

## DEFENCE WORKS

The usual maintenance and repairs have been carried out at camps and establishments belonging to the Armed Services and some success has been achieved in overtaking deferred maintenance.

Some investigations and surveys such as for additional housing at Waiouru Military Camp have been made, but very little construction work has been carried out.

At Devonport Naval Base alterations have been made to the bulk fuel installation to enable the British Petroleum Co. to store commercial fuel and Diesel oil. This entailed a 6 in. main the full length of the Calliope Jetty.

Valve assemblies for Admiralty furnace fuel have been placed underground and a new 12 in. black-oil main has been laid to connect with bunkering-points on the jetty. Tanker-discharge points have been provided on the Calliope Jetty for both black oil and Diesel oil.

The installation of modern fire protection equipment throughout the Base is proceeding, but the work has been retarded by difficulty in obtaining materials and equipment. The installation of sprinklers in the north yard is about 75 per cent. complete, and wiring is being installed in the south yard for the automatic-alarm system.

A salt-water tank has been erected in the north yard, but the pump has not yet been delivered. At H.M.N.Z.S. "Tamaki" new 6 in. salt-water mains have been laid throughout and a 50,000-gallon salt-water reservoir is almost completed.

At bulk fuel installations throughout the country the demolishing of splinter-proof protection erected around bulk fuel tanks as a defence measure during the war is approaching completion. Demolition at the 138 tanks concerned is completed and painting on the final 6 tanks is well in hand. This work is being undertaken by the oil companies under departmental supervision and with funds provided by the Government.

## PLANT AND MECHANICAL EQUIPMENT

During the year the activities of the Mechanical Engineers' Branch have been well maintained despite staff and workshop personnel shortages. The mechanical plant has been considerably increased during the year, and additional new units are continually coming to hand in furtherance of the replacement programme.

During the year the whole of the Department's construction plant was employed, principally on hydro-electric construction works, highways, roads and bridges maintenance and construction, and opencast coal-mining. Work was also undertaken for State housing settlements, land-clearing and water-supply schemes.

The maintenance of aerodromes and buildings both in New Zealand and overseas was also carried on.

Replacement of worn-out plant has been made in the case of some power graders, diesel compressors, diesel excavators, and crawler tractors, whilst new bitumen road plant has been secured for highways work, as well as cableways, diesel dump wagons, and batching plants for hydro-electric projects.

A very large number of machines of all types has been reconditioned in the Department's workshops and put into service again this year. There are approximately 9,500 items of plant to be maintained, and in view of the widespread shortages of spare parts this has proved a difficult task.

The Mechanical Design Office has been fully occupied in designing equipment such as tunnelling plant, gravel washing, screening, and crushing plants, material-handling equipment, including haulage and hoisting plant and general equipment for hydro-electric construction works. Design has also been carried out for other Departments.

The purchase of plant and equipment for other Departments has been arranged and technical assistance and advice has also been supplied to other Departments and local bodies. Officers of the Department have visited island territories and dependencies to advise on and erect generating plants and general mechanical equipment during the year.