CANADA

DEPARTMENT OF MINES

MINES BRANCH

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THE

PRODUCTION OF ASBESTOS

IN

CANADA

During the Calendar Years

1907 - 8

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ADVANCE CHAPTER OF THE ANNUAL REPORT ON THE MINERAL PRODUCTION OF CANADA DURING THE CALENDAR YEARS 1907 AND 1908.

ASBESTOS

Asbestos is mined in Canada in the Eastern townships, Province of Quebec, at Black Lake, Thetford, East Broughton and Danville. Other occurrences of the mineral have been noted, and some shipments were at one time made from the township of Denholm, in the county of Wright, north of the city of Ottawa, but the first-mentioned districts are the only localities in which mining is at present being carried on. The mining of asbestos in this region dates from about 1878, and statistics of production since 1880 are shown in tables following. The value of the annual output has grown from less than \$25,000 in 1880 to over \$2,573,000 in 1908, so that next to coal this is now one of the most important of non-metallic mineral products, and supplies a very large proportion of the world's demand. A special report on this subject has been published by this branch, though now unfortunately out of print. A revised edition is, however, in course of preparation.

PRODUCTION.

A portion of the output is sufficiently high grade to be shipped as crude; the greater part, however, is crushed and the fibre extracted by special machinery. A uniform system of classification has not yet been adopted by the operating companies, but for statistical purposes the shipments have been classified on a valuation, basis, the crude being divided into two classes and the mill fibre into three grades; the short fibred, asbestic, and sand, being separately classified.

The total shipments in 1908 aggregated 90,773 tons valued at \$2,573,335, as compared with shipments in 1907 of 90,426 tons valued at \$2,505,042, the shipments in 1908 being the largest both in tonnage and value yet recorded. Details are given in Table 1.

• •		1907.	•		1908.	
	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton.
		6	\$ cts.		\$.	\$ cts.
Crude, No. 1 " 2 Mill Stock, No. 1 " " 2 " " 3	1,419 2,908 3,675 43,821 10,307	374,275 456,357 300,925 1,247,078 106,132	$\begin{array}{c} 263 & 76 \\ 156 & 93 \\ 81 & 88 \\ 28 & 46 \\ 10 & 30 \end{array}$	$\begin{array}{r} 857\frac{1}{2} \\ 2,488 \\ 5,282\frac{1}{2} \\ 45,545\frac{1}{4} \\ 12,374\frac{1}{4} \end{array}$	$\begin{array}{r} 257,752\\ 411,480\\ 425,448\\ 1,345,750\\ 114,931 \end{array}$	$300^{\circ}59$ 165 38 80 54 29 33 9 29
Total asbestos Total asbestic	$\begin{array}{c} 62,130\\ 28,296 \end{array}$	2,484,767 20,275	$\begin{array}{r} 39 \hspace{0.1cm} 99 \\ 0 \hspace{0.1cm} 72 \end{array}$	66,548 24,225	2,555,361 ·17,974	$\begin{array}{r} 38 \hspace{0.1cm} 40 \\ 0 \hspace{0.1cm} 74 \end{array}$
Grand total	90,426	2,505,042		90,773	2,573,335	

ASBESTOS.—TABLE 1. Production by Classes, Calendar Years 1907 and 1908.

While the average prices in each class are given in the above, the classification is based approximately on the following maximum and minimum prices per ton:—

•	,		 		 	1	907				1	.908	3.	
. ,	•				ş	c.		\$	c.	Ş	c.		\$	c.
Crude, No. 1		. · · · · · · ·	 ••••	 	 225					267				
Mill Stock, No	$\begin{array}{c} 1 \\ 2 \\ \end{array}$		 	 	 57	00	11	200 163 50	00	60	00	11	225 100 50	00
	3	• • • • • • • •	 	 	 8		11	15		5	00	H		00

Range of Prices of Asbestos During the Years 1907-8.

Although the total tonnage shipped in 1908 was only 347 tons in excess of the 1907 shipments, it will be seen that the amount of crude shipped in 1908, despite a higher average price, was less than the 1907 crude shipments by 981 tons. The fibre shipments on the other hand were 5,399 greater in 1908, and brought a higher average return per ton of \$1.22. The asbestic shipments in 1908 were 4,071 less than in 1907.

In Table 2, following, the production of crude asbestos and mill stock since 1903 is separately shown. The statistics indicate that during the past six years there has been only a slight increase in the quantity shipped as crude, although the average price has nearly doubled; while on the other hand the shipments of mill stock have increased over 125 per cent in the same time, with an increase of over 50 per cent in the average price per ton obtained.

ASBESTOS .- TABLE 2.

Annual Production of Crude and Mill Stock 1903-1908.

C(-137		CRUDE.		MILL STOCK.				
Calendar Year.	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton		
· · ·		\$	\$ cts.		\$	\$ ct		
003	3,134 4,410 3,767 3,841 4,327 3,345	361,867 534,874 472,859 635,345 830,632 669,232	$\begin{array}{c} 115 & 46 \\ 121 & 28 \\ 125 & 53 \\ 165 & 41 \\ 191 & 97 \\ 200 & 04 \end{array}$	27,995 31,201 46,902 56,920 57,803 63,202	554,021 678,628 1,013,500 1,401,083 1,654,135 1,886,129	$\begin{array}{c cccc} 19 & 7 \\ 21 & 7 \\ 21 & 6 \\ 24 & 6 \\ 28 & 6 \\ 29 & 8 \end{array}$		

4

Table 3 shows the total shipments of asbestos and asbestic separately for each year since 1880.

ASBESTOS.—TABLE 3.

Annual Production since 1880.

		Asbestos.			Asbestic.				
Calendar Year.	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton.			
1990 (~)	990	\$	\$ ets.		ş	\$ cts.			
1880 (a)	$\begin{array}{c} 380\\ 540\\ 810\\ 955\\ 1,141\\ 2,440\\ 3,458\\ 4,619\\ 4,404\\ 6,113\\ 9,860\\ 9,279\\ 6,082\\ 6,331\\ 7,630\\ 8,756\\ 10,892\\ 13,202\\ 16,124\\ 17,790\\ 21,621\\ 32,892\\ 30,219\\ 35,611\\ 50,669\\ 60,761\\ 62,130\\ 66,548\\ \end{array}$	$\begin{array}{c} 24,700\\ 35,100\\ 52,650\\ 68,750\\ 75,097\\ 142,441\\ 206,251\\ 226,976\\ -255,007\\ 426,554\\ 1,260,240\\ 999,578\\ 390,462\\ 310,156\\ 420,825\\ 399,528\\ 420,825\\ 368,175\\ 423,066\\ 309,528\\ 475,131\\ 468,635\\ 729,886\\ 1,248,645\\ 1,126,688\\ 9,15,888\\ 1,213,502\\ 1,486,359\\ 2,036,428\\ 2,484,767\\ 2,555,361\\ \end{array}$	$\begin{array}{c} 65 & 00\\ 65 & 00\\ 65 & 00\\ 71 & 99\\ 65 & 82\\ 59 & 64\\ 48 & 92\\ 57 & 81\\ 127 & 81\\ 107 & 76\\ 64 & 20\\ 86 & 81\\ 55 & 15\\ 42 & 05\\ 42 & 05\\ 38 & 84\\ 29 & 99\\ 20 & 34\\ 33 & 796\\ 37 & 28\\ 20 & 33\\ 52 & 34\\ 08\\ 33 & 52\\ 34 & 52$	$\begin{array}{c} 1,358\\ 17,240\\ 7,661\\ 7,760\\ 7,520\\ 7,325\\ 10,197\\ 10,548\\ 12,854\\ 17,594\\ 21,424\\ 28,296\\ 24,225\\ \end{array}$	6,790 45,840 16,066 17,214 18,545 11,114 21,681 13,861 12,850 16,900 23,715 20,275 17,974	5 00 2 66 2 10 2 22 2 47 1 52 2 20 1 31 1 00 0 96 1 11 0 72 0 74			

(a) Figures of export taken as production.

EXPORTS AND IMPORTS.

Supplying as it does the greater part of the world's demand, the Canadian . output of asbestos finds a wide distribution.

During the twelve months ending March 31, 1908, exports were made as follows:—

Countries.	Tons.	Value.	Countries.	Tons.	Value.
Great Britain Belgium France	5,347 3,372 2,332 225	86,871 50,612	Italy Japan. United States	814 97 46,846	\$ 21,678 3,177 1,322,890
Germany.,	220	`\$,195	Total	59,033	1,730,575

Exports to Great Britain, United States, Germany and other countries during the past six calendar years are shown in Table 4, and total exports each year since 1892 in Table 5.

ASBESTOS.—TABLE 4.

Exports of Canadian Asbestos by Countries 1903-1908.

ar Year.		REAT TAIN.	To United States.				Total Exports.		çe per ton.		
Calendar	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Average
1903.	. 2,743	\$ 40,120	24,252	\$ 714,781	1,429	\$ 25,150	3,356	\$ 110,982	31,780		\$ ets. 28 04
1904 1905 1906 1907 1908	6,602 9,731 9,435 5,432 5,221	210,175 305,056 318,313 200,909 288,290	25,957 29,696 39,767 44,861	762,300 811,080 1,058,513 1,312,582 1,314,337	2,463 2,969 3,654 225	94,141 100,061	2,250 4,635 6,998 6,235	94,271 169,918 230,314 147,613 230,666	59,854 56,753	$1,160,887 \\1,386,115 \\1,689,257 \\1,669,299 \\1,842,763$	$\begin{array}{cccc} 31 & 15 \\ 29 & 47 \\ 28 & 22 \\ 29 & 41 \\ 30 & 11 \end{array}$

ASBESTOS.—TABLE 5.

Annual Exports, Calendar Years 1892-1908.

Calendar Year.	Tons.	Value.	Value per ton.	Calendar Year.	Tons.	Value.	Value per ton.
		\$	\$ cts.			\$	\$ ets.
1892 1893 1894 1895 1896 1897 1898 1898 1899 1890	5,380 5,917 7,987 7,442 11,842 15,570 15,346 17,883 16,993	373,103 338,707 477,837 421,690 567,967 473,274 494,012 473,148 693,105	$\begin{array}{ccccc} 69 & 35 \\ 57 & 24 \\ 59 & 82 \\ 56 & 66 \\ 47 & 96 \\ 30 & 40 \\ 32 & 19 \\ 26 & 46 \\ 39 & 61 \end{array}$	1901 1902 1903 1904 1905 1906 1907 1908	31,780 37,272 47,031 59,854 56,753	$1,069,918\\995,071\\891,033\\1,160,887\\1,386,115\\1,689,257\\1,669,299\\1,842,763$	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

Although the chief source for the raw material, Canada does not as yet manufacture all the asbestos goods required for home consumption. There is, therefore, a considerable importation of asbestos goods under the import classification 'Asbestos in any form other than crude and all manufactures of,' the duty being 25 per cent. The annual value of the imports is shown in Table 6.

6

ASBESTOS .--- TABLE 6. '

Imports Fiscal Years 1885-1908.

Fiscal Year.	Value.	Fiscal Year.	Value.	Fiscal Year.	Value.
1885 1886 1887 1888 1889 1890 1891 1892	\$ 674 6,831 7,836 8,793 5,943 13,250 13,298 14,090	1893 1894 1895 1896 1897 1898 1899 1899 1900	\$ 19,181 20,021 26,094 23,900 19,032 26,389 32,607 43,455	1901 1902 1903 1904 1905 1906 1907 (9 months) *1908	\$ 50,829 52,464 75,465 83,827 116,836 137,974 127,509 190,980

* Asbestos in any form other than crude, and all manufactures of. Duty 25 per cent.

Outside of Canada the chief asbestos producing country is Russia, whose output in 1907 is reported as 9,356 metric tons. The United States, Cape Colony, and Cyprus are also producers, though the quantity is not important.

Table 7 shows the principal productions since 1902.

ASBESTOS.-TABLE 7.

World's Production 1902-1908 in Metric Tons, (2204.6 lbs.).

· · · · · · · · · · · · · · · · · · ·		1902.	1903.	1904.	1905.	1906.	1907.	1908.
United St Russia (e). Cape Colo) ates (c) ny (e)	912 4,507 (g) 41	28,240 805 5,624 (g) 276	32,306 1,343 7,502 373	45,967 2,820 7,266 454	55,122 1,538 9,201 473 (g) 19	56, 364 592 (a) 9,356 548 (g) 89	60,372 849 * *

* Figures not available. (a) Provisional. (b) Mines Branch, Ottawa. (e) Home Office, London. (g) Exported.

(c) United States, Geological Survey.

The following is a list of the principal producing companies in Canada:-

List of Operators.

Dominion Asbestos Co., Ltd., Montreal, 415 Merchants Bank Building. " " Standard Asbestos Co., Ltd., 415Union Asbestos Mines, Calmon, Que. Johnston's Asbestos Co., Ltd., Thetford Mines, Que. Bell Asbestos Mines, Beaver Asbestos Co., " " King Asbestos Mines The Asbestos and Asbestic Co., Ltd., Asbestos, Que. Broughton Asbestos Fibre Co., East Broughton Sta., Que. The Quebec Asbestos Co., Sherbrooke, Que. Eastern Townships Asbestos Co., East Broughton Sta., Que. The Frontenac Asbestos Mining Co., Ltd., East Broughton Sta., Que. British Canadian Asbestos Co., Ltd., Black Lake, Que.

COMPANIES PROSPECTING OR EXPECTING TO OPERATE.

Megantic Mining Co., Montreal, 88 McGill St.

W. H. Lambly, Inverness, Que.

Brompton Lake Asbestos Co., Montreal, 17 Victoria Square.

The Asbestos Mining & Manufacturing Co., Sherbrooke, Que.

Boston Asbestos Co., Ltd., East Broughton Sta., Que.

Robertson Asbestos Mining Co., Drummondville, Que.

The Ling Asbestos Co., East Broughton Sta., Que.

The Thetford Asbestos & Exploration Co., Thetford, Que.

The Imperial Asbestos Co., Montreal, Que.

La Compagnie d'Amiante Champlain, Quebec, 81 Rue St. Pierrc.