

TABLE NO. 2.—COMPARISON OF IMPERIAL STANDARD STEEL TAPE NO. 4 (NEW PLYMOUTH) WITH THE HEAD OFFICE, WELLINGTON, IMPERIAL STANDARD STEEL TAPE NO. 1.

Comparator laid down with the Imperial Standard Tape No. 1, using its Balance No. 2. Balance No. 2 also used at the comparisons of Tape No. 4.—2nd July, 1910.

No. of Test.	Observed Difference from Comparator.	True Value of Comparator.	Value of Tape at each Test from Columns (2) and (3).	Differences of Tape at each Test, from Imperial Standard 100 links.	Differences in Column (5) given in Degrees Fahr.	Mean Temperatures at Tests. Degrees Fahr.	Temperature at which Tape is Imperial Standard. Sums of (6) and (7).	Temperature at which No. 4 New Plymouth Standard Tape is Imperial Standard by the Standards Branch of Board of Trade.
(1.)	(2.)	(3.)	(4.)	(5.)	(6.)	(7.)	(8.)	(9.)
	Links.	Links.	Links.	Links.	Deg.	Deg.	Deg.	Deg.
1	+ -0003	99-99438	99-99468	- -00532	8-512	53-12	61-632	61-798
2	+ -0003	99-99438	99-99468	- -00532	8-512	53-10	61-612	
3	+ -0004	99-99438	99-99478	- -00522	8-352	53-18	61-532	
4	+ -0004	99-99438	99-99478	- -00522	8-352	53-31	61-662	
5	+ -0004	99-99438	99-99478	- -00522	8-352	53-39	61-742	
6	+ -0006	99-99438	99-99498	- -00502	8-032	53-58	61-612	
7	+ -00065	99-99438	99-99503	- -00497	7-952	53-60	61-552	
8	+ -0006	99-99438	99-99498	- -00502	8-032	53-76	61-792	
9	+ -0007	99-99438	99-99508	- -00492	7-872	53-80	61-672	
10	+ -0006	99-99438	99-99498	- -00502	8-032	53-82	61-852	
11	+ -0007	99-99438	99-99508	- -00492	7-872	53-84	61-712	
12	+ -0008	99-99438	99-99518	- -00482	7-712	53-88	61-592	
13	+ -0008	99-99438	99-99518	- -00482	7-712	53-85	61-562	
14	+ -0007	99-99438	99-99508	- -00492	7-872	53-80	61-672	
15	+ -0005	99-99438	99-99488	- -00512	8-192	53-78	61-972	
16	+ -0004	99-99438	99-99478	- -00522	8-352	53-74	62-092	
17	+ -00035	99-99438	99-99473	- -00527	8-432	53-67	62-102	
18	+ -0004	99-99438	99-99478	- -00522	8-352	53-64	61-992	
19	+ -00025	99-99438	99-99463	- -00537	8-592	53-58	62-172	
20	+ -0003	99-99438	99-99468	- -00532	8-512	53-30	61-812	
						20	1235-340	
Mean temperature at which No. 4 tape is Imperial standard							61-767	61-798 61-767
Difference between present test and test by Board of Trade							= 0-031

Twenty determinations of the comparator were made, involving 120 readings of the thermometer. Ten of these determinations were made before the Imperial standard tape No. 4 was tested, and ten after the test was completed.

At the twenty separate tests of the Imperial tape No. 4 scheduled, 120 readings of thermometers were also taken, and when working out the means in both cases double values were given to the certificated thermometers.

The standard reference tape for all measurements of the Eltham-Okaiawa base is the Imperial standard steel tape No. 4 deposited in the District Survey Office, New Plymouth, with its certificated balance No. 4. This tape and balance were tested by the Standards Branch of the Board of Trade, London, the tape being certified to as being 0-001 in. longer than Imperial standard at 62° (see page 23, Survey Report for the year 1909-10), or Imperial standard at 61-798° Fahr.

NOTE.—The whole of the work in connection with the above results was carried out under practically perfect conditions of weather, the day being densely cloudy and free from wind, drizzling rain falling at intervals. Comparator was laid down in shelter-tent. Six thermometers in all were used, four being certificated thermometers of the Department, Nos. 263, 264, 265, and 266, the two others being in accord with these, all being distributed along the length of the tape, hanging vertical, and with their bulbs touching same. The certificated thermometers were out of their copper tubes. Observers: R. T. Goulding at the rear end, J. Langmuir reading scale.

APPENDIX IV.

REPORT OF THE SURVEYORS BOARD.

THE Board, acting in conjunction with the six Australian Surveyors Boards, conducted examinations of candidates for surveyors' licenses in September, 1910, and March, 1911. At the September examination twenty-one candidates sat, and of these Mr. Geoffrey St. Vincent Keddell, Lands and Survey Department, Wellington, passed the examination; while Mr. Richard Samuel Thompson, Dunedin, Mr. William Moody Gray, Lands and Survey Department, Christchurch, and Mr. Robert Thomson Goulding, Auckland, who had previously passed in some of the subjects, completed their examinations.

At the March examination there were eighteen candidates, of whom the following completed their examinations: Mr. Hugh Montgomery Thompson, Lands and Survey Department, Hokitika; Mr. William Prentice Black, Dunedin; Mr. John Patrick Larkin, Te Kuiti; Mr. Robert Mitchell McIver,