

## MINUTES OF EVIDENCE.

FRIDAY, 18TH AUGUST, 1899.—(MR. JOYCE, Chairman).

ROBERT DUNCAN, Principal Engineer Surveyor, examined.

*The Chairman:* I will read the following correspondence received from the Marine Department:—

SIR,—  
 Marine Department, Wellington, 12th August, 1899.  
 In reply to your letter of the 29th ultimo forwarding a petition from persons interested in the use of oil-engines for marine purposes, I have the honour to inform you that, as the matter involves matters of a technical nature, I have asked the Chief Inspector of Machinery, Mr. Robert Duncan, to furnish a report, which I beg to forward to you herewith.

I agree with Mr. Duncan that there should not be freedom from survey, but up to a limit of 15 tons the obligation to carry a certificated engineer might be dispensed with in the case of vessels which do not carry passengers. I do not approve of separate examiners. The present Inspectors of Machinery should be capable of doing all that is required, and I believe they are so capable. In my opinion mechanical skill should be a necessary qualification. No doubt the obligation to carry a certificated engineer bears most heavily on sailing-vessels with auxiliary engines, but there is the same hardship in connection with vessels having auxiliary steam-power.

I have, &c.,

W. T. GLASGOW, Secretary.

The Chairman, Public Petitions Committee, A to L, House of Representatives, Wellington.

Mr. Duncan reports as follows:—

SIR,—  
 Office of the Chief Inspector of Machinery, 3rd August, 1899.

In answer to your query *re* this petition of Lane and others as to auxiliary-powered vessels:—

Clause 1. No doubt the shipbuilding industry has been brisk in New Zealand, but all the vessels built have not been furnished with auxiliary oil-machinery. To show you this by comparison, eighty-five new vessels have been surveyed by us in New Zealand during the last three years. Of this number thirty-two have been built in the colony for auxiliary oil-power, thirty-one for steam-power, and twenty-two steam-vessels have been built out of the colony, so that all shipbuilding has been busy. Where auxiliary schooners score is in shallow draught and up to a certain size for local requirements about Auckland, where the bays are numerous, and settlement scattered. Steamers above a certain size are built in Scotland, simply because New Zealand builders could not compete, as there is no steel or iron produced here. With a wooden vessel it is different, having a plentiful supply of the very best timber suitable for shipbuilding, more especially in the Auckland Province; but necessities of trade have caused the increase of vessels, not the auxiliary aid of an oil-engine.

Clause 2. This is not true, as instance a new vessel for Whakatane trade built at Whangaroa, which was to have been driven by oil-engines, but the owners decided in favour of steam. This vessel is owned by the Northern Steamship Company, and is fitted with twin screws.

Clause 3. Where steam had the monopoly, and where auxiliary-powered vessels started to compete in trade, no doubt there would be cutting rates; but this is also found where steam-vessels only are employed, and that not at all peculiar to the trades only where auxiliary schooners are employed. Where land and means of communication are good settlement will necessarily follow.

Clause 4. Granted, but the same applies to steam-launches.

Clause 5. I do not think they would decrease the cost, as an oil-engine is about four times more expensive than a steam-engine, and no safer.

Clause 6. It does not follow, for if trade demands the increase the matter of £1 or £2 will not stop its growth.

As to the prayer of the petition:—

Clause 1. The tonnage should be the guide, not the horse-power, and the limit should be 15 tons, but not exempt from survey, and that for pleasure or fishing they be exempt from carrying certificated officers altogether.

Clause 2. Examination alone will never make a tradesman, and I consider where vessels are employed outside restricted limits that for public safety a man should have at least three years' mechanical experience at the making and repairing of engines, not necessarily steam-engines, or at work of a similar nature.

Clause 3. That there is nothing (if an examination is to take place) that an Inspector of Machinery, who at present examines engineers, cannot undertake, and I see no reason to prevent the present Examiners conducting such examination.

Clause 4. That the *Gazette* notice of the 25th May, 1899, should be the date fixed for service certificates, and the service for twelve months prior to this be enforced, and that certificates according to the trades in which the applicants have been engaged only be granted, and that service in restricted limits should not be available for certificates for deep water.

I do not think that a separate examination is necessary, as engineers with present certificates under the Shipping and Seamen's Act are quite capable of taking charge; and I think that a special certificate for this class of vessel will not ensure more trustworthy or efficient men for this special class of power.

Finally, I would point out, with reference to the alleged benefit to the colony the advent of these oil-powered vessels are claimed to have given, that the petitioners have only brought forward one phase of the question—viz., the immediate benefit to the builders of this class of vessel, entirely overlooking the fact that during the last three years there have been built thirty-two of this class of vessel, while at the same time there have been built within the colony thirty-one steam-vessels, so that if the oil-engined vessel is to supersede the steamer, this must be done at the expense of the builders of steam-vessels and other industries, as the machinery for the latter is all manufactured in the colony, and all the coal used for such vessels is supplied from the mines of our colony. The engineers who supply this machinery give employment to blacksmiths, fitters, turners, pattern-makers, moulders, boiler-makers, coppersmiths, plumbers, and apprentices; and with regard to the latter, the importations of this oil-machinery at the expense of the manufacturers of the machinery would necessarily militate against the advancement of the young fellows of the colony at present apprenticed, and would limit the number of apprentices required in the future. To make this thoroughly clear, it must be pointed out that the whole of the oil-engines, and even their duplicate parts, are imported from America and the Old Country, and give no employment to any of the skilled workmen named. It might be said that the revenue derived on the oil should be a factor in considering the benefit to the colony, but here again there is no benefit, as the steam-vessels will use an equal amount to that used by the oil-vessels, as they must constantly use oil on steam-vessels for their engines.

ROBERT DUNCAN, Principal Engineer Surveyor.

The Secretary, Marine Department, Wellington.

1. *The Chairman.*] You say, Mr. Duncan, that a steam-vessel would use as much oil as an oil-engine vessel. Take the steamer "Wakatu," for instance. Would she use as much oil as the "Huia?"—That is perhaps a little overdrawn.