

wheelmen, two watchmen, one boatswain and one wireless operator; also the officers' recreation hall, lavatories and shower baths. The deckhouse above the forecastle will contain three passenger staterooms, observation room, private dining room, kitchenette and accommodation for steward and cook. Above this will be the captain's house, which will be arranged for bedroom, office, bathroom, spare room and inside stairway leading up to the pilot house.

"At the after end of the ship, the lower deck house will contain the officers' dining room, with private dining room adjoining. These rooms will have no connecting door, but they will be entered from the outside or from the steward's hall, and contrary to usual practice, there will be no doors in the dining rooms opening into bedrooms. The cook's and steward's rooms will be convenient to the galley and have bathroom adjoining. The deckhands, firemen and coal-passers, galley pantry, stores and mess rooms will all be located in this house, each living room having its own shower bath and lavatory.

"Above this accommodation will be a steel house containing quarters for the engine room staff. The chief engineer will have the entire after end of this structure, bedroom, bathroom and office, with thwartship hallway running the full width of the house. The entrance to the engine room will be from this hallway, with stairs leading down inside of the engine casing. On the starboard side, accommodation will be provided for the second engineer, and one spare room; on the port side will be located the third and fourth engineers and two oilers. All the cabins will be finished in oak or mahogany, with painted fibreboard panelling.

"Steam will be supplied by three Scotch boilers, $15\frac{1}{4}$ feet in diameter by $11\frac{1}{2}$ feet long, with a total heating surface of 9,042 square feet. Each boiler will be fitted with three furnaces, 44 inches inside diameter; the total grate surface will be 198 square feet, and the ratio of heating to grate surface is 45.6. Boilers are designed for a working pressure of 190 pounds per square inch. A forced draft installation will be fitted in connection with the boilers, and there will be a 75-inch diameter fan, driven by two 7 x 5 inches vertical engines, located in the engine room. The flue will be of the direct type, located in the smokeboxes, and operated by levers from the fire room floor.

"The propelling machinery will consist of a vertical triple expansion engine, arranged with the high pressure cylinder forward, followed by the intermediate and low pressure cylinders, respectively. The cylinder diameters will be $24\frac{1}{2}$, $41\frac{1}{2}$ and 72 inches and the pistons will have a stroke of 48 inches. The high pressure and intermediate cylinders will be fitted with piston valves, and the low pressure engine cylinder will be equipped with a double-ported slide valve. All valves will be operated by double-bar link motion, and fitted with assistant cylinders.

"The engine will be arranged with three back and three front columns fitted with ahead and astern slipper guides. The bedplate will be of the girder type, and will have six main bearings, 14 inches in diameter. The connecting rods will be of heavy fork type construction, 9 feet between centres, with the bottom ends of cast steel, lined with white metal. The crank pins will be $14\frac{3}{8}$ inches diameter by $13\frac{1}{2}$ inches long. The crosshead pins will be $6\frac{3}{4}$ inches diameter by $7\frac{3}{4}$ inches long, double. The crossheads will be solid steel forgings, fitted with adjustable slippers lined with white metal on both ahead and astern faces. The usual type of horseshoe thrust bearing will be used, with nine collars, water cooled inside, and running in an oil bath.

"The stern tube will be of heavy cast iron design, fitted with brass bush, lined with lignum vitae, in two lengths, to permit of easy withdrawal and renewal of the wood liners. The propeller shaft will be $15\frac{1}{8}$ inches in