

1903.  
NEW ZEALAND.

# INSPECTION OF MACHINERY:

ANNUAL REPORT OF THE DEPARTMENT FOR 1902-3.

*Presented to both Houses of the General Assembly by Command of His Excellency.*

The Hon. the MINISTER of MARINE to His Excellency the GOVERNOR.

Inspection of Machinery Department,

MY LORD,—

Wellington, 31st July, 1903.

I do myself the honour to transmit herewith, for Your Excellency's information, the report of the Inspection of Machinery Department of the colony for the financial year ended the 31st March last.

I have, &c.,

His Excellency the

WM. HALL-JONES,

Right Hon. the Earl of Ranfurly,

Minister of Marine.

Governor of New Zealand.

The CHIEF INSPECTOR of MACHINERY to the Hon. the MINISTER of MARINE.

Inspection of Machinery Department,

SIR,—

Queen's Chambers, Wellington, 20th May, 1903.

I have the honour to submit herewith the annual report on the operations of the Inspection of Machinery Department for the twelve months which ended the 31st March, 1903 :—

## BOILERS.

During the financial year 4,463 steam-boilers were inspected, and all the machinery driven by these boilers was examined at the same time. This shows a slight increase on former years, but numbers do not always represent the increase of work, as much longer journeys have now to be made in the back portions of the various districts.

This branch of the Department is, with the exception of some parts of the Auckland District, practically up to date, and I can bear testimony to the zeal displayed by all the officers in the performance of their arduous and varied duties.

### *Accident to Life and Limb connected with Boilers.*

No accident occurred in New Zealand during the year whereby injury was caused to life or limb through a boiler explosion. This Department can congratulate itself on the result of another year free from accidents.

Owing to the high pressures now in use, the greatest possible care has been taken, and strict instructions are given to each Inspector to particularly satisfy himself in all cases. In some cases where brick flues are used the work is not of a very pleasant nature, but dampness in brickwork oftentimes leads to serious deterioration of the plate resting on the damp portion of the brickwork.

The only questions taken into consideration when granting a certificate for a boiler are, whether the boiler is safe for the intended working-pressure (no matter whether it is a high or a low one), and also whether the conditions under which the boiler is being worked are safe, more especially as regards the feed-water, as, if the latter is not attended to, serious defects may arise through pitting of the plates, and scale-formation on them. Defects also often occur through getting up steam too quickly from cold water, since some parts of the boiler are more readily heated than others, and unless great care is exercised, and sufficient time taken, unequal heating is bound to take place. It is equally injurious to blow off all the steam suddenly, empty the boilers, and open the dampers. The cooling influence operates much more rapidly upon the boiler itself than upon the brickwork seating. The better plan is not to blow off the steam, but to let the steam and water cool down, and then empty the boiler.

The certificates for boilers issued during the year total 4,463, being an increase of eighty-four on the number issued last year.