

Tests of Golden Bay Cement.

The following are selected test results showing the tensile and compressive strength of the finished article, by Sydney F. Strudwicke, works chemist, obtained at the works laboratory :

Nature of Tests according to British Standard Specification.	Packed First Week of September, 1914.	Packed in June, 1915.	Supplied to Public Works, Wellington and Blenheim, 28th September, 1915.	Packed September, 1916.
Fineness—				
Residue on 180 sieve ..	16.0 per cent.	14.0 per cent.	12.0 per cent.	12.0 per cent.
Residue on 76 sieve ..	0.8 „	0.6 „	0.4 „	0.4 „
Setting-time—				
Initial set	4 hours	4 hours	2½ hours	3 hours.
Final set	7½ „	6 „	5 „	5 „
Soundness				
Boiling-water tests ..	All perfect	All perfect	All perfect	All perfect
Expansion by 1" chatelier ..	2 millimetres	2 millimetres	1½ millimetres	1½ millimetres.
Specific gravity	3.105	3.137	3.106	3.121
Tensile strength neat cement—	Lb. per sq. in.	Lb. per sq. in.	Lb. per sq. in.	Lb. per sq. in.
After 1 day	333	304	405	384
„ 7 days	640	733	777	657
„ 28 days	656	803	804	751
„ 3 months	732	812	814	797
„ 6 months	Not made	840	839	Not made.
„ 1 year	Not made	845	..

COMPRESSIVE STRENGTH TESTS OF GOLDEN BAY CEMENT BY NEW SOUTH WALES PUBLIC WORKS DEPARTMENT.

Sand is that used as standard by Public Works Department, New South Wales, obtained from Nepean River, and sifted through a sieve of 400 meshes and retained on a sieve of 900 meshes per square inch.

Nature of Tests.	Standard required.	Results N.S.W. Public Works Department.
Compressive strength (cubes 50 sq. cm. ; face about 2.75 in. ; cement 1 part, standard sand 3 parts)	Lb. per sq. in.	Lb. per sq. in.
After 1 day in air and 27 days in cold water	2,250	4,170
After 1 day in air, 6 days in cold water, and a further 21 days in air	3,570	4,840

General.

The Golden Bay Cement Company (Limited) has a nominal capital of £60,000 in 60,000 shares of £1 each, of which 2,400 fully paid up were issued, and 57,600 contributing shares now fully called up, in addition to which the company has issued £25,000 in debentures. The estimated value of the quarries in the balance-sheet is £5,791, and of the works £78,938. During the year ended 30th June, 1916, £5,744 was distributed in dividends. The output stage was arrived at during September, 1911.

The output of Portland cement for 1916 was about 22,000 tons ; the maximum capacity of the plant is about 30,000 tons. The manufactory is worked full time—*i.e.*, three shifts per day for seven days per week. The quarries are worked one shift per day during six days per week. Ninety men on the average are employed at the quarries and works. The managing engineer at the works is Mr. J. A. J. McLaren (first-class certificate under the Mining Act), and the works chemist Mr. Sydney F. Strudwicke, to both of whom I am greatly indebted for much of the information contained in this report.

VII. STATE AID TO MINING.

(1.) SUBSIDIZED PROSPECTING.

During the year ended 31st March, 1918, nine approved prospecting parties were granted subsidies amounting to £1,933 5s., of which £882 8s. 8d. was expended during that period. In addition to this, £518 8s. 8d. granted during previous years was expended by fifteen parties during the past financial year.

The following statement shows the total expenditure during the year ended 31st March, 1918:—

	£	s.	d.
Tauranga County	125	0	0
Thames County	60	0	0
Ohinemuri County	25	0	0
Pelorus Road District	15	0	0
Wairau Road District	37	10	0
Inangahua County	53	11	8
Buller County	70	0	0
Westland County	686	8	6
Prospecting associations, &c.	328	7	2
Total	£1,400	17	4