

ignorance, but the Commissioners will not accept this as an excuse for neglecting to take proper measures to insure that a boiler is being worked under safe conditions, and it may be useful to repeat their decision in this respect—viz., that if a person for the purpose of his business chooses to use steam appliances which, if neglected, become a source of great danger not only to himself but to others, he must, in the event of an explosion, be taken to have known that it was his duty to ascertain that they were kept in good condition, and, further, that if he was not able to ascertain that himself, it was his duty to have called in a competent person from time to time to examine the boiler, to ascertain if it was fit to be worked at the pressure required.”

This information may be of use to steam-users in this colony, and it clearly demonstrates how useful, beneficial, and safe compulsory inspection of boilers and machinery—as carried out in New Zealand by competent men—is for those employed about boilers and machinery, as well as a safeguard to residents in the vicinity in which the boilers and machinery are situate, and a protection for their property.

Defects in Boilers and Fittings.—No fewer than 431 defects were discovered in boilers and their fittings, of which eighty-seven were dangerous, many of which, if neglected, would have undoubtedly led to accident to life and injury to property.

New Boilers.—There were 345 new boilers started during the year, representing a total horse-power of 4,116. Of these, 149, with 2,138-horse power, were made in the colony, and 196, with 1,978-horse power, were imported, and include the following classes: Portable, traction, locomotive, Cornish, vertical cross-tube, vertical tubular, multitubular, Lancashire tubular, water-tube, and marine.

Lifts and Water-driven Machinery.—There were 171 hydraulic lifts, twenty lifts driven by gas, steam, and electricity, and 201 water-driven machinery examined during the year. In ten instances new ropes were ordered for lifts, and two new chains, and in twenty-five cases the chains were required to be annealed. With reference to the water-driven machinery, there were twenty-four instances in which notices were given to fence and guard the machinery.

Accidents in connection with Machinery.—I regret to have to report several accidents to life and limb of persons employed amongst machinery, a detailed account of which is given in Return No. 6, attached.

Accidents in connection with Boilers.—I regret also to have to report an accident to a man who was employed cleaning the inside of a boiler which was empty, he being fatally injured. A boiler alongside the empty one was in use and under steam. Unfortunately, the blow-off cock of the empty one had been left open, and when the blow-off cock of the full one was opened to blow off sediment in its bottom the hot water was blown into the empty one, scalding one man inside fatally. The details of this accident appear in Return No. 6, attached hereto.

Competency Certificates for Land-boiler Drivers.—During the year 154 traction- and locomotive- and twenty-one winding-engine drivers passed the competency examination, and ten traction- and locomotive- and three winding-engine drivers were granted service certificates.

Additional Inspector.—Mr. A. W. Bethune, chief engineer of the s.s. “Tutanekai,” was appointed an additional Inspector of Machinery, and commenced duty on the 16th January, 1900. He has been stationed in the Canterbury District, but will assist in the Otago and other districts when required.

Districts.—During the year I have visited all the districts and the various offices of the Inspectors of Machinery, have interviewed most of the shipowners, leading engineers, &c., and have visited works where disputes have arisen, and have generally obtained information for the better carrying-out of the various duties of this department.

Prosecutions.—It has been necessary, to enforce the Acts governing the department, to institute several prosecutions, the majority of which have been for driving engines by men who had not obtained the necessary certificate according to law, and only in one instance against the owner of a boiler for working without a certificate.

Postal and Police Authorities.—The thanks of this department are due to the postal and police authorities for the very valuable assistance they have rendered in the carrying-out of their part of the duties imposed by the statutes upon them, in many instances at great personal inconvenience.

Returns.—Appended are the returns in detail, numbered from 1 to 11: (1.) Number and class of boilers inspected, and fees payable on these; the machinery inspected, and the fees payable thereon; and the classes and numbers of engine-drivers' certificates issued, and the fees payable therefor. (2.) The different classes of work for which the boilers and machinery are used, showing the motive-power also used. (3.) Return of defects found on inspection of boilers. (4.) Return of notices given to repair boilers. (5.) Return of notices given to fence dangerous parts of machinery. (6.) Return of accidents which were not fatal. (7.) Return of accidents which were fatal. (8), (9), (10), and (11). Names of all candidates to whom certificates of service and competency as engine-drivers have been granted during the year.

I have, &c.,

ROBERT DUNCAN,
Chief Inspector of Machinery.

The Secretary, Marine Department, Wellington.

No. 1.

(a.) RETURN showing the NUMBER of LAND BOILERS and MACHINERY INSPECTED, and for which CERTIFICATES are ISSUED, for the Financial Year ended 31st March, 1900.

Boilers—

Stationary—Five-horse power and under, 907; 10-horse power and over 5, 496; over 10-horse power, 909; digesters, 192; total, 2,504.

Portable—Five-horse power and under, 149; 10-horse power and over 5, 839; over 10-horse power, 157; total, 1,145.