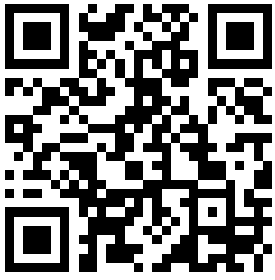
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REPORTS OF INVESTIGATIONS

BUREAU OF MINES - - OCTOBER 1920 - - DEPARTMENT OF INTERIOR

ASBESTOS IN SOUTH AFRICA

By Oliver Bowles, (Mineral Technologist, Bureau of Mines.)

Rhodesian asbestos is of high quality and is much in demand by American consumers. Production in Rhodesia was first reported in 1909. The production for this and each succeeding year is shown in the following table:

Rhodesian Asbestos Production

1909	272.5 tons
1910	332 "
1911	460 "
1912	None reported
1913	290 tons
1914	487 "
1915	2010 "
1916	6157 "
1917	9562 "
1918	8573.56 "
1919	9799.37 "

The serious curtailment in production for the years 1912 and 1913 was occasioned by transportation difficulties. In 1914 a railway was projected to Victoria and thereafter production increased greatly. Up to 1916 asbestos was obtained from the Victoria district only, but thereafter the Bulawayo district became an important producer with minor quantities from Gwelo.

In the Bulawayo district the productive area is about 2½ miles long, with the Shebanie mine at the north-west end, the Nil Desperandum at the south end, and the Birthday claims between them.

The fibrous serpentine or chrysotile of commercial quality occurs in a zone varying in width from 20 to 200 feet. The best fiber is found near the contact of serpentine with a band of talc schist which lies beneath the serpentine, and dips to the south-west, thus forming the foot-wall of the workings. The workable deposits are probably of great depth. Immediately below the talc schist is a band of quartz, which, on account of its resistance to weathering stands out as a bold outcrop that can be traced for many miles. It thus constitutes a valuable index to aid prospectors in tracing the zone of commercial fiber.

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The deposits are developed as open-pit quarries. The ore is hand-cobbed, and mills have been built at the quarries for dressing and fiberizing the asbestos. The fibers are flexible, easily separable, and of high tensile strength. They vary in length from 1/4 inch to 3 inches, and are separated into three grades according to length, quality and color. The finished product is packed in bags of about 180 pounds each, and conveyed in ox wagons to Selukwe, the nearest railway station, about 60 miles distant. Rhodesian fiber is shipped to Europe, the United States, and Australia.

Production of Rhodesian asbestos during 1920 shows remarkable advances. In February 832.3 tons were produced valued at £ 16,649; April, 1251.6 tons valued at £ 48,680; and in June it reached 1408.1 tons valued at £ 61,519. From detailed figures it appears, however, that over half the value given for June production consists of adjustments from under-declared production for the preceding year. Total production for the first 6 months of 1920 was 7168 tons valued at £ 1,011,823, or nearly equal to the entire 1918 production. It is evident therefore that Rhodesia is becoming a more and more important factor in world production. While the total tonnage is still small as compared with that of Canada, consideration must be given to the fact that, owing to the heavy expense of transportation, the low-grade fibers which constitute the great bulk of Canadian production can not be shipped from Rhodesia, and practically the entire output is of spinning grade.

Asbestos production of considerable proportions is to be noted from other provinces in South Africa. Complete figures for 1919 are not yet available, but figures for 1917 and 1918 are shown in the following table:

Asbestos Production in South Africa

	1917	1918
Union of South Africa	6220 tons	3674 tons
Transvaal	3192 "	930 "
Cape	2999 "	2738 "
Natal	28 "	5 "
TOTAL	15,439 "	9,265 "

The present condition of the industry is indicated by the following comparative table showing production for the first 6 months of 1920, as compared with the same period in 1919:

Asbestos Produced in South Africa
During first half of 1919 and 1920.

	Jan. to June 1919	Jan. to June 1920
Union of South Africa	1762 tons	3227 tons
Transvaal	637 "	2352 "
Other provinces	725 "	875 "

The remarkable increase in the Transvaal production is to be attributed to the rapid growth of the amosite asbestos industry in the Lydenburg district.

The asbestos of Natal is not spinning fiber but a variety of tremolite. It is mixed with talc and made into stove bricks, boiler lagging and steam-pipe jointing. -- U. S. Bureau of Mines, Reports of Investigations.

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