

The INSPECTOR of MACHINERY, OTAGO DISTRICT, to the ASSISTANT SECRETARY, Marine Department.

SIR,—

Office of Inspector of Machinery, Dunedin, 25th April, 1890.

I have the honour to forward to you the annual report of the inspection of boilers and machinery in the Otago District for the financial year ended the 31st March, 1890, contained in the accompanying tables.

In the summary of inspections, the number of inspections are—Boilers, 609; hydraulic lifts, 52; steam elevator, 1; water-wheel, 1: total, 663. Of that number Mr. Blackwood inspected—Boilers, portable, 147; boilers, stationary, 92; hydraulic lifts, 39; water-wheel, 1: total, 279.

In forwarding this report to you I am pleased to be able to inform you that the iron-trade has materially improved during the year owing to the great start the mining-industry has taken, both in alluvial and quartz, but principally in river-dredging, which has been doing remarkably well, and which has every appearance of being a great source of wealth for many years to come.

There is a great amount of work on hand at the present time, and more coming forward.

The timber-trade is at present in a very backward state. During the building of the Exhibition a slight impetus was given to it, and also a very considerable amount of foreign shipments going on at the same time; but the one source of demand being closed and the other having dwindled down so much, it has caused a number of mills to work single-handed and also closed up others.

The harvest down South has been almost unprecedented in quality and quantity.

The flax-industry has taken a sudden rise, but seems at present to be in rather a backward state again. I may say that at all the mills I have visited there appears to me to be a great loss through the non-utilisation of the by-products, which I am confident with a little application could be made to yield a considerable profit, but which now entirely, or nearly so, goes to waste.

The flax-dressing is also turned out very imperfectly, there being no selection of cases, but all passing through indiscriminately, which certainly produces quantity but an inferior quality.

There has been a large increase of new boilers during the year, 56 having been added to last year's number; still a considerable number remain to be inspected at the end of March.

A great deal of time during the year has been occupied with marine work.

A great deal of time is also taken up in examining tracings presented by persons getting new boilers made; and also, afterwards, visiting these boilers in course of construction at the different shops; the whole of our time and advice, at present, given gratis.

The question arises whether a small fee should not be charged as an equivalent for the time taken up in overlooking and correcting these tracings; the fee to be charged according to horsepower; thus enabling the steam-user to get the highest class and pressure accordingly. This would also be a great benefit to the Inspector, giving him greater facilities in classification.

Remarks on Tables.

Return of Defects found on the Inspection of Boilers and Fittings.—This represents about the usual amount of tear and wear and renewals.

Return of Notices given to repair Boilers.—These repairs have all been done satisfactorily and without any trouble; steam-users, as a rule, always being willing to adopt any suggestions we may make; one boiler having been condemned.

Return of Accidents to Boilers and Machinery reported.—These are only two, but one of them might have been attended with disastrous results, the man in charge having taken out the blow-off cock-plug in order to clean out the pipes, the boiler being under steam with a strong fire. Fortunately, the door of the building was immediately opposite, through which the man escaped without injury. The other accident was simply trying to get up steam without water, and was therefore unattended with any danger.

Notice to fence Dangerous Parts of Machinery.—There has been nothing of sufficient importance requiring any notice.

Notice to remove Dangerous Parts of Machinery.—There was only one notice served, which was for two circular saws, both at the one mill. The saws were cracked for a distance of 10in. and 14in. respectively from the centre. It is rarely that cracked saws are worked about the large mills; generally the small mills. As this mill has changed hands there was no difficulty in their removal.

Return of Accidents to Life and Limb.—I am sorry to have to report one accident, which took place in the rope-works in South Dunedin. The machine is known as a drawing-frame. The boy is supposed to stand at one end and watch the hemp coiling into the tub, when he removes the full tub and replaces it with an empty one.

In case of any hemp fouling, his orders are to stop the machine at once; but in this case the boy thought he could manage to clear the obstruction without stopping the machine. For this purpose he went round the side, and put his arm underneath the chain-belt, when the belt caught his arm, tearing it off at the elbow. This is an extremely dangerous machine to meddle with while in motion. I visited the works next day, but nothing more can be done than there is at the present time. Printed instructions are placed up on the walls, instructing the boys to stop their machines at once when they see anything wrong; and there are also two men who do nothing else but attend to this, the proprietors sparing nothing that would be likely to obviate any such thing happening in the future.

Return of Hydraulic Lifts inspected.—As you will see by the table, we have not been able to get the owners in all cases to put on safety-catchers, a number of them being difficult to fix efficient catchers on; there are also a number of owners who object to the expense incurred.