

two electric cranes installed, and one out-of-date hand-crane. Owing to the lay-out of the shop and its inadequacy, the work undertaken must necessarily be costly. All new boilers required by the Department in the Dominion are manufactured in this shop. The blacksmiths' shop did not seem to be large enough to deal with the amount of work passing through it. In the carriage-shop the building of new carriages and wagons, as also repairs to existing stock, is undertaken. This shop is far too small, and the machinery is out-of-date and inadequate to carry on work cheaply.

The building described as a paint-shop is used for painting carriages, the overhaul of Westinghouse brakes on carriages and wagons, and the manufacture of all points and crossings required by the railways. The shop is not sufficiently large to deal with the whole of the work, and it is considered that a separate shop should be provided for the manufacture of points and crossings. The stores maintained in the paint-shop have been built up from surplus of previous orders, but it was explained by the Chief Mechanical Engineer that a scheme was under consideration for having a storekeeper—on the staff of the Stores Department—attached to each workshop, which would do away with the necessity of foremen holding stocks on hand. In the tarpaulin-shop are manufactured all the tarpaulins used by the railways.

Generally speaking, the workshops had a neat and tidy appearance, but they did not seem to be adequate for the amount of work passing through, and the whole place needs remodelling.

New tender locomotives required by the New Zealand railways are built at Addington.

HILLSIDE WORKS.—The major portion of the machinery in the machine-shop is old-fashioned. A grinding-machine is just being installed, and is of the most modern type. It is considered that much remains to be done in the way of replacing out-of-date machinery, which would naturally expedite output and decrease costs. At the end of this shop a carriage and wagon wheel-making plant is located.

Boiler repairs are effected in the erecting-shop, a portion of which is set apart for that purpose. The work of preparing plates for use in connection with boiler repairs is, however, carried out in a part of the blacksmiths' shop. This, of course, must add to the costs, owing to the increased handling required.

The erecting-shop is very congested, and the roads—of which there are three—are situated too close together for economical working. The centre road, which should be a "run-out" road, has to be made use of for repair work. New tank locomotives are built in this shop. Tender tanks were being built in another shed which is used by the boilermaking staff. Wagon underframes are constructed in the open, as there is no accommodation elsewhere. The blacksmiths' shop called for no special comment. Open fires are used.

The trimmings for carriages and carriage-lifting is carried out in the paint-shop. In connection with the painting of new carriages, the practice is to give one coat of priming, three of colour, and one of varnish. This is understood to last from eighteen months to two years. In the carpenters' shop a number of sheep-trucks were in process of construction, and repairs to wagons were also being dealt with. There is a very limited number of machines, and mostly out-of-date.

The pattern-store called for much comment on its untidy appearance and the fact that from the stacking of patterns great difficulty must be experienced in obtaining the one required. This shop is far too small. When greater strides are made in the direction of standardization it should be possible to get rid of a certain number of the patterns now in stock. The foundry is small, but meets present requirements.

The condition of the shops indicates that a better system of getting the repairs through might be adopted. Most of the machinery is antiquated and obsolete, which no doubt causes delay in dealing with the work.

INVERCARGILL WORKS.—The erecting-shop, which has three roads, each capable of holding two tender or three tank engines, is provided with two overhead hand-operated travelling-cranes of 20-ton capacity. As also at certain of the other shops, the centre or run-out road is made use of for repair work. One half of the shop is set aside for carrying out boiler repairs. The machine-shop is equipped with