No. 9.

No. 42413

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

(Received at London Office THU. 9 JUN. 1921)

Date of writing Report 7th June 1921 When handed in at Local Office 8th June 1921 Port of CARDIFF

No. in Reg. Book. 65221 Survey held at Cardiff Date, First Survey 31st May Last Survey 31st May 1921 (No. of Visits 23)

on the Machinery of the ~~Wood, Iron or~~ Steel S.S. "Manoa" Master

Tonnage { Gross 4903 / Net 2880 } 8886 / 4358

Registered Horse Power 400 XXX

No. of Main Boilers 3

No. of Donkey Boilers ✓

Steam Pressure— in Main Boilers

in Donkey Boilers ✓

Vessel built at Vegesack By whom Bremer Vulkan When 1913 (YEAR MONTH.)

Engines made at Do. By whom Do. When 1913

Boilers, when made (Main) 1913 (Donkey) ✓

Owners Canada Steamship Lines Ltd. Port Voyage Montreal

If Surveyed Afloat or in Dry Dock Junction Dry Dk (State name of Dock.)

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER. ✠ for Special Survey. Date of last Survey and of Periodical Surveys.	Years Assigned now expired.	Machinery and Boiler Surveys (including date of N.B., if any).

Last Report No. Port

Particulars of Examination and Repairs (if any) Damage & Classification

(Periodical Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case. H. 30/3/21.

In 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? Yes. Not req^d. Was a damage report made by anyone else? If so, by whom? London Sal. Assoc.

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes.

Do. " Donkey " " " ✓

If this was not done, state for what reasons? ✓

And what parts of the Boilers could not be thus thoroughly examined? ✓

Also 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? ✓

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 180 lb.

Did the Surveyor examine the Safety Valves of Donkey Boiler? ✓ To what pressure were they afterwards adjusted under steam? ✓

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes, and of the Donkey Boiler? ✓

Did the Surveyor examine the drain plugs of the Main Boilers? Yes, and of the Donkey Boiler? ✓

Did the Surveyor examine all the mountings of the Main Boilers? Yes, and of the Donkey Boiler? ✓

Has screw shaft now been drawn and examined? Yes Is it fitted with continuous liner? Yes, or two liners? ✓ or is it without liners? ✓

Has shaft now been changed? ✓ If so, state reasons ✓

Is the shaft now fitted new? ✓ Has it a continuous liner? ✓ or two liners? ✓ or is it without liners? ✓

State the distance between lignum vitæ of stern bush and top of after bearing of screw shaft? 1/16" New bush.

If the Survey is not complete state what arrangements have been made for its completion and what remains to be done? ✓

Damage thro, apparently, the tail shaft having seized in the stern tube, the vessel having to be towed into port; and Classification, See Lbs Repts No. 1834 + 1849 and R YK Rept No. 19283.

Vessel placed in dry dock, outside fastenings + propeller examined, and found in order.

Tail shaft drawn in, the metal in stern tube found loose, and badly worn; the shaft has been put in lathe and a slight skim taken off, now fitted with a continuous liner; dia of shaft 15 3/8" ~~dia~~. Stern tube drawn, bored and fitted with a brass bush, and lignum-vitae; shaft re-fitted. Length of bush 6 feet.

General Observations, Opinion, and Recommendation:— The machinery of this vessel (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.&M.S. 9,11, or ✠ L.M.C. 9,11, 140 lb., F.D., &c.)

is in a good and safe working condition; eligible, in my opinion, to have the record of L.M.C. 5.21 + T.S. 5.21 entered in the Register Book.

Survey Fee (per Section 28) £ : :

Special Damage or Repair Fee (if any) (per Section 28.) £ 50 :

Travelling Expenses (if chargeable) £ : :

Fees applied for 19

Received by me, 12/7/ 1921

J. G. Hunter. Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. JUL. 1 1921

Assigned LMC 5.21 Regist

Notified F.D. C.L.

MACHINERY CERT. WRITTEN

TUE. JAN. 24 1922 FRI. SEP. 29 1922

FRI. 30 JUN. 1922 FRI. DEC. 8 1922

FRI. 22 SEP. 1922

Insert Character of Ship and Machinery precisely as in the Register Book.

Is a Certificate required? If so, to be sent to

1/4

It is submitted that
this vessel is eligible for
THE RECORD LMC 5.21 F.D. CL.
S 5.21. „ 220 „ tb. (s) 588 N.H.
Q.4Cy 24, 34 11/16, 50 3/8 & 74 - 53 3/16
3 SB. 9 cf. GS 199. HS 8634.
subject to the main boiler furnaces being seam
before the end of
December 1921.
JWD.
16/6/21
See Cff ltr 21/6/21

N.B.—If this Report is copied by Copying Press, especial care must be taken that the copying paper is not so much damped as to spread the ink, or to cause it to show through to the other side.

☞ THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

Port of CARDIFF Continuation of Report No. 42413, dated 8th June 1921, on the

- S.S. "Manoa". II

Examination made of all cylinders, pistons, slide valves; pumps; the condenser; crank, thrust and tunnel shafting; sea cocks and valves; bilge and other suctions; distribution valves; dynamos; valve gear; Evaporator; auxiliaries and other working parts of engines.

Repairs etc now done,-

H.P. cylinder liner drawn, a new liner fitted; new piston, with Lockwood & Carlisle rings, fitted complete; piston rod skimmed up, new neck and gland bushes fitted; new metallic packing fitted. New piston ring fitted to the 1st M.P. piston. All pistons, piston valves and slide valves overhauled and adjusted.

Shafting. crank shaft lifted, new metal fitted in main bearing brasses; and H.P. bottom end; shaft re-bedded. Thrust shaft bearings re-metalled. Tunnel shafting un-coupled, the whole of the shafting re-aligned and coupled up. New worm wheel fitted to turning gear. Holding down bolts to bedplate overhauled.

Pumps etc - The feed pump ram skimmed up, new neck and gland bushes; the ram fitted with new brass bush, new neck & gland bushes. Bilge pump rams skimmed up, new neck and gland bushes. New delivery valve & seat to after feed pump. Two new cast iron bilge pump chambers fitted. Centrifugal pump overhauled, cylinder bored out & new piston fitted. New valve box & valves fitted to water end of Weir's feed pump. All auxiliaries overhauled, adjusted and tested. Condenser tested. Evaporator coils tested after annealing; Evaporator tested under steam. A new Downton Pump fitted in Eng. Room, connected up to Bilge suction. Downton (2) pumps tested.

Dynamos overhauled, the cylinder of Forward dynamo bored out, new piston fitted. Electric wiring etc overhauled and re-paired as necessary.

Windlass examd. & overhauled, new brackets for crank shaft fitted, Steering Engine examd. & overhauled.

J. B. Hunter.

Port of CARDIFF Continuation of Report No. 42,413. dated 8th June 1921. on the

S.S. "Manoa." III

- Boilers.

Examination made of the 3 main boilers over all parts, found in good condition, with the exception of the furnaces, which were all found to be more or less distorted; these have now been set up, and the boilers tested to 300 lb per □" W.P., furnaces gauged before pressure, when pressure was on, and after the pressure was off, and the furnaces were found to have altered very little. The Board of Trade Surveyors examined the boilers, and witnessed the tests, and owing to the furnaces having been distorted, they will only allow a working pressure of 180 lb. Boilers tight under both water & steam pressures.

Safety valves and mountings examd & overhauled, several of the smaller valves renewed.

Main steam pipes (steel) tested to 600 lb per □" W.P. New copper feed pipes and brass connections (Tee & cross pieces) fitted, in lieu of the steel ones; same tested.

Safety valves adjusted under steam to 180 lb per □". Engines tried under steam & found to work satisfactorily.

This survey has been carried out in conjunction with the Board of Trade Surveyors, who have put the furnaces of main boilers on a six months limit.

The particulars required for 1st Entry Report, New York, are as follows.

Dia of screw shaft. 15 3/8". ✓ Stroke of Feed Pump 15". ✓

No. & Sizes of hold Sections. 9 - 3½" dia. ✓ (2 to No. 1. 2 to No. 2. 2 to No. 3 (aft of engine room) 2 to No. 4, and 1 to after well). ✓

A Pumping plan is forwarded. ✓

J. B. Hunter.

Spare Gear. (over)

Rpt. 9a.

Port of CARDIFF Continuation of Report No. 42, 4/3 dated 8th June 1921 on the

S.S. "Manoa" IV

Spare Gear (on board).

2 Top end bolts and nuts.
2 Bottom end bolts and nuts.
2 Main bearing bolts & nuts.
1 Set coupling bolts.
1 Set of feed and bilge pump valves.
1 Set of piston springs for 3 engines.
A quantity of assorted bolts, nuts and iron of assorted iron.

1 Valve spindle (interchangeable).
2 Crosshead brasses. 1 Set of crank pin brasses.
1 Impeller for Circulating pump. 2 pairs valve spindle guide brasses. 1 Air pump rod. 1 Set of check valves.
55 boiler tubes. 30 Tube stoppers. 2 Safety valve springs.
1 Cyl. cover, 1 piston rod & 1 valve spindle for Fan engine.
1 Propeller blade. 1 Propeller boss. 1 Pro. nut.
9 Jack ring bolts. 12 Condenser tubes.
6 propeller studs and nuts: and a quantity of smaller gear.

The Boiler plan is herewith returned and Pumping Plan enclosed.

J. G. Hunter.