

bines, and their average speed at sea will be eighteen knots an hour.

Yet another important departure: A casual glance at either of the new Empresses shows a peculiarity in their construction in the neighborhood of the stern. This part is built after the manner of a cruiser, and calls attention to the fact that, if required, they are capable of being fitted with guns. So that, in spite of political delays and the paying off of the crew of the "Rainbow" we shall still have the "nucleus of a navy," with its local habitation on the Pacific coast of Canada. The rudders are entirely underhung. The effective length of water-line is increased by this form of stern, propulsion is assisted, and there is an addition to the available deck space at the after-end.

In all, each vessel will accommodate one thousand one hundred passengers — 200 first-class, 100 Asiatic second-class, and 800 Asiatic third-class, besides a crew of 475 officers and men — a total floating population, when all the accommodation is taken, of 1,575 souls. Taking the ship from the keel upwards, there is, first, the double bottom, then the orlop, lower, main, upper and shelter decks, and above the latter is the long forecastle and bridge, the bridge deck being extended to the stern and stanchions. Higher up is the promenade deck, about 350 feet in length, which are the first-class public rooms, the officers' quarters and navigating bridge, etc.

In the construction of the ships provision has been made that either oil fuel or coal may be used. The propelling machinery will consist of four turbines of the Parsons type, embodying the most recent improvements in design and construction to

ensure the maximum economy of fuel consumption. For manoeuvring, when entering or leaving harbor, independent high-pressure steam connections are provided. The four turbines are situated in one watertight compartment, and in a separate compartment immediately aft are the two condensers of the Weir Uniflux type, together with the circulating pumps, dual type wet and dry air pumps, evaporators and distillers. In view of the service in which these vessels are to be engaged, the installation of refrigerating machinery is very large.

Just forward of midships on the shelter deck is situated the first-class reception room and cafe, measuring 44 feet by 64 feet, with large embarking gangways on either side. Through this room access is gained to all the first-class accommodation, and on the aft side is the main saloon, 74 feet long and 64 feet wide. A feature of this room is the semi-private tables for six, arranged in alcoves. Within easy reach of their cabins

on the upper deck, and leading directly to a covered promenade on the shelter deck, is a second-class entrance and saloon, which in turn leads to the second-class saloon? These rooms are fitted in a large airy deck-house, about 50 feet long



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