250. How many years have they been in existence for marine purposes?—About fifteen years. It was further back than that when the first engine was made; but they have been in general operation about fifteen years. Priestman started them.

251. *Mr. Lawry.*] In his report Mr. Duncan stated that the engines were mostly very costly, in consequence of having to import them from America. I would like you to make it quite clear that, if you had the proper appliances here, you could make these oil-engines to compete against America and the world?—I did so when I was with the Century Motor-power and Traction Company, and the tools we had were totally inadequate for turning out the work rapidly and well.

252. If you had the appliances in New Zealand you could compete against the world?—I have no hesitation in saying Yes.

253. *Mr. Duncan.*] About that vessel built for the Whakatane trade by the Northern Steamship Company: what power did they want?—They asked for two 35-horse-power engines with twin screws.

254. You say the biggest marine engine you built in your shop was of fifteen-horse power, and some one has told us that they are building twenty-five-horse-power engines at present. How do they manage that with the plant they have now?—The fifteen-horse-power engine built for Mr. Chamberlain would give them over eighteen-horse power by enlarging the cylinders, and with the same stroke these engines could be made to give twenty-five-horse power; but, seeing that I have nothing whatever to do with the business, I am not prepared to say how they are going to do it.

255. You say you have had seven years' experience in Collier's shop in Manchester?—Yes.

256. What class of work did they generally turn out?—They are principally toolmakers, but made engines for their own use.

257. You were for ten years a consulting engineer for gas- and oil-engines?—Yes.

258. With any special maker?—Wells Brothers, of Nottingham.

259. And you had two years' experience with the Century Motor Company, of Auckland?—Yes.

260. Have you ever been at sea?—Not as an engineer.

261. Do you not think an Examiner of Certificates should have sea-going experience?—Preferably, I should say, Yes; but there is a considerable difference in the two classes of engines.

262. There are many things that might go wrong outside the working of an engine that could be referred to by an Examiner if he had been at sea?—That would necessarily follow.

263. The propeller-shaft, heated bearings, and various parts that may go wrong, and, if a landsman were an Examiner, his experience would be very small as compared with an Examiner of sea-going experience?—I say preferably he should have sea-going experience, but it does not necessarily follow that he should have been in a big ship at sea.

264. You say you are conversant with both steam- and oil-engines, and the principles which govern both?—Yes; but I do not profess to be a steam-engine engineer. I profess to be a gas- and oil-engine engineer.

265. Both have cylinders?—Yes.

266. Both have pistons?—Yes.

267. Both have connecting-rods?—Yes.

268. Both have emission- and exhaust-valves?—Yes.

269. Both have reversing gear for driving the engine ahead and astern?—Yes.

270. Both have crank- and propeller-shafts, and both have sea-cocks and pumps?—Yes. You put all that down; but you also have a boiler, which I have not. You also have steam-cocks, which I have not. There is a boiler in the one case and not in the other.

271. Have you ever read recently of an explosion to a boiler that disabled the vessel in New Zealand?—No.

272. In my experience ranging over fifteen years, and ten years as Surveyor, I have not known of a boiler sticking up the vessel at sea.—That may be so.

273. So that a boiler is a very safe article on board a ship in good hands?—I say these boilers in New Zealand are in good hands, and are watched very closely, but the general question is not affected by that, because we know there are boiler-explosions all over the world.

274. I was only drawing the comparison to show that these things were mutual in both classes of engines?—Yes, so far as the engine itself goes, but when it comes to a question of supervision, you have a boiler which requires infinitely more attention than my engine.

275. The Board of Trade Surveyors have only to do with the safety of passengers' lives at sea, and I have never known of an accident to a marine boiler in New Zealand in the last ten years.—I do not doubt that at all.

276. Are you aware that in some vessels running in New Zealand at the present time, they have electricity fitted throughout for lighting-purposes and for driving fans?—Yes.

277. And for other purposes—cleaning boots, and so on?—Yes.

278. How is that electricity generated?—By a dynamo.

279. Who is in charge of that machinery?—The mechanical engineer.

280. Are you aware that Examiners, who are also Surveyors, have to examine and survey all this machinery?—I was not aware of it. I should like to point out that the man who is required to take charge of an electrical plant, such as that on board the "Rotoiti,"—and a very good plant, too—has totally different duties to those required in the manipulation of a dynamo for sparking an oil-engine. An amateur or boy could look after a dynamo to spark an oil-engine, but he would be totally unfit to take charge of the "Rotoiti" plant. In our case ten volts and two amperes is quite as much as is required, and any boy in a mechanic's workshop with ordinary intelligence will build you a dynamo to do that.

281. I was asked if I knew anything about electricity, and I want to point out to you and the Committee the fallacy of thinking that we are not capable of becoming Examiners of drivers for