

56/37/94.

Locomotive Superintendent's Office, Wellington, 11th January, 1894.

The New Zealand Railway Commissioners, Wellington.

IN reply to your instruction of the 20th November, 1893, I have the honour to report as follows:—

The locomotives, rolling-stock, and plant in my charge are in good and efficient order.

Many additions and valuable improvements have been effected during the last five years at the cost of working expenses, the benefit of which is felt not only by the Locomotive Department but by the railways as a whole.

The aggregate power of the locomotives has been increased by rebuilding improved types, so that there is now much greater power available than in 1889. Out of the working expenses alone the power has been increased 81,356lb., equal to about 5 per cent., representing rather more than seventeen "F" locomotives. It has been found convenient to reduce the number of locomotives while increasing the aggregate power.

On the Hurunui-Bluff Section two powerful locomotives of a new design are under construction from working expenses, having cylinders 16in. by 20in., with 4ft. 6in. wheels. These two engines will be completed at an early date. The work of compounding two locomotives is also in hand.

Some of the improvements effected to the locomotives consist of the adoption and application of balanced slide-valves, sight feed lubricators, and general system of lubricating reservoirs, compensating levers, steam brakes, metallic packing, improved boilers to carry higher pressures, new and larger crank pins and coupling and connecting rods, improved boiler mountings and fittings.

The system of boiler inspection, and recording the condition of all boilers, has been gradually improved, until it is now thoroughly efficient and of the greatest importance to the department.

The carriage seating accommodation has been increased out of working expenses by over 7 per cent., representing about twenty-seven Class A carriages. This has been effected by rebuilding and improving, so that a much superior class of vehicle with double-bogies of improved type have replaced many of the old four- and six-wheeled stock.

The aggregate wagon capacity has been greatly increased. To effect this, many improvements have been made in general design and detail, and the standard wagons, both four-wheel and bogie, are now very complete and simple in construction. Much attention has been given to the very important work of renewing the old type of draw-gear, and no less than 1,683 vehicles have been fitted with standard continuous draw-gear during the last five years. The value of this improvement is very great; it increases the safety of trains, and prevents any undue strains and racking of the under-framing.

The brake-vans and brake power have been improved and increased by rebuilding several of the old four-wheel type into commodious and easy-running double-bogie vans, thus providing greater accommodation for luggage, &c., also increased brake-power. Five years ago the department had only six bogie brake-vans, there are now forty-two.

The effect of these various improvements to the locomotives and rolling-stock has been to reduce the failures and delays to traffic to a minimum, and the stock is more economically maintained and available for use for maximum periods.

Much attention has been given to the various workshops; many important additions and alterations both in buildings and machinery have been effected.

The department is now fitted with a very complete hydraulic rivetting plant; also first-class machinery for use in boiler construction.

The adoption of milling machinery, recommended by the late General Manager on his trip to Europe, has proved a great success. Altogether the department has, during the last five years, provided to the various workshops tools and machinery of the most recent and improved type, valued at between £7,000 and £8,000. The effect of this has been that the department has been able, within its own workshops, to build new locomotives, carriages, and wagons, and provide generally everything required in the railway; but as the whole of these improvements, &c., are carried out at the cost of working expenses, the progress can only be gradual, and there is yet something to be done; but the value of what has been effected has been distinctly felt, and will continue to make itself manifest more and more.

Much care and attention has been devoted to perfecting the regulations and instructions, so that the practice throughout the department shall be to a standard. This has resulted in many improvements and economies, and as members of the staff afford information and the results of their observation, these are made available for the whole department.

One hundred and seventy-two miles and six chains have been added to the mileage during the last five years, to supply which the following additional rolling-stock has also been provided from Capital Account, and manufactured in the railway workshops:—

Description.	Completed.	In hand.
Bogie carriages	4	...
L High sides	20	12
O Iron hopper	75	...
R Double-bogie high side	14	6
S " sheep	24	10
T " cattle	3	...
U " platform	12	...
V " freezers	20	...
F Four-wheel brake-van ...	...	2
F Double-bogie brake-van ...	...	1
U Locomotive, 16in. x 20in. cylinders, 4ft. 6in. wheels ...	...	2