Owing to the excessive cost of repairs and upkeep, the dredger "Erskine" and the steam-hoppers "Heathcote" and "Sumner" were laid up at the end of September, 1922. Prior to this date the former had lifted approximately 7,386 cubic yards of material from the berthing-area.

The quarry was reopened on the 1st October, 1922, to obtain stone to strengthen the last section of the Western Breakwater, which was showing signs of weakness; 7,000 tons of stone was tipped at the Western and 500 tons at the Eastern Breakwater, and these are now in first-class order. Quarrying was discontinued on the 31st March, 1923.

During the year 572,342 tons of coal were shipped, as against 480,873 tons for the previous year —an increase of 91,469 tons.

During the year the Westport Harbour Board's Superannuation Fund was transferred to the Public Service Superannuation Fund, as provided by section 6 of the Westport Harbour Act, 1920.

The Consultative Committee appointed in June, 1922, met during the year and rendered valuable assistance and advice.

The total staff employed on the 1st April, 1922, was 71, as against 41 on the 1st April, 1923—a reduction of 30.

All buildings, tools, plants, &c., under the jurisdiction of the Department have been maintained in good order and repair.

Shingle and Sand Beaches and Foreshores.—The question of effective control of these areas has been given careful consideration during the year, and steps are being taken to place effective supervision over the removal of material from, and the construction of wharves and other structures on, these areas.

A good deal of ignorance in respect to the provisions of the Harbours Act both concerning the removal of sand, shells, gravel, &c., and the erection of structures on foreshores has manifested itself, and a policy of appointing Honorary Inspectors of Beaches is being put into operation.

In view of the increasing demand for sand and gravel as the result of lessening of timber-supplies, it is intended to strictly enforce the provisions of the Act in regard to any unauthorized cases of removal of materials from foreshores that may come to light.

Government Steamers.—The s.s "Tutanekai" has efficiently carried out the work of tendering the coastal lighthouses and departmental harbours during the year, and has visited the southern islands in search of castaways, and to replenish the provision-depots there. The average daily cost per head of provisioning the s.s. "Tutanekai" during the year was 3s. 10d.

The training-ship "Amokura," which was of no further use to the Department, has been sold, and it is also proposed to sell the s.s. "Hinemoa," which is now out of commission.

Inspection of Machinery and Examination of Land Engineers, Engine-drivers, etc.

Considerable want of knowledge on the part of many owners of machinery and boilers concerning the provisions of the Inspection of Machinery Act, 1908, is apparent.

Notifications of change of ownership are not sent to Inspectors as they should be, and certificates are not lifted promptly.

The Department has no special wish to prosecute owners, but is occasionally forced to do so to impress on them their obligations under the Act.

Boilers.—The number inspected during the year was 8,158, as compared with 8,188 during the previous year. The total number of defects discovered was 1,366, of which 366 were considered dangerous.

The inspection of boilers has been kept up to date. Several boilers of the multitubular type have been found bulged at the bottom of the shell plating. Such defects are generally caused by the overheating of the plates, due to an accumulation of a deposit of scale or other sediment. Feed-water often contains solid matter in solution or suspension. In the process of evaporation the solid matter is deposited on the heating-surfaces. These deposits have a low conductivity, the heat is not conducted readily to the water, the plate becomes overheated and weakened and is distorted in consequence.

There are several methods of preventing the accumulation of scale: (1) By using a pure water-supply; (2) by systematic cleaning of the boiler and removal of deposits, or by blowing-off regularly to carry away the deposits; (3) by treating the feed-water with a suitable solvent either before or after it enters the boiler.

Care should be exercised in choosing a boiler-composition. It is desirable that an analysis of the feed-water should first be made. The composition should only be used under expert supervision. Muddy deposits are often removed by blowing-down. The blow-down will remove the mud in the vicinity only of the blow-down pipe, and therefore frequent blowing-down at short intervals is necessary to ensure the removal of the whole of the deposit.

Boilers should be examined and cleaned at definite intervals, even though solvents or the blow-down are being used. The length of period between cleanings cannot be stated as it depends upon a number of circumstances the principal of which is the quality of the feed-water. Frequent examinations should be made until a proper period of thorough cleaning has been ascertained. When a boiler has been lying idle it might be considered that the period between cleanings should be extended, but in many cases a boiler will deposit more solid matter when standing filled or under banked fires than when under steam-pressure.

New Boilers inspected.—The number of new boilers inspected during the year totals 274. The number of designs examined exceeds this number. Many inquiries are made, especially from abroad, for rulings on design or pressure of boilers which are never submitted for inspection. New rules for land-boilers are urgently needed. The present rules have been in use for many years, considerably over twenty years at least, and are therefore quite out of date. The rules for marine boilers are quite up to date. The difference between the rules for marine and land boilers is so marked at present as to be confusing, especially to junior Inspectors. Whilst the rules for land-boilers cannot be made