

machinery away, and the engineer should be able to tell what was wrong. He should also be taught how to regulate the oil-taps.

58. Should he also have some knowledge of tools?—Yes, a small knowledge of them would not be out of the way.

59. It is not absolutely necessary?—No, because if any parts of the engine break they have to go to a lathe to be made, as they are mostly cast.

60. Speaking for yourself, do you think you have sufficient knowledge to be an Examiner?—Not myself. I have not had the experience of my brother. He has a thorough knowledge of the matter. I have no hesitation in saying that he could pass the candidates, and I also know two others in Auckland that could pass them.

61. *Mr. Lawry.*] Do you know that the owner of the auxiliary boat at Wanganui could not start the engine?—Yes.

62. Have you heard why?—I do not know why, but I have an idea.

63. Were you asked to go and see if you could start the engine?—I received a telegram from Mr. Houston asking me to come down that way.

64. And were you unable to do so?—Yes. I do not say I could go and take an engine to pieces the same as my brothers, but I will guarantee that I could bring one of my brothers down who could take it all to pieces and put everything together again.

65. And your brother is not a marine engineer?—No.

66. Did you ever know of a fire on board one of these oil-engine vessels?—Yes.

67. Do you know what caused the fire?—It was not proved what the cause of the fire was on the "Medora," but on the "Aotea" it was caused through some cotton-waste.

68. Was there an explosion?—No.

69. Did the fire come in contact with the oil-tank?—Yes; the oil-tank on the "Medora." My brother was running her at the time, but the oil-tank was not the scene of the fire. The fire started at the back of the oil-tank, and when the fire was put out the solder ran off the tank. There were about twenty or thirty gallons of benzine in the tank at the time.

70. That would strengthen your opinion that there is no danger of combustion, even under a very hot fire?—The running of the solder proves that it must have been very hot. The danger in benzine or naphtha is in opening the tanks.

71. Do you think it is necessary for what we call a driver to serve three years in a workshop before being certificated to drive an oil-engine?—No. Any young chap could learn how to do it in three days if he had a head at all.

72. *The Chairman.*] You say you are not competent to be an Examiner?—I am speaking from experience. In one or two days, my sailors, after seeing the engine worked, can go and work it themselves.

73. *Mr. Lawry.*] Do you think there is any more difficulty in driving an oil-engine at sea than a gas-engine on shore?—No, they are about the same.

74. So far as you are concerned you would have no objection to men applying for the position of driver being subjected to the most rigid examination with regard to the oil-engine?—No.

75. And you do not think it would take a man three years to qualify himself to pass such an examination?—No. I have thought this matter out thoroughly, because we have been in charge of these engines so long.

76. You think the testimony you are giving here would be corroborated entirely by your brother, who has had greater experience than yourself?—Yes.

77. Are you satisfied that the use of these engines as an auxiliary power to sailing-vessels has been greatly to the interests of the settlers?—Yes, of great benefit.

78. *Mr. Duncan.*] You are aware that permits have been issued to men who have been running these engines for a year?—Yes.

79. You said in your evidence that your engine had been working on an average one hour per day?—Yes.

80. Taking the 365 days at one hour per day, that is equal to 16 days?—Yes.

81. Do you think it is honest that a man should have a permit for running an engine sixteen days?—As far as the oil-engine is concerned, yes.

82. Take an engine with 100-horse power, running between here and Australia, do you think a man should have a permit after having worked that engine for sixteen days during a year?—Yes, I do.

83. Do you use naphtha?—Benzine only.

84. Are you aware that evidence has been given here in connection with the "Torora's" Hercules engine that they always used naphtha for starting?—Yes, they were supposed to use naphtha. My brother did at one time. He said he had to use naphtha.

85. The builder of the vessel said in evidence that naphtha was used on the "Torora" for starting?—They used naphtha when they first took her off the stocks to go round the harbour, and they gave it up, benzine being cheaper. They certainly use benzine.

86. Do you know that a mechanic can make a pin round with a hammer, chisel, and file, equal to that of a lathe?—Yes.

87. Then, why did you say that everything had to be taken to a lathe if it broke?—I was talking about the main parts of the machinery.

88. Is not a pin the main part of the machinery if it breaks and stops the efficiency?—No, my idea is that it does not take a man long to make a pin.

89. *Mr. Crowther.*] And a pin made by a lathe is a very much better pin than that made by a hammer and a chisel?—Yes.

90. *Mr. Duncan.*] I am speaking of an emergency.—But in an emergency it does not take a man long to make a pin.