

# Report of Survey for Repairs, &c., of Engines and Boilers.

No. 75474

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of writing Report 19 When handed in at Local Office 29.4.1922 Port of NEWCASTLE-ON-TYNE  
 Survey held at Newcastle-on-Tyne Date, First Survey 21.4.1921 Last Survey 26.4.1922  
 on the Machinery of the Wood, Iron or Steel QUAD. SC. BERENGARIA (No. of Vessel 78)

Gross 52022 Vessel built at Hamburg By whom Vulcan-Werke When 1912  
 Net 23229 Engines made at do By whom do When 1912  
 Mastered 62000 Boilers, when made (Main) 1912 (Donkey) —  
 Main Boilers 46WT Owners Cunard S.S. Co. Ltd. Port Liverpool Voyage Southampton  
 Donkey Boilers 228 If Surveyed Afloat or in Dry Dock Afloat  
 (State name of Dock.)

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).  
 Report No. Port  
 Particulars of Examination and Repairs (if any) L.M.C.

Medical Surveys, when held, must be reported in detail and verbatim in the terms of the Rules. State clearly the nature of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on the cause of which must be stated should be separated from Repairs due to other causes; and the initials of any letters respecting this case.  
 Damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined?  
 Was a damage report made by anyone else? If so, by whom?  
 The Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time?  
 " " Donkey " " "  
 If not done, state for what reasons?  
 What parts of the Boilers could not be thus thoroughly examined?  
 What special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler?  
 The Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 230 lbs.  
 The Surveyor examine the Safety Valves of Donkey Boiler? Yes To what pressure were they afterwards adjusted under steam?  
 The Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes, and of the Donkey Boiler?  
 The Surveyor examine the drain plugs of the Main Boilers? None, and of the Donkey Boiler?  
 The Surveyor examine all the mountings of the Main Boilers? Yes, and of the Donkey Boiler?  
 Screw shaft now been drawn and examined? No Is it fitted with continuous liner? Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?  
 Shaft now been changed? If so, state reasons  
 Shaft now fitted new? Has it a continuous liner? Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?  
 The distance between lignum vite or bearing metal of stern bush and top of after bearing of screw shaft?

Survey is not complete state what arrangements have been made for its completion and what remains to be done: To complete the survey for first entry.  
 Sea-connections, propellers, outside fastenings, thrust shafts and propeller shafts remain to be examined and the accumulation test of the Boilers' Safety valves made.  
 It is stated that the above requirements will be carried out at Southampton.  
 done. The H.P. and L.P. ahead and astern turbines, their rotas, casings and connections examined throughout. The two L.P. Turbines (ahead and astern) examined inside the eduction pipes. The Condensers examined under head of water & found good. The Air, feed, circulating (centrifugal) and bilge pumps opened out, overhauled and put in order, as found necessary. The Shafting except thrust and propeller shafts examined. The holding-down bolts found good. The auxiliary steam line on the Port Side been tested by hydraulic pressure to 420 lbs. The Steering Engine opened out, overhauled and examined. The auxiliary Diesel Engine on Boat Deck examined under working conditions. The vessels' lighting sets and found to be efficient.

General Observations, Opinion, and Recommendation:—The machinery of this vessel, so far as it is possible to state clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.: thus, for example, B.S. 9,11, B.2 H.S. 9,11, or L.M.C. 9,11, 140 lb., F.D., &c.)  
 seen, is now in good order, and eligible, in my opinion, to have records L.M.C.  
 date - Fitted for Oil fuel F.P. above 150°F - Water Tube Boilers to be surveyed annually.  
 in the Survey has been completed as above.

Fee (per Section 26) £ 100 Fees applied for 19  
 Damage or Repair Fee (if any) £ 100 Received by me, 19  
 Expenses (if chargeable) £ 100  
 Committee's Minute FRI. 23 JUN. 1922  
 See Minute on F.B. report.  
 TUE JUL 11 1922  
 FRI 4 AUG 1922  
 TUE 15 SEP 1922  
 TUE JAN 9 1923  
 TUE FEB 20 1923  
 TUE NOV 28 1922  
 TUE JAN 30 1923  
 Lloyd's Register Foundation  
 W512-0852 (1/2)

EEL QUAD. 50.

"BERENGARIA"

BOILERS.

44 of the Boilers were re-tubed throughout. One Boiler C in No. 1 Storehold was re-tubed. One Boiler A in No. 4 Storehold which had been recently re-tubed found to be in good order. So far as could be checked the scantlings are to plan. Steam drums of all main Boilers were fitted with three (portable) longitudinal stays in each. All the Boilers' mountings were overhauled. New tubes for the Boilers have been tested in accordance with the Rules. Completion of repairs the Boilers were tested by hydraulic pressure to 392 lbs. Safety valves were adjusted under steam.

Oil Fuel Installation on the White System has been fitted in accordance with the approved plans. The Heaters, Coils, Fitters &c were tested in accordance with the Rules. The pressure line, after fitting up, was tested by hydraulic pressure to 460 lbs. The Tank Filling and Suction lines to Heaters were tested to 150 lbs. by hydraulic pressure.

Air, sounding & filling pipes and the controls to the valves are in accordance with the approved plans and the Rules.

Heating Coils in Storage and Settling tanks were tested, after installation, by hydraulic pressure and are supported satisfactorily. Oil level in the Tanks is ascertainable by means of the Pneumometer gauges.

Additional Suctions for dealing with the Oil Bilges were fitted in all the holds. 2 in each 3 1/2"

<sup>salt</sup> water fire extinguishing line is carried through the Storeholds with connections for four portable hoses in each Storehold. Sand Boxes are fitted each Boiler.

Line of chemical fire extinguishing pipes on the Foamite System arranged for supplying all Storeholds.

Rice Amear.