

TABLE 7.—TESTS OF STONE COMPLETED DURING THE YEAR ENDED 31ST MARCH, 1941.

*Abrasion Tests by the Los Angeles Machine.*

(Tests carried out between 1st April and 30th June, 1940, were recorded in the last annual report and are therefore omitted).

Gradings of test-samples are: A,  $1\frac{1}{2}$  inches to  $\frac{1}{2}$  inch; B,  $\frac{3}{4}$  inch to  $\frac{3}{8}$  inch.

The Board's Standard Specifications require that the abrasion loss shall not exceed the following figures: Base-course metal, 65 per cent.; top-course, 50 per cent.; sealing-chips, 20 per cent.

| Locality.                                                            | Grading. | Percentage of Loss. | Geological Classification.                |
|----------------------------------------------------------------------|----------|---------------------|-------------------------------------------|
| Port Mapua, Nelson .. .. .                                           | B        | 50·80               | Marble.                                   |
| Patutahi Quarry, Cook County .. .. .                                 | A        | 28·38               | Limestone.                                |
| Patutahi Quarry, Cook County .. .. .                                 | B        | 28·88               | Limestone.                                |
| Motuhora Quarry, Cook County .. .. .                                 | B        | 26·68               | Greywacke, shaly.                         |
| Brynderwyn, Whangarei District .. .. .                               | B        | 13·78               | Greywacke.                                |
| Taipa, Whangarei District .. .. .                                    | B        | 29·00               | Hornblende andesite.                      |
| Larmer's Road, Whangarei District .. .. .                            | B        | 26·18               | Greywacke.                                |
| Green Hill, Whangarei District .. .. .                               | B        | 24·20               | Augite diorite.                           |
| Bald Rock, Whangarei District .. .. .                                | B        | 25·22               | Trachyte.                                 |
| Te Paki, Whangarei District .. .. .                                  | A        | 24·72               | Greywacke.                                |
| Te Kao, Whangarei District .. .. .                                   | A        | 29·04               | Greywacke, slaty.                         |
| Waipatu River, Gisborne .. .. .                                      | B        | 18·46               | Greywacke.                                |
| White's Bay, Blenheim .. .. .                                        | B        | 11·88               | Quartzite.                                |
| Fox's Island, Renwicktown .. .. .                                    | B        | 15·36               | Quartzite and Greywacke.                  |
| Wangamoa River, Nelson .. .. .                                       | B        | 16·18               | Greywacke.                                |
| Matthew's Quarry, Papamoa .. .. .                                    | B        | 21·52               | Pyroxene andesite.                        |
| Duncan's Quarry, Papamoa .. .. .                                     | A        | 20·30               | Pyroxene andesite.                        |
| P.W.D. Quarry, Athenree .. .. .                                      | A        | 38·90               | Hornblende andesite.                      |
| Tauranga County Quarry, Athenree .. .. .                             | B        | 19·78               | Pyroxene andesite.                        |
| Wangamoa River, Nelson .. .. .                                       | A        | 13·56               | Greywacke and andesite.                   |
| Wangamoa River, Nelson .. .. .                                       | B        | 13·70               | Greywacke and andesite.                   |
| Motucka Borough Pit, Hursthouse Street .. .. .                       | B        | 18·88               | Greywacke, andesite, and sandstone.       |
| Waipara County Quarry .. .. .                                        | A        | 13·54               | Greywacke.                                |
| Cobden Beach .. .. .                                                 | A        | 15·70               | Greywacke and some sandstone.             |
| Cobden Beach .. .. .                                                 | B        | 15·72               | Greywacke and some sandstone.             |
| Nelson Creek, Grey County .. .. .                                    | A        | 21·64               | Greywacke and sandstone.                  |
| 17-Valley Stream, Blenheim .. .. .                                   | A        | 26·94               | Greywacke and sandstone.                  |
| Hunua Gorge, Papakura .. .. .                                        | A        | 10·58               | Greywacke.                                |
| Hunua Gorge, Papakura .. .. .                                        | B        | 10·02               | Greywacke.                                |
| Kakariki, Rangitikei River .. .. .                                   | B        | 16·12               | Greywacke.                                |
| Totara Flat .. .. .                                                  | A        | 23·80               | Greywacke, quartz, &c.                    |
| North Beach, Greymouth .. .. .                                       | B        | 15·56               | Greywacke, quartz, &c.                    |
| P.W.D. Quarry, Western Springs, Auckland .. .. .                     | A        | 23·94               | Basalt-scoria.                            |
| P.W.D. Quarry, Western Springs, Auckland .. .. .                     | B        | 23·62               | Basalt-scoria.                            |
| Waitakere Scenic Drive, Auckland .. .. .                             | A        | 37·26               | Melaphyre.                                |
| Waitakere Scenic Drive, Auckland .. .. .                             | B        | 37·00               | Melaphyre.                                |
| Ferndale Road Quarry, Mount Wellington .. .. .                       | B        | 22·52               | Basalt, soft.                             |
| Smeed's Quarry, Tuakau .. .. .                                       | A        | 11·88               | Basalt, nepheline.                        |
| Smeed's Quarry, Tuakau .. .. .                                       | B        | 10·86               | Basalt, nepheline.                        |
| Stevenson's Quarry, Runciman .. .. .                                 | A        | 37·02               | Greywacke, fine grain, partly decomposed. |
| Gulland's Quarry, Mangatawhiri, Pokeno .. .. .                       | A        | 25·90               | Greywacke.                                |
| Smale's Quarry, Takapuna .. .. .                                     | A        | 24·14               | Basalt, soft.                             |
| Winstone's Quarry, Mount Wellington .. .. .                          | B        | 28·14               | Basalt, scoriaceous.                      |
| Omahu Shingle Co., Napier .. .. .                                    | B        | 16·32               | Chiefly greywacke.                        |
| Birkenhead Borough Quarry, Takapuna .. .. .                          | B        | 14·54               | Basalt.                                   |
| Wellington Pipe Co., Hutt River .. .. .                              | B        | 13·06               | Greywacke.                                |
| Palmer's Quarry, Dunedin .. .. .                                     | B        | 21·44               | Basalt.                                   |
| Neuchatel Co., Sockburn .. .. .                                      | B        | 14·82               | Greywacke.                                |
| Eltham Borough Council .. .. .                                       | B        | 40·96               | Andesite.                                 |
| Waioeka Quarry, 7m., Tauranga District .. .. .                       | A        | 19·22               | Andesite.                                 |
| Nukuhou Quarry, 7m., Tauranga District .. .. .                       | A        | 34·46               | Andesite and sandstone.                   |
| Tirohia Quarry, Paeroa .. .. .                                       | A        | 17·50               | Andesite.                                 |
| Pitangui, Wanganui River .. .. .                                     | B        | 22·14               | Largely andesite.                         |
| Kapuni River, Hawera County .. .. .                                  | A        | 39·64               | Basalt-scoria.                            |
| Hauraki Plains County Council: Orongo-Netherton main highway .. .. . | A        | 19·84               | Hornblende andesite.                      |

Other tests were made by sieve analysis, and for tension, lineal shrinkage, and soil constants of surface- and sub-grade materials.