sumption of fuel, the high-pressure boiler, and additional boiler-space come in. It would require 3,800 indicated horse-power to guarantee a speed of sixteen knots.

75. If you want an eighteen-knot boat?—There is an increase again. I should say if you had a vessel of 2,000 tons, and greater speed was required, you would have to give her additional length as well as additional boiler-power. Length always gives speed.

76. You have been all your life running in steamers?—I was for sixteen or eighteen years connected with the Union Steamship Company, commanding in nearly all their vessels. I have never had any experience with an eighteen-knot vessel, but I have had experience with a sixteen-knot one—the "Mararoa." She could do sixteen knots, and the horse-power indicated was about 3,800.

77. Have you had any experience of the class of steamers that are now being run in connection with the railway systems at Home—say, from Hull to Ostend?—For a few days. But I see all the nautical and engineering papers, and I can say that they have been gradually increasing the size of their vessels at Home. Formerly they were 700 tons, and now they are 1,700 tons, and they find they get a better service with them even in the Channel service. Most of the new vessels at Home have twin-screws, excepting those with paddles. Those running from Holyhead to Ireland have paddles, but that is smooth water compared with that between Lyttelton and Wellington.

78. *Mr. Buchanan.*] In the Irish Sea?—Yes.

79. *The Chairman.*] In the German Ocean?—Yes; that is land-locked too. The steamers there have no passenger-accommodation, and there are no berths for passengers. You sit in a room like a drawing-room, and you are across in an hour or so.

80. I am speaking now of the steamers which make longer journeys, such as those from Hull to Ostend?—They supply berthing-accommodation for saloon passengers.

81. Do you know how long they take running across?—I could not say exactly. They make their running during the night. Their passages are similar to ours between Lyttelton and Wellington.

82. The boats of that service are of 1,700 and 1,800 tons?—Yes.

83. They are eighteen-knot boats?—Yes; the last boats that were built are of that speed.

84. There are five boats, practically of the same tonnage and power, which perform the service between Hull and Ostend. They are of 1,700 or 1,800 tons; would they not be equal to the journey between Wellington and Lyttelton?—I do not suppose that a matter of 300 tons would make any material difference. I spoke of 2,000 tons in my previous remarks, but I do not see why vessels of the size you speak of should not do the service.

85. Is there, in your opinion, more risk in running a steam-service between Wellington and Lyttelton than there is in running across the German Ocean?—There is no risk in running a boat on the New Zealand coast as compared with that in running boats in the seas round the British Islands. There you have fogs that you never meet with here, and you have much heavier gales. There are a great many more risks in running boats from Hull and Glasgow and other northern ports to the south than any that are to be met with here.

86. The advantage would therefore be with New Zealand coasts as compared with the weather round the coast of Great Britain?—Yes; certainly

87. *Mr. Buchanan.*] Would not the enormous amount of traffic be an additional danger at Home?—Yes; there is a very large amount of traffic, and then the elements are twice as bad in Great Britain as they are here. I have been sixteen or seventeen years in command out here, and have not been stuck up three times by fog or bad weather off the coast of New Zealand.

88. Could you furnish us with any information as to the cost of these steamers?—I can only tell you what some of the Union Company's boats cost. The "Takapuna," which was brought out as a very fast running boat, cost £67,000 at Home, and £72,000 when she arrived here. It cost £4,000 or £5,000 to bring her out.

89. What is her tonnage?—930 tons. She has 2,000 indicated horse-power.

90. If the "Takapuna" does such good work why do you think that you would require 2,000-ton boats?—The accommodation for passengers would require it. The "Takapuna" is too small a boat, and people do not care to travel in small vessels when they can get a larger one. If you had vessels like the "Manapouri" or the late "Wairarapa" they would be as good an article as you could get for the work at present, provided they had the necessary speed.

91. *Mr. Meredith.*] What is the speed of the "Mararoa?—Sixteen knots.

92. What is her horse-power?—Nominally it would be about 1,270. They measure the indicated horse-power sometimes by using the donkey-boiler. They get more speed out of the machinery in that way. The "Mararoa" supplements her speed occasionally in this way.

93. What was the cost of the "Mararoa"?—I could not say with accuracy. It would be about £120,000.

94. What is her gross tonnage?—2,198 tons.

95. I think the idea is that if two such boats were put on, and they ran regularly every day, they would secure a monopoly of the passenger traffic?—It might be so as far as the coastal passengers, but not as regards the Australian passengers. The companies issue round tickets to them, and they stick to the vessels on the round trip, and very often never miss a meal.

96. *Mr. Buchanan.*] Is it true that Dennys, who usually build for the Union Company, objected to build the "Takapuna"—objected to putting so much power into so small a vessel?—Yes; they objected and would not build her. She was built by another firm.

97. I believe it was a Barrow-in-Furness firm built her?—I believe so.

98. What were the reasons for Dennys refusing?—They would not guarantee the speed unless she was made about 20 ft. longer. She was wanted to carry out a quick service to Onehunga; there are a number of short turns and ugly corners in Manukau Harbour and a longer vessel could not do it.