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DEPARTMENT OF MINES

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THE
PRODUCTION OF ASBESTOS
IN
CANADA

During the Calendar Years

1907-8

BY

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OTTAWA
GOVERNMENT PRINTING BUREAU
1909

5894-1

No. 44.

**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 \$2,573,355, 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.

ASBESTOS.—TABLE 1.

Production by Classes, Calendar Years 1907 and 1908.

	1907.			1908.		
	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton.
		\$	\$ cts.		\$	\$ cts.
Crude, No. 1.....	1,419	374,275	263 76	857½	257,752	300 59
" 2.....	2,908	456,357	156 98	2,488½	411,480	165 38
Mill Stock, No. 1.....	3,675	300,925	81 88	5,282½	425,448	80 54
" " 2.....	43,821	1,247,078	28 46	45,545½	1,345,750	29 33
" " 3.....	10,307	106,132	10 30	12,374½	114,931	9 29
Total asbestos.....	62,130	2,484,767	39 99	66,548	2,555,361	38 40
Total asbestic.....	28,296	20,275	0 72	24,225	17,974	0 74
Grand total.....	90,426	2,505,042	90,773	2,573,335

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:—

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

	1907.		1908.	
	\$ c.	\$ c.	\$ c.	\$ c.
Crude, No. 1.....	225 00 to	300 00	267 00 to	350 00
" " 2.....	100 00 "	200 00	75 00 "	225 00
Mill Stock, No. 1.....	57 00 "	163 00	60 00 "	100 00
" " 2.....	18 00 "	50 00	20 00 "	50 00
" " 3.....	8 00 "	15 00	5 00 "	13 00
Asbestic.....	0 50 "	2 00	0 35 "	1 16

Although the total tonnage shipped in 1908 as 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 5,309 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.

Calendar Year.	CRUDE			MILL STOCK.		
	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton.
		\$	\$ cts.		\$	\$ cts.
1903.....	3,134	361,867	115 46	27,995	554,021	19 79
1904.....	4,410	534,874	121 28	31,201	678,628	21 75
1905.....	3,767	472,859	125 53	46,902	1,013,500	21 61
1906.....	3,841	635,345	165 41	56,920	1,401,083	24 61
1907.....	4,327	830,632	191 97	57,803	1,654,135	28 62
1908.....	3,345½	669,232	200 04	63,202	1,886,123	29 84

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

ASBESTOS.—TABLE 3.
Annual Production since 1880.

Calendar Year.	ASBESTOS.			ASBESTIC.		
	Short Tons.	Value.	Per ton.	Short Tons.	Value.	Per ton.
		\$	\$ cts.		\$	\$ cts.
1880 (a).....	380	24,700	65 00			
1881 (a).....	540	35,100	65 00			
1882 (a).....	810	52,050	65 00			
1883 (a).....	965	68,750	71 09			
1884 (a).....	1,141	75,097	65 82			
1885 (a).....	2,440	142,441	58 38			
1886 (a).....	3,458	206,251	59 64			
1887.....	4,619	226,976	48 92			
1888.....	4,404	255,007	57 90			
1889.....	6,113	424,554	69 78			
1890.....	9,860	1,260,240	127 81			
1891.....	9,279	990,878	107 76			
1892.....	6,082	390,462	64 20			
1893.....	6,331	310,156	86 81			
1894.....	7,630	420,825	55 15			
1895.....	8,756	368,175	42 05			
1896.....	10,892	423,066	38 84	1,358	6,790	5 00
1897.....	13,202	399,528	29 99	17,240	45,840	2 66
1898.....	16,124	475,131	29 47	7,661	16,066	2 10
1899.....	17,700	464,635	26 34	7,746	17,214	2 22
1900.....	21,621	729,896	33 76	7,520	18,545	2 47
1901.....	32,892	1,248,646	37 96	7,325	11,114	1 52
1902.....	30,219	1,126,688	37 28	10,197	21,631	2 20
1903.....	31,129	915,888	29 42	10,548	13,869	1 31
1904.....	35,611	1,213,502	34 08	12,854	12,850	1 00
1905.....	50,669	1,486,359	29 33	17,594	16,900	0 96
1906.....	60,761	2,036,428	33 52	21,424	23,715	1 11
1907.....	62,130	2,484,767	39 99	28,296	20,275	0 72
1908.....	66,548	2,555,361	38 40	24,225	17,974	0 74

(a) Figures of export taken as production.

EXPORTS AND IMPORTS

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

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

Countries.	Tons.	Value.	Countries.	Tons.	Value.
		\$			\$
Great Britain.....	5,347	237,152	Italy.....	814	21,378
Belgium.....	3,372	86,871	Japan.....	97	2,177
France.....	2,332	50,612	United States.....	46,346	1,322,890
Germany.....	225	8,195			
			Total.....		1,654,575

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.

Calendar Year.	TO GREAT BRITAIN.		TO UNITED STATES.		TO GERMANY.		TO OTHER COUNTRIES.		TOTAL EXPORTS.		Average per ton.
	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	Tons.	Value.	
		\$		\$		\$		\$		\$	\$ cts.
1903..	2,743	40,120	24,262	714,781	1,429	25,159	3,356	110,982	31,780	801,033	28 04
1901..	6,602	210,175	25,957	762,300	2,403	94,141	2,250	94,271	37,272	901,837	31 15
1905..	9,731	305,056	29,690	811,080	2,969	100,061	4,635	169,918	47,031	1,361,113	29 47
1906..	9,435	318,313	39,767	1,058,513	3,654	82,117	6,998	230,314	59,854	1,669,257	28 22
1907..	8,432	200,909	44,861	1,312,582	225	8,195	6,235	147,613	59,753	1,669,299	29 41
1908..	5,221	288,290	50,503	1,314,337	341	9,470	5,145	230,666	61,210	1,842,763	30 11

ASBESTOS.—TABLE 5.

Annual Exports, Calendar Years 1892-1908.

Calendar Year.	Tons.	Value.	Value per ton.	Calendar Year.	Tons.	Value.	Value per ton.
		\$	\$ cts.			\$	\$ cts.
1892.....	5,380	373,103	69 3c	1901.....	32,269	1,069,918	33 16
1893.....	5,917	338,707	57 24	1902.....	31,074	995,071	32 02
1894.....	7,987	477,837	59 82	1903.....	31,780	801,033	28 04
1895.....	7,442	421,090	56 60	1904.....	37,272	1,160,887	31 14
1896.....	11,842	567,967	47 96	1905.....	47,031	1,386,115	29 47
1897.....	15,570	473,274	30 40	1906.....	59,854	1,669,257	28 22
1898.....	15,346	494,012	32 19	1907.....	59,753	1,669,299	29 41
1909.....	17,883	473,148	26 46	1908.....	61,210	1,842,763	30 11
1900.....	16,968	693,195	39 61				

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.

ASBESTOS.—TABLE 6.

Imports Fiscal Years 1885-1908.

Fiscal Year.	Value.	Fiscal Year.	Value.	Fiscal Year.	Value.
	\$		\$		\$
1885	674	1893	19,181	1901	60,829
1886	6,831	1894	26,921	1902	52,484
1887	7,836	1895	26,004	1903	75,465
1888	8,793	1896	23,940	1904	83,827
1889	9,943	1897	19,182	1905	116,836
1890	13,250	1898	25,389	1906	137,974
1891	13,256	1899	32,607	1907 (9 months) ..	127,549
1892	4,090	1900	43,455	*1908	190,980

* Asbestos in a 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.
Canada (b).....	27,414	28,240	32,306	45,967	55,122	56,364	60,372
United States (c).....	912	805	1,343	2,820	1,538	592	849
Russia (e).....	4,507	5,624	7,502	7,366	9,201	(a) 9,356	*
Cape Colony (e).....	(g) 41	(k) 276	373	454	473	548	*
Cyprus (e).....					(g) 19	(g) 89	*

* Figures not available.

(a) Provisional.

(b) Mines Branch, Ottawa.

(c) United States, Geological Survey.

(e) Home Office, London.

(g) Exported.

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., " 415 " "
 Union 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. Pierre.