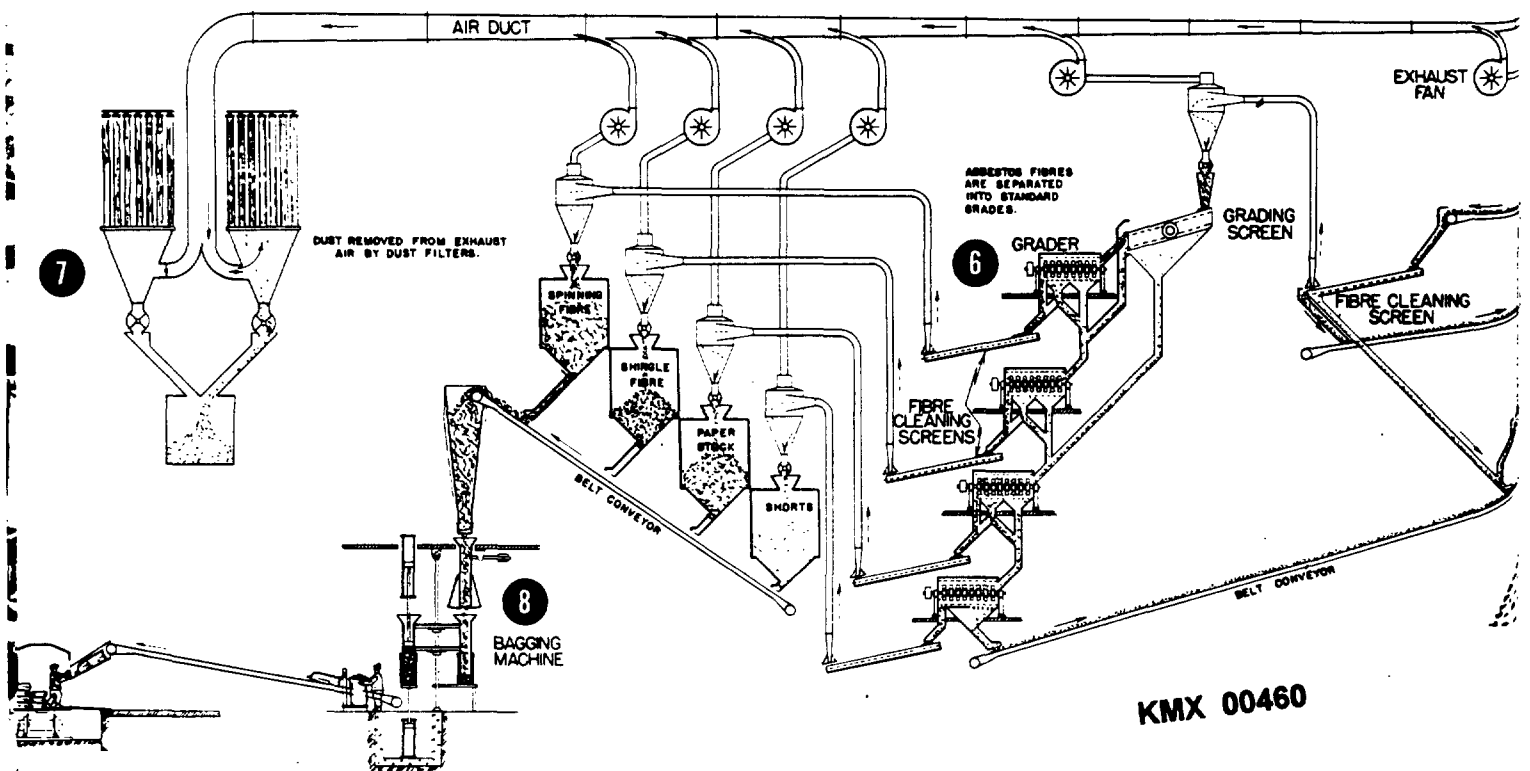
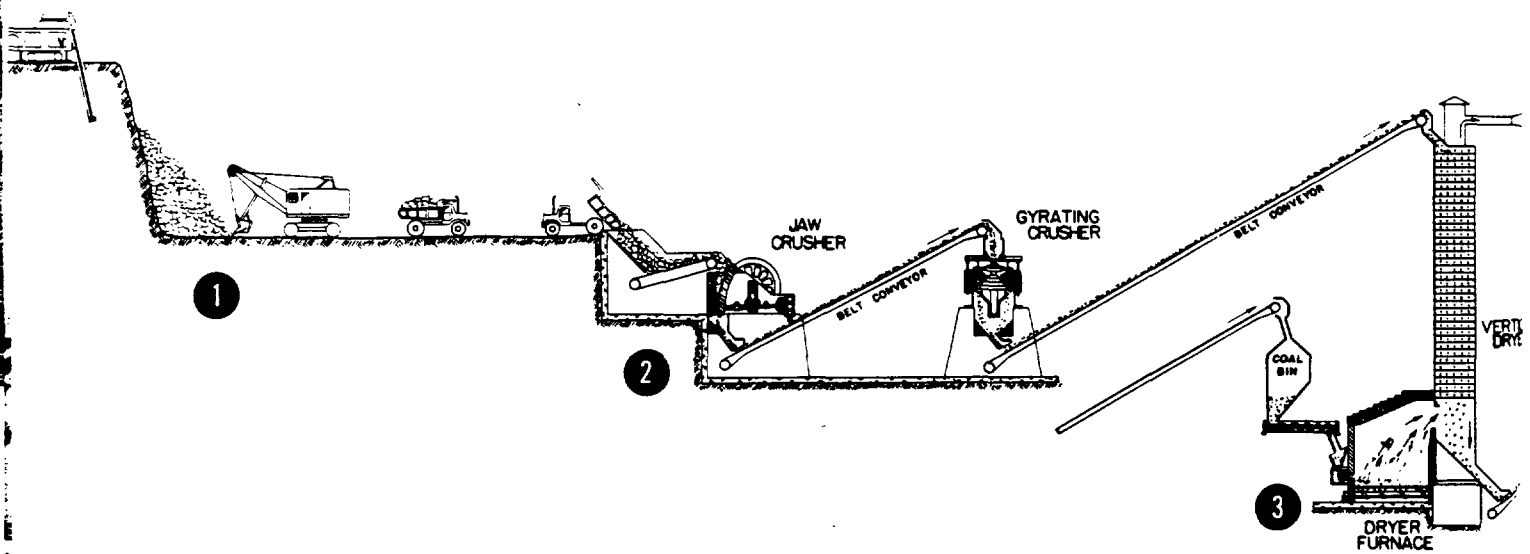
1. Open pit mining operations.



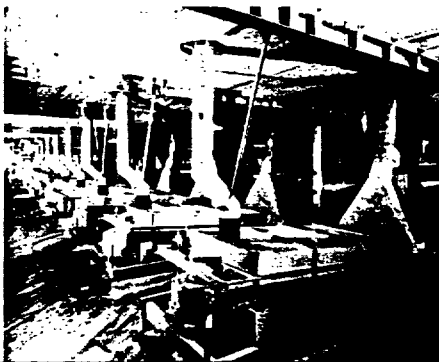
2. Jaw Crusher.



3. Horizontal Dryer.

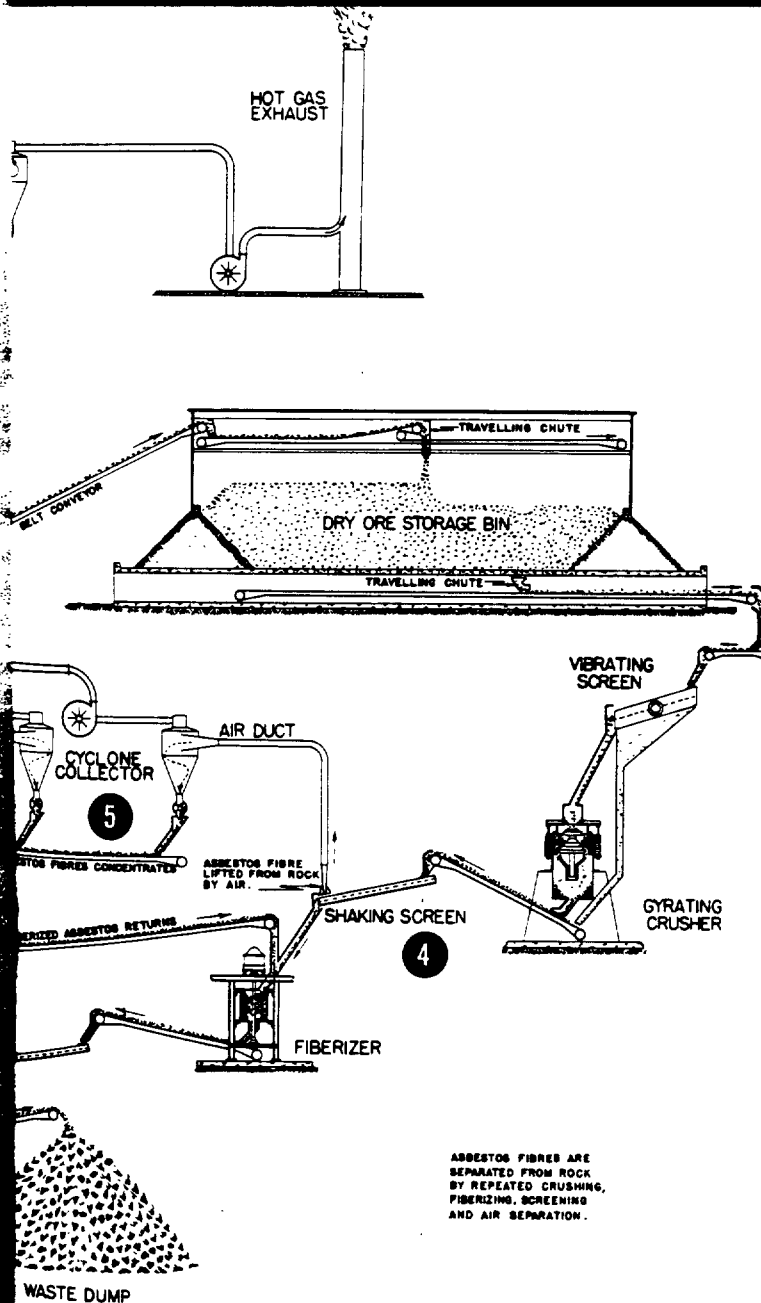


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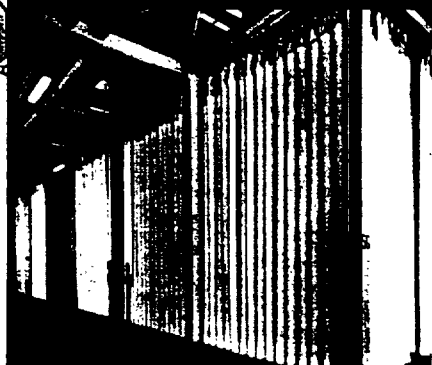
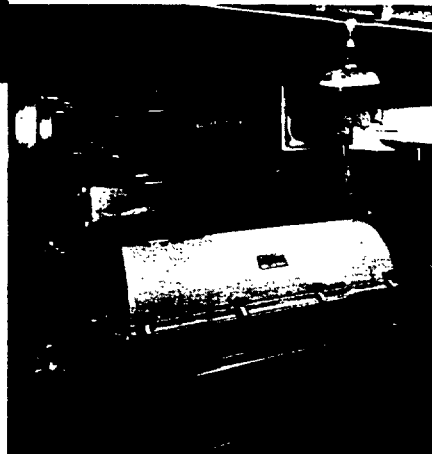
4. Shaking Screens.

5. Cyclone Collectors.



ASBESTOS FIBRES ARE
SEPARATED FROM ROCK
BY REPEATED CRUSHING,
FIBERIZING, SCREENING
AND AIR SEPARATION.

6. Graders.



7. Dust Collecting Units.



8. Pressure Packing Machine.

KMX 00461

considerably higher than in other mining operations with a comparable sales volume.

Asbestos mining is ordinarily a quarrying operation and this method pertains at all three of our mines, the King-Beaver, the British Canadian and Normandie. In addition, part of the ore for the King-Beaver Mill comes from the old King Mine underground workings.

Regardless of the method of extraction, the treatment of the ore is basically the same and on the two previous pages there will be found a simplified flow sheet showing a typical asbestos milling operation.

The first step in the operation shown on the previous page is the mining or quarrying of the asbestos-bearing rock. After drilling, blasting and sorting, the ore is transported to the primary crushing plant where it is reduced in size, usually by a jaw crusher; a further reduction in size occurs at the secondary crusher which is generally of the gyrating type. Asbestos-bearing rock, as it comes from the mine, is normally wet and before any separation of the asbestos from the mother rock can take place the material must be thoroughly dried. Vertical tower dryers are used for fine ore and horizontal dryers for the coarser material. The dried ore is then drawn off and stored in a dry ore storage bin.

Ore from the storage bin is brought to the mill as required where some of the free fibre is extracted and the remaining material passed over vibrating screens to separate the finer material. The ore is then given another crushing to free the asbestos fibre from the rock. The resultant mixture of rock fragments and asbestos fibre is then passed over an inclined shaking screen. The smaller particles of rock and the shorter asbestos fibres pass through the screen openings and

KMX 00462

are carried away for further treatment. The coarser rock fragments and the longer asbestos fibre remain on the screen and the shaking action of the screen brings the fibre to the surface. As the free asbestos fibre nears the end of the shaking screen, it is lifted off by air suction and aspirated through large air ducts to collectors. The material remaining on the screen, which consists mainly of unfreed asbestos in rock fragments, is carried off for further processing in fiberizers which release the rest of the fibre.

The asbestos fibres are then cleaned and separated into standard commercial grades and bagged in 100-pound jute or paper bags for shipment.

Driller at work in open pit.



Canadian Chrysotile Asbestos CLASSIFICATION

The following list of standard asbestos grades was set up by the Committee on Uniform Classification and Grading of Asbestos Mines Products. This committee was formed in 1931 at the instigation of the Minister of Mines of the Province of Quebec. The list of grades has been revised by such committee from time to time. The latest revision was made in July, 1959.

Asbestos mines products are divided into two classes: "Crude Asbestos" and "Milled Asbestos" respectively defined as follows:

"Crude Asbestos" consists of the hand selected cross vein material essentially in its native or unfiberized form.

"Milled Asbestos" consists of all grades produced by mechanical treatment of asbestos ore.

The "Crude Asbestos" and the "Milled Asbestos" are subdivided into groups designated and defined here below:

Classification of the "Milled Asbestos" grades, in groups Nos. 3 to 7 inclusive, unless otherwise specified, is based on the Quebec Standard Testing Machine, a description of which and its operation is given on page 19.

"SHIPPING TEST"—The shipping test is the average for each carload or smaller shipment, of tests of representative samples.

"GUARANTEED MINIMUM SHIPPING TEST"—The guaranteed minimum shipping test is that below which the actual shipping test shall not fall.

SUBDIVISION OF THE GROUPS OF CANADIAN CHRYSOTILE ASBESTOS CRUDE ASBESTOS

Class	Standard Designation of Grade	Description
Group No. 1	Crude No. 1	Consists basically of crude $\frac{3}{4}$ inch staple and longer.
Group No. 2	Crude No. 2	Consists basically of crude $\frac{3}{8}$ inch staple up to $\frac{3}{4}$ inch.
	Crude run-of-mine	Consists basically of unsorted crudes.
	Crudes sundry	Consists of crudes other than above specified.

MILLED ASBESTOS

Groups No. 3 to No. 9 Inclusive	Standard Designation of Grade	Guaranteed Minimum Shipping Test			
Group No. 3	3F	10.5	3.9	1.3	0.3
	3K	7.0	7.0	1.5	0.5
	3R	4.0	7.0	4.0	1.0
	3T	2.0	8.0	4.0	2.0
	3Z	1.0	9.0	4.0	2.0

KMX 00464

Group No. 4	4A	0.0	8.0	6.0	2.0
	4D	0.0	7.0	6.0	3.0
	4H	0.0	5.0	8.0	3.0
	4J	0.0	5.0	7.0	4.0
	4K	0.0	4.0	9.0	3.0
	4M	0.0	4.0	8.0	4.0
	4R	0.0	3.0	9.0	4.0
	4T	0.0	2.0	10.0	4.0
	4Z	0.0	1.5	9.5	5.0
Group No. 5	5D	0.0	0.5	10.5	5.0
	5K	0.0	0.0	12.0	4.0
	5M	0.0	0.0	11.0	5.0
	5R	0.0	0.0	10.0	6.0
Group No. 6	6D	0.0	0.0	7.0	9.0
Group No. 7	7D	0.0	0.0	5.0	11.0
	7F	0.0	0.0	4.0	12.0
	7H	0.0	0.0	3.0	13.0
	7K	0.0	0.0	2.0	14.0
	7M	0.0	0.0	1.0	15.0
	7R	0.0	0.0	0.0	16.0
	7T	0.0	0.0	0.0	16.0
	7W	0.0	0.0	0.0	16.0
Group No. 8	8S	under fifty pounds per cubic foot loose measure			
	8T	under seventy-five pounds per cubic foot loose measure			
Group No. 9	9T	over seventy-five pounds per cubic foot loose measure			

Approved method of

TESTING ASBESTOS FIBRE

SCOPE

This method of test covers a procedure for the classification of Chrysotile Asbestos fibre into Commercial Grades with respect to fibre length.

EQUIPMENT

- (1) The Quebec Standard Asbestos Testing Machine, Model No. 2.

NOTE: The machine shall be constructed and operated according to the specification issued by the National Research Council of Canada and described on page 19.

- (2) A 16 oz. scoop scale with graduations of 0.2 oz. and a sensitivity of 0.1 oz.
- (3) A smooth-surfaced mixing table.

KMX 00465

PROCEDURE

The sample to be tested shall be placed on the table and conditioned to normal room temperature and humidity. Examine the sample by passing through the hands to ensure that clots or lumps are broken up. The moisture content of the sample should not exceed 3% (significant variations, not normally encountered except when moisture content exceeds 3%). Erratic results can be expected beyond 3%. Mix thoroughly, then weigh accurately into the scoop of the scale, a 16 oz. ± 0.1 oz. representative portion. Place the sample in Box No. 1 of the testing machine, by letting it fall loosely from the scoop. The scoop shall be held from 6 to 10 inches above the screen cloth. Take care that when the cover of the testing machine is closed, the fibre shall not be compressed.

When setting the boxes on the machine, be sure that they are lined up true to the platform and that the ends of the boxes always face the same way each time they are used.

Start the machine and allow it to run until it automatically stops. Then, remove each tray and dump the fibre resting on each tray onto the mixing table, in individual piles, picking up and adding the loose fibre adhering to the cloth.

Weigh separately the fibre recovered from each tray; the weights in ounces of the fibre shall be recorded as the Quebec Standard Test of the fibre sample.

REPORT

To the nearest 0.1 oz. the fibre retained in each box.

An example of test results on a long (Group 3) fibre and short (Group 7) fibre would be:

	Box 1 1/2"	Box 2 4 mesh	Box 3 10 mesh	Box 4 Pan	
Long fibre	3.2	9.4	2.8	0.6	16.0 oz.
Short fibre	0	0	6.2	9.8	16.0 oz.



QUEBEC STANDARD TESTING MACHINE and its operation

The Quebec Standard Asbestos Testing Machine Model No. 2 (see illustration) consists of a nest of 4 boxes, measuring $24\frac{1}{2}'' \times 14\frac{3}{4}''$, resting on a table which is driven by an eccentric with $25/32''$ throw and $1\frac{1}{8}''$ travel. The boxes, which are superimposed one above the other, are numbered from the top down—1, 2, 3 and 4. The bottoms of boxes Nos. 1, 2 and 3 are made of brass screen of the following specifications:

Box No.	Screen opening	Diameter of Wire
1	0.500"	0.105"
2	0.187"	0.063" (4 mesh)
3	0.053"	0.047" (10 mesh)

4—Receptacle for the fines which fall through the other three boxes.

To make a test, 16 oz. of asbestos is placed on the uppermost tray (No. 1), which is then covered and tightly clamped. The machine is started and by means of an automatic device is kept going until exactly 600 revolutions have been made. (The speed of rotation is 328 r.p.m.) At the end of this time the asbestos which remains on each tray (box) is weighed. This gives the grade of asbestos fibre; the longest fibre naturally stays on the screen with the largest opening, whereas shorter fibre, according to its length, remains on screen (or tray) 2 or 3, or drops into the pan (lowest tray). The more fibre retained on the first screen, and the less fibre falling into the pan, the higher the grade and therefore the greater its value.

If, for instance, a customer buys 3R fibre of the specification 4-7-4-1, it means that in a sample of 16 oz., representing the average of the lot shipped, 4 oz. will remain on the top screen, 7 on the second and 4 on the third, while 1 oz. will go through all the screens into the pan. It is evident that the figures of the test represent the proportion in ounces of the different lengths of fibre in a pound of asbestos.

KMX 00467





View of a section of the central laboratory of the Quality Control Department.



Testing the surface area of a grade.

QUALITY CONTROL

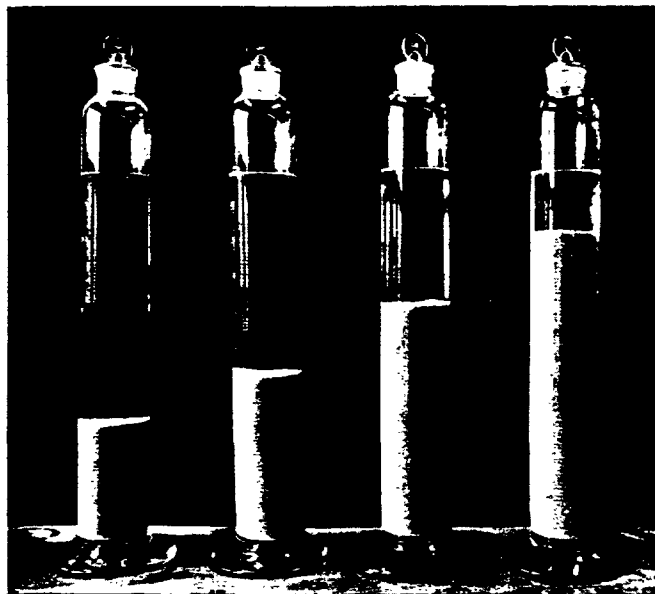
To-day's exacting requirements for asbestos fibre demand high standards of quality and uniformity and with this in view, we established, some time ago, a Quality Control Department whose main function is to ensure that all shipments of fibre from our mines measure up to the closely stipulated specifications for each grade.

Each mill has its own Quality Control testing laboratory which constantly checks production circuits for variation in fibre quality. Individual shipments are tested daily to make certain that they are up to required standards.

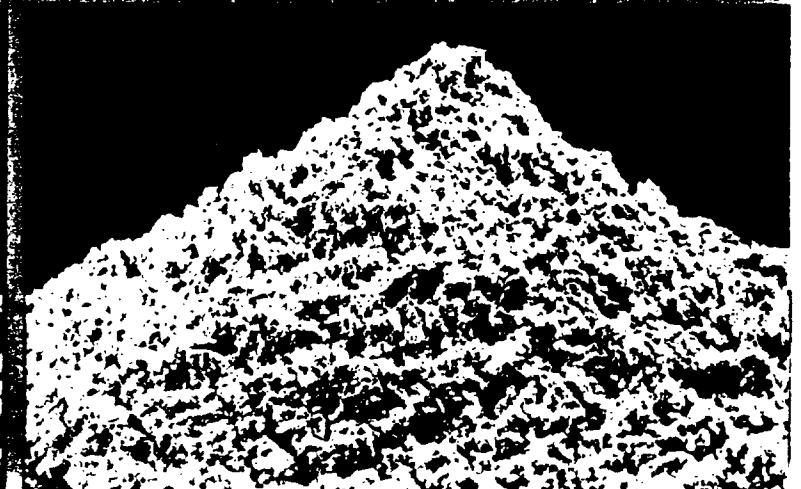
By continuous liaison with the milling department staffs, the Quality Control Department specifies the required technical controls for fibre production at each mine.

In its well-equipped, central laboratory new testing methods are studied, new milling techniques tested, and experimental work on fibre characteristics is undertaken. The Quality Control staff engineers and technicians maintain close relations with the Sales Department in order to help on the spot investigation and solution of customers' problems in the utilization of asbestos fibre and stand ready to provide technical advice and recommendations whenever necessary.

In the course of its work on fibre development, the Quality Control Department uses many different testing and control procedures involving such tests as the Ro-Tap, Bauer-McNett, Suter-Webb, Air Analysis, Strength Unit, Surface Area, Wet and Dry Bulk and Oil Absorption.



KMX 00469





Explanation of nomenclature used for **LISTING OF A.C.L. FIBRES**

The Asbestos Corporation is in the unique position of being able to offer to users of asbestos a choice of chrysotile asbestos extracted from three different mines, ranging in characteristics from the crudest to the silkiest type of fibre. Before listing in detail the numerous grades produced at our various mines, an explanation of the numbering system in use is necessary to avoid confusion and promote a clear understanding of its significance.

Crudes

Asbestos crudes are hand-selected cross-vein material essentially in its native or unmilled form. They are designated as follows:

No. 1 Crude: consists basically of crude $\frac{3}{4}$ inch staple and longer;

No. 2 Crude: consists basically of crude $\frac{3}{8}$ inch staple and up to $\frac{3}{4}$ inch;

Run of Mine: consists basically of unsorted crudes;

Sundry Crudes: consists basically of crudes not otherwise specified.

Groups 3, 4, 5 and 6

In all of the A.C.L. milled grades, the first letter or letters of the grade designation indicate the mine of origin; for example:

In the grade designation KB-439-4K, the letters "KB" stand for the King-Beaver Mine.

Similarly the "N" in N-439-4K for the Normandie Mine, and the "BC" for the British Canadian Mine.

Taking KB-439-4K as our example where the "KB" stands for King-Beaver Mine, we come now to the serial number "439". The first digit

of this number, namely the "4", stands for the Quebec Asbestos Mining Association Standard Grouping for this type of fibre, in this case a group 4 or shingle fibre. Next come the two digits "39" which are used to indicate the character of the fibre as explained below. Finally comes the official Quebec Standard Grade designation, in this case "4K", thus:

KB	4	39	4K
(King-Beaver Mine)	(A Group 4 fibre)	(Fibre character)	(Quebec Standard Grade)

Coming back to the "39" in KB 4(39) 4K, in order to indicate the characteristics of an individual grade such as our example, a 4K fibre, each grade is given a series of ten consecutive numbers which are used to represent the degree of crudiness or openness of that particular grade of fibre. In our example the grade 4K has been allotted the following series: 39, 40, 41, 42, 43, 44, 45, 46, 47 and 48. Hence we could have any number from (4)39 to (4)48 in this particular grade. In this series, and in all other series used in other grades, the lower number of the series always ends in "9". The final digit "9" indicates that this particular grade, KB-439-4K, is the crudest type of 4K that can be produced at that particular mine. The higher degree of openness in the fibre the higher the number in the series will be, viz.: KB-442-4K is more open than KB-439-4K but not as open as KB-443-4K. Similar considerations apply in all other grades, for example:

BC	3	29	3K
		(Crudy)	
(British Canadian)	(A Group 3 fibre)		(Quebec Standard)
		(Open)	
BC	3	33	3K

Groups 7 and 8

The classification for shorts and floats follows the same principles as described above; however, other factors such as bulking, grit percentage, viscosity, etc., have a bearing on the nomenclature used. More specific details can be obtained from the Sales Department upon request, and the wide variety of asbestos shorts produced in our mines for various purposes will meet any desired requirements.

Note:—The Asbestos Corporation also produces a few grades which carry no descriptive number except for the mine of origin and the grade, such as BC-4T. These special grades are developed for special needs, primarily, in the asbestos cement industry.

List of Asbestos Corporation Limited grades

QUEBEC STANDARD A.C.L. DESIGNATION MINIMUM SHIPPING TEST

Crude	No. 1 Crude No. 2 Crude Run-of-Mine Sundry Crudes	— — — —
3F	N-319-3F	10.5 - 3.9 - 1.3 - 0.3
3K	KB-333-3K N-329-3K N-333-3K BC-329-3K BC-333-3K	7 - 7 - 1.5 - 0.5 7 - 7 - 1.5 - 0.5 7 - 7 - 1.5 - 0.5 7 - 7 - 1.5 - 0.5 7 - 7 - 1.5 - 0.5
3R	KB-339-3R KB-342-3R KB-343-3R N-339-3R N-343-3R BC-339-3R BC-343-3R	4 - 7 - 4 - 1 4 - 7 - 4 - 1 4 - 7 - 4 - 1 4 - 7 - 4 - 1 4 - 7 - 4 - 1 4 - 7 - 4 - 1 4 - 7 - 4 - 1
3T	KB-359-3T KB-362-3T KB-363-3T N-359-3T N-362-3T BC-359-3T BC-362-3T	2 - 8 - 4 - 2 2 - 8 - 4 - 2 2 - 8 - 4 - 2 2 - 8 - 4 - 2 2 - 8 - 4 - 2 2 - 8 - 4 - 2 2 - 8 - 4 - 2
3Z	KB-369-3Z KB-373-3Z N-369-3Z N-373-3Z BC-369-3Z BC-373-3Z	1 - 9 - 4 - 2 1 - 9 - 4 - 2 1 - 9 - 4 - 2 1 - 9 - 4 - 2 1 - 9 - 4 - 2 1 - 9 - 4 - 2
4A	KB-409-4A KB-413-4A N-409-4A N-413-4A BC-409-4A BC-413-4A	0 - 8 - 6 - 2 0 - 8 - 6 - 2 0 - 8 - 6 - 2 0 - 8 - 6 - 2 0 - 8 - 6 - 2 0 - 8 - 6 - 2
4D	KB-422-4D KB-423-4D N-419-4D	0 - 7 - 6 - 3 0 - 7 - 6 - 3 0 - 7 - 6 - 3
4K	KB-439-4K KB-442-4K KB-443-4K N-439-4K N-440-4K	0 - 4 - 9 - 3 0 - 4 - 9 - 3 0 - 4 - 9 - 3 0 - 4 - 9 - 3 0 - 4 - 9 - 3
4M	KB-462-4M N-460-4M	0 - 4 - 8 - 4 0 - 4 - 8 - 4
4T	KB-479-4T KB-480-4T KB-483-4T N-479-4T N-483-4T BC-4T	0 - 2 - 10 - 4 0 - 2 - 10 - 4 0 - 2 - 10 - 4 0 - 2 - 10 - 4 0 - 2 - 10 - 4 0 - 2 - 10 - 4
4Z	N-493-4Z	0 - 1.5 - 9.5 - 5

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and their general purposes

GENERAL PURPOSE	REMARKS																						
Fine Cut Asbestos Rovings and Yarns	Crudes and Group 3, or asbestos textile fibres, are used primarily in the manufacture of various types of asbestos yarns and rovings which are in turn used to fabricate the following products:																						
Fine and Medium Cut Asbestos Rovings and Yarns	<table><tr><td>Belting (special conveyor and transmission)</td><td>Gaskets (woven type)</td></tr><tr><td>Blankets (for fire fighting and fire protection)</td><td>Lagging Cloth</td></tr><tr><td>Boiler mattress covers</td><td>Laminated Plastics</td></tr><tr><td>Braided Packings</td><td>Lap for wire insulation</td></tr><tr><td>Brake Blocks (woven type)</td><td>Rope and Rope packings</td></tr><tr><td>Brake Linings (woven type)</td><td>Tape or Listings</td></tr><tr><td>Clothing</td><td>Theatre and decorative curtains, draperies</td></tr><tr><td>Clutch facings</td><td>Thermal insulating tapes</td></tr><tr><td>Diaphragms for Electrolytic Cells</td><td>Tubing or Sleeving</td></tr><tr><td>Dryer Felts</td><td>Turbine Blankets</td></tr><tr><td>Electrical Insulating Tapes</td><td>Wicks and wick packing</td></tr></table>	Belting (special conveyor and transmission)	Gaskets (woven type)	Blankets (for fire fighting and fire protection)	Lagging Cloth	Boiler mattress covers	Laminated Plastics	Braided Packings	Lap for wire insulation	Brake Blocks (woven type)	Rope and Rope packings	Brake Linings (woven type)	Tape or Listings	Clothing	Theatre and decorative curtains, draperies	Clutch facings	Thermal insulating tapes	Diaphragms for Electrolytic Cells	Tubing or Sleeving	Dryer Felts	Turbine Blankets	Electrical Insulating Tapes	Wicks and wick packing
Belting (special conveyor and transmission)	Gaskets (woven type)																						
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Dryer Felts	Turbine Blankets																						
Electrical Insulating Tapes	Wicks and wick packing																						
Commercial Grade Asbestos Yarns and Asbestos Rovings	The lower grades of asbestos textile fibres, besides being used in asbestos yarns, are more often employed in the manufacture of the following products:																						
Various uses as noted opposite, and in combination with other grades in Commercial Yarns	Brake Blocks (moulded type) Compressed sheet packing (jointing) Gaskets (compressed packing types) High pressure asbestos cement pipes Moulded high temperature insulation 85% magnesia insulation																						
Asbestos Cement Products	Groups 4, 5 and 6, or medium length fibres, are used extensively in the manufacture of asbestos cement products such as the following: Clapboard Hand moulded products (all types) Pipes (high and low pressure, air ducts, etc.) Sheets (flat and corrugated) Shingles (roofing and siding) Wallboards and panels (sheathing, building, electrical insulating panels, etc.) Also: Asbestos Felting Brake Blocks (moulded) Brake Linings (moulded) Sprayed acoustical insulation 85% magnesia insulation																						

QUEBEC STANDARD	A.C.L. DESIGNATION	MINIMUM SHIPPING TEST
5D	KB-520-5D KB-522-5D KB-523-5D N-520-5D N-522-5D N-523-5D BC-520-5D	0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5 0 - 0.5 - 10.5 - 5
5K	KB-542-5K KB-543-5K N-540-5K N-542-5K N-543-5K	0 - 0 - 12 - 4 0 - 0 - 12 - 4 0 - 0 - 12 - 4 0 - 0 - 12 - 4 0 - 0 - 12 - 4
5M	KB-552-5M N-552-5M	0 - 0 - 11 - 5 0 - 0 - 11 - 5
5R	KB-560-5R KB-562-5R KB-563-5R KB-565-5R N-562-5R N-563-5R BC-559-5R	0 - 0 - 10 - 6 0 - 0 - 10 - 6 0 - 0 - 10 - 6 0 - 0 - 10 - 6 0 - 0 - 10 - 6 0 - 0 - 10 - 6 0 - 0 - 10 - 6
6D	KB-650-6D KB-652-6D KB-653-6D N-652-6D N-653-6D BC-649-6D BC-653-6D	0 - 0 - 7 - 9 0 - 0 - 7 - 9 0 - 0 - 7 - 9 0 - 0 - 7 - 9 0 - 0 - 7 - 9 0 - 0 - 7 - 9 0 - 0 - 7 - 9
7D	KB-714-7D KB-716-7D N-713-7D N-714-7D	0 - 0 - 5 - 11 0 - 0 - 5 - 11 0 - 0 - 5 - 11 0 - 0 - 5 - 11
7F	KB-723-7F	0 - 0 - 4 - 12
7H	KB-733-7H	0 - 0 - 3 - 13
7K	KB-743-7K KB-745-7K	0 - 0 - 2 - 14 0 - 0 - 2 - 14
7M	KB-753-7M KB-755-7M BC-753-7M	0 - 0 - 1 - 15 0 - 0 - 1 - 15 0 - 0 - 1 - 15
7R	KB-762-7R KB-763-7R KB-765-7R N-762-7R N-765-7R BC-759-7R BC-762-7R	0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16
7T	KB-774-7T KB-775-7T BC-769-7T BC-774-7T	0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16
7RS	KB-784-7RS KB-785-7RS N-784-7RS N-788-7RS	0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16
7TS	KB-795-7TS KB-797-7TS N-793-7TS	0 - 0 - 0 - 16 0 - 0 - 0 - 16 0 - 0 - 0 - 16
8S	N-845-8S N-856-8S	Under 50 lb. per cu. ft. loose measure.
8T	N-8T	Under 75 lb. per cu. ft. loose measure

GENERAL PURPOSE**REMARKS****Asbestos
Cement
Products**

In addition to their use in asbestos cement products, these fibres are employed in making asbestos paper for use in the fabrication of such articles as:

Air cell pipe covering**and****Gaskets (asbestos paper)****Linings (for stoves, garages, electric switch boxes, ovens, etc.)****Asbestos
Paper
Products****Millboard****Wrapping (electrical wires, hot air pipes, etc.)**

The use of asbestos shorts and floats is primarily in the role of a fibrous mineral filler in a great variety of manufactured products, for example,

Fillers

**Asphalt roofing compounds
Boiler Coverings
Brake Linings (moulded)
Caulking compounds
Conduit pipes
Flooring composition
Grease (fibre filled)
Hot and cold moulded products
Joint cement
Paint filler
Stucco
Synthetic resins**

and**Plastics****Tiles:—**

- 1. Asphalt**
- 2. Synthetic resin**
- 3. Vinyl asbestos**

Undercoatings and sound deadeners

Should additional information about any particular grade or concerning any application or use of asbestos be required, the Company will be pleased to deal with such requests. Samples of the majority of the grades listed are available upon demand. All such enquiries should be addressed to the General Sales Manager, and an order form for this purpose will be found enclosed with this catalogue.

PHYSICAL AND CHEMICAL PROPERTIES OF ASBESTOS

CHEMICAL COMPOSITION

Canadian Chrysotile asbestos is a hydrous magnesium silicate ($H_4Mg_3Si_2O_9$). There is some variation shown in analyses of fibres from mines in different localities, but the variation is generally very slight. So far as fibre from our Company's mines is concerned, a sample comparative analysis follows:

	SiO ₂	Al ₂ O ₃	Fe ₂ O ₃	FeO	MgO	H ₂ O
	40.15	0.65	1.72	0.85	42.93	13.45
	40.10	0.30	2.30	1.25	42.65	13.59
	38.70	0.66	3.07	2.05	41.93	13.53

SPECIFIC GRAVITY

Specific gravity of samples taken from the various mines runs as follows:

Normandie	2.49
British Canadian	2.54
King-Beaver	2.56

HARDNESS

The hardness of Canadian Chrysotile Asbestos varies from 3 to 3.5 on Mohs's scale.

EFFECT OF TEMPERATURE ON LOSS IN WEIGHT OF A TYPICAL ASBESTOS CORPORATION FIBRE*

Temp. °F	Time of Exposure	Percentage (%) Loss in Weight	Temp. °F	Time of Exposure	Percentage (%) Loss in Weight
400	2 hours	0.46	1,200	2 hours	12.45
600	2 "	0.66	1,300	2 "	12.79
700	2 "	0.80	1,400	2 "	12.82
800	2 "	0.93	1,500	2 "	12.92
900	2 "	1.39	1,600	2 "	12.93
1,000	2 "	4.60	1,700	2 "	13.02
1,100	2 "	12.00	1,800	2 "	13.09

Note:—Sample conditioned at 105°C for several days before testing.

*Compiled from data supplied by H. M. Woodrooffe, Industrial Minerals Division, Mines Branch, Department of Mines and Technical Surveys, Ottawa, Ont.

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SPECIAL CHARACTERISTICS OF A.C.L. FIBRES and their packaging

GENERAL

By reason of having three different and separate mines our Company is in the fortunate position of being able to supply three distinct types of high quality asbestos fibre according to customer preference. These are:

1. King-Beaver Type

Fine, white, silky and strong fibre from our King-Beaver Mine at Thetford is especially adaptable to those processes which call for well-opened grades requiring the minimum of treatment. With the new King-Beaver Mill an even greater variety of quality grades is now available from this plant.

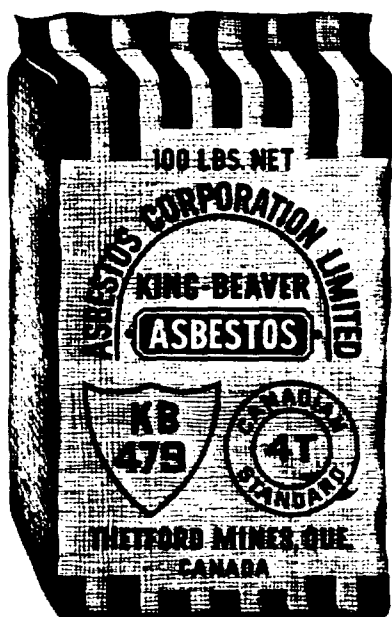
2. British Canadian Type

Fibre from our British Canadian Mine at Black Lake can, in the longer spinning grades, be produced in as open a state as that of the King-Beaver Mine. Normally, however, it is made in a crudier state, particularly in Groups 4 and 5 where its high potential value and fast filterability are esteemed by manufacturers of top quality asbestos cement products.

3. Normandie Type

Somewhere between King-Beaver type and British Canadian type in harshness, is the Normandie type fibre. Fast filtering and possessing exceptional tensile strength, Normandie fibre generally requires more opening than the other types in order to attain its full value.

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BAG MARKINGS

The illustration at the left is representative of the trade-marked design used on all jute packages of Asbestos Corporation fibre—in this case KB-479-4T.

It will be noted that the Quebec Standard Grade "4T" is printed within the "Q" on the lower right hand side, while the Company code number "479" appears in the shield to the left. The name of the mine, in this case King-Beaver, is shown directly under the words "Asbestos Corporation Limited". Every package, jute or paper, bears the Company trade-mark "ASBESTOS" in red as indicated.

In the pressure packed paper package the design is the same, but in addition, the grade number is printed on the bottom of each package to permit easy identification in storage.

In the case of pressure packed jute packages only where printing on the ends of bags is not feasible, identification of the type of fibre in storage or transit is made possible by the use of a colour code system involving the use of 7 coloured bands placed on the end of each package as shown in the illustration and the different coloured printing of the design.

Black	Purple	Group 3
Black	Red	Group 4
Blue	Blue	Group 5
Green	Green	Group 6
Black	Black	Group 7

SHIPPING INFORMATION

1. PACKAGING

There are four basic packages used in the shipment of Asbestos Corporation fibres each containing 100 lbs of asbestos. They are,

1. Pressure Packed multiwall paper container;
2. Pressure Packed jute container;
3. Loose Packed multiwall paper container;
4. Loose Packed jute container.

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Normally, all overseas export shipments are made in jute containers and inland shipments in paper. Economies in transportation and storage costs can usually be effected by the use of pressure packed fibre because of its better stowage and handling characteristics. Compression of the fibre in pressure packed containers on the other hand, may mean cost to some consumers in the opening and preparation of fibres prior to use, additional to that normally required for loose packed fibre. Individual package dimensions vary somewhat in accordance with the type of packaging machinery employed and the grade of fibre. Details on this and other aspects of packaging are obtainable from the Sales Department on request.

2. INLAND FREIGHT RATES

The Canadian and U.S. railroads have established definite commodity classifications for the movement of asbestos as follows:

CANADIAN STANDARD GROUP	RAILWAY CLASSIFICATION	MINIMUM CARLOAD WEIGHT
1 and 2	Asbestos Crude	40,000 lbs.
3, 4 and 5	Asbestos Fibre	40,000 lbs.
6 only	Asbestos Waste	60,000 lbs.
7 and 8	Asbestos Shorts	60,000 lbs.

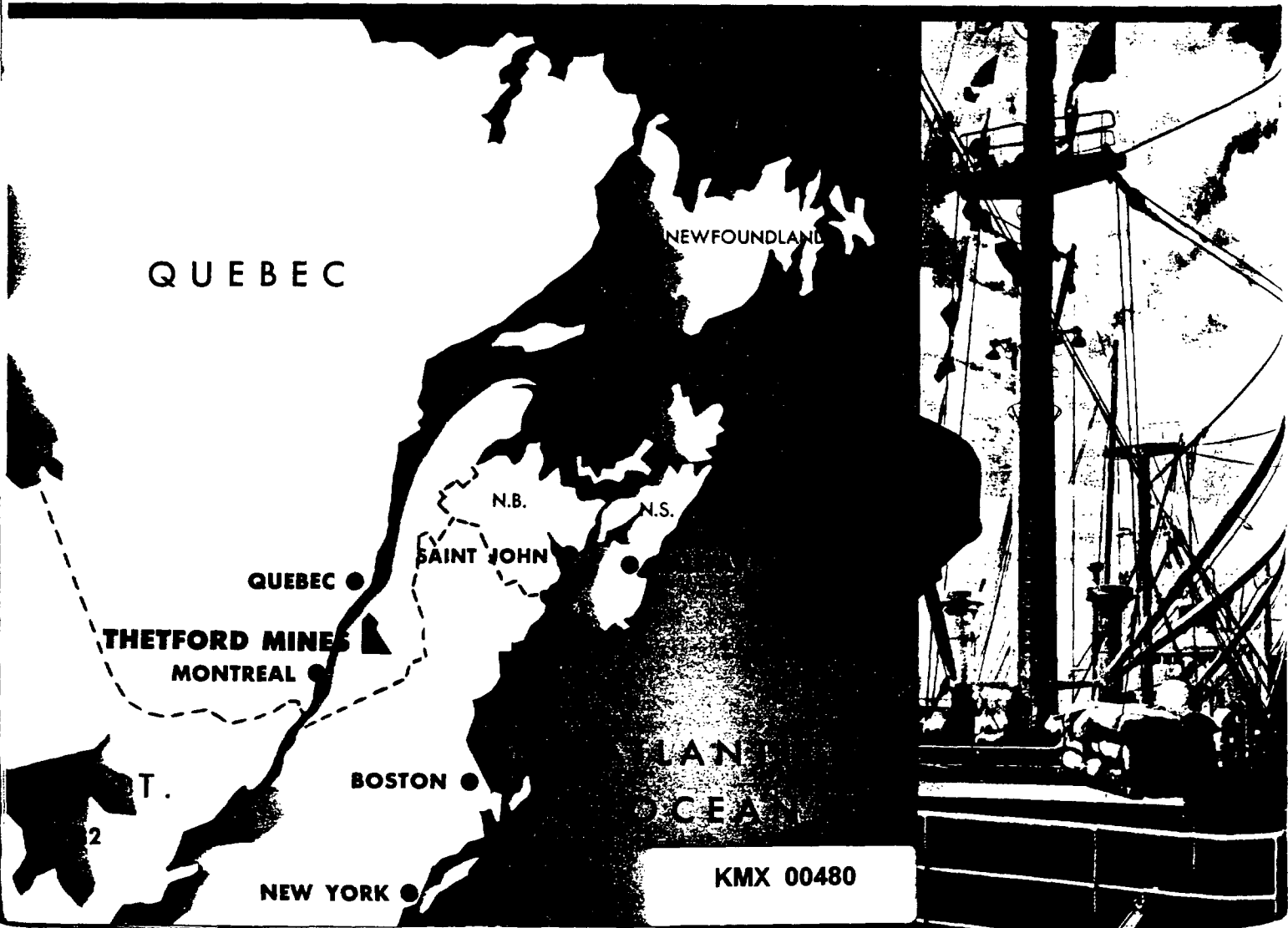
Lower freight rates apply on carload shipments in excess of the minimums shown above to most destinations and substantial savings can be realized by customers by taking advantage of these higher minimums where applicable on both domestic and export shipments. Less than minimum carload lots, of course, travel at higher rates. Full information on all rates can be obtained upon inquiry but it should be emphasized that the Company will always try to ship the most economical way.



3. OCEAN FREIGHT RATES & OVERSEAS EXPORT SHIPMENTS

Overseas export shipments are usually made from the port of Quebec City located on the St. Lawrence River or alternatively through the port of Montreal at a slightly higher cost. Both these ports are closed to navigation during the severe winter months (December to mid-April) due to the freezing over of the St. Lawrence River, except for a very limited service available from Quebec City. Shipments abroad during this winter period are made from the Atlantic East Coast Ports of Halifax, N.S. or Saint John, N.B. at substantially higher inland freight costs.

In special circumstances, where prompt service is not available through Canadian ports, shipments can be made from the ports of New York or Boston but again higher inland freight costs will prevail. Although our prices are quoted on an F.O.B. mine basis, we are prepared to ship on an F.O.B. port, F.A.S., C. & F. or C.I.F. basis depending on the requirements of the individual customer. Complete information on prevailing ocean freight rates, insurance rates, etc, can be obtained from writing to the Sales Division.



ASBESTOS CORPORATION LIMITED

President and Managing Director
General Manager

A. L. PENHALE
G. F. JENKINS

OPERATIONS DIVISION

Asst. General Manager

W. W. OUGHTRED

Accounting and Purchasing Dept.

J. W. McCarvill, *Comptroller*
J. Yves Paquet, *Purchasing Agent*

Corporate and Financial Dept.

I. C. Campbell, *Secretary-Treasurer*

Exploration Department

P. H. Riordon, *Exploration Manager*

Methods and Training Dept.

J. G. Mooney, *Methods & Training Manager*

Personnel Department

J. A. Wayland, *Personnel Manager*

Production Department

C. H. McNaughton, *Production Manager*
C. G. Bourne, *Plant Manager*
King-Beaver Mine
F. A. Cunningham, *Plant Manager*
British Canadian Mine
W. H. Foster, *Plant Manager*
Normandie Mine
G. F. A. Brink, *Quality Control Manager*

Quality Control Department

SALES DIVISION

General Sales Manager

J. A. D. MARCOTTE

Sales and Traffic Department

A. C. Steele, *Asst. Gen. Sales Manager*
Paul E. Leclerc, *Regional Sales Manager*
J. P. Lafontaine, *Sales Office Manager*
G. R. Biron, *Traffic Manager*



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ASBESTOS

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