

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

No. 31217

Writing Report 14. 5. 33. When handed in at Local Office 19 MAY 1933 (Received at London Office 20 MAY 1933)

Survey held at Sunderland. Port of Sunderland. Date, First Survey Jan 5 Last Survey May 17 1933 (No. of Visits 29)

on the Machinery of the Wood, Iron or Steel S/S "LLANARTH"
Gross Tonnage 3053. Vessel built at Sunderland By whom Baston & Co Ld When 1929.3.
Net Tonnage 3018. Engines made at Stockton By whom Blair & Co (1926) Ld When 1929.
Boilers 460. Boilers, when made (Main) 1929. (Donkey) 1929.
Boilers 3. Owners Pictin & Co Ld.
Boilers 180. Managers Evan Thomas Redcliffe & Co. Port London. Voyage
Boilers 120. If Surveyed Afloat or in Dry Dock Both (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.E., if any)

Damage L.M.C. T.S. Alterations + 100A.1. with freeboard 11.32. T.S. 4.32 CL.
Ports of Examination and Repairs (if any) T.S. Alterations + Superheaters
Boys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on damage (the cause of which must be stated) should be separated from Repairs due to other causes; and details of any letters respecting this case.
Where the Surveyor has not made a special damage report he is required to state whether he has services for this purpose, and why they were declined? Yes. Copy attached
report made by anyone else? If so by whom? No.
personally go inside each Main Boiler separately and make a thorough examination at this time? Yes. 22.2.33.
" Donkey " " " Yes. 15.3.33.
name, state for what reasons? ✓

the Boilers could not be thus thoroughly examined? ✓
means, in the absence of internal examination, were adopted by the Surveyor? ✓
examine the Safety Valves of the Main Boiler? Yes. To what pressure were they afterwards adjusted under steam? 180 lbs/sq in.
examine the Safety Valves of Donkey Boiler? Yes. To what pressure were they afterwards adjusted under steam? 120 lbs/sq in.
examine all the manholes, doors and their fastenings of the Main Boilers? Yes. , and of the Donkey Boilers? Yes.
examine the drain plugs of the Main Boilers? Yes. , and of the Donkey Boiler? Yes.
examine all the mountings of the Main Boilers? Yes. 28.3.33. , and of the Donkey Boiler? Yes.
How been drawn and examined? Yes. Is it fitted with continuous liner? Yes. Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ✓
When changed? No. If so, state reasons ✓
fitted been previously used? ✓ Has it a continuous liner? ✓ Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ✓
between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft working fit (Bush rewooded).
not complete, state what arrangements have been made for its completion and what remains to be done complete.

Vessel placed in dry dock for examination after damage sustained by grounding off the Llanedrhonwydd Bank (R. H. H. H.) on the 3rd Jan. 1933 whilst proceeding Buenos Aires towards Hamburg & the Propeller submerged object whilst engine running astern in order to refloat the vessel. In further particulars see separate Report.

Examination made of Sea Connections & outside fastenings. P.T.O.

Observations, Opinion, and Recommendation:—
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 the action 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, &c.
Machinery of this vessel is in order & safe looking & reliable in my opinion to remain as classed fresh record L.M.C. 3.33 & notation "Tail Shaft Sec 3.33."
H.P. Cylinder diameter amend to 26"

Section 20 L.M.C. £ 13.8.0 Fees applied for 19 MAY 1933
Damage (M) 8.8.0
Repair Fee (if any) £
Alteration Section 20 10.8.10
Cases (if chargeable) £ 10.16.0 Received by me, 24.5.1933
FRI. 2 JUN 1933
J. H. Fraser
Engineer Surveyor to Lloyd's Register of Shipping.

bee's Minute + L.M.C. 3.33
CERTIFICATE WRITTEN 8.6.33
Lloyd's Register Foundation W57-0113

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

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

S.S. "LLANARTH" Com^{id}

Tail Shaft drawn when vessel was afloat, examined in lathe & found in order.

Propeller found to have one blade broken off at root. A new Propeller now fitted in lieu.
Stem bush examined & reworked on lower half.

On account of damage examination made of the following parts of machinery: Cylinders, pistons, slides, rods, spindles, Crank, thrust & intermediate shafting & bearings throughout; Condenser; air circulating, feed & bilge pumps & their valves; ballast-general service & donkey boiler feed pumps & their valves.

Damage repairs to machinery:

Feed pump rams renewed, neck & gland bushes machined to suit.

Bilge pump rams shimmed up, neck & gland bushes renewed.

Air pump head foot & bucket valves & seats & shimmed up.

H.P. (top half), M.P. (bottom half) & L.P. (top half) bottom end bearings re-metalled & refitted.

Two broken studs in stem gland renewed.
Condenser fitted out for cleaning.

In L.M.C.: In addition to the foregoing examination of machinery parts examination made of Pumping arrangement, steering engine & windlass.
Electric installation examined generally & tried under working conditions satisfactorily.

Main & Donkey Boilers examined internally & externally with mountings doors & fastenings.
Repairs: Mountings overhauled.

Alterations: A new H.P. Cylinder of Lentz type with Poppet valves fitted in lieu of existing cylinder. New cylinder made 26" diameter.
Valve gear altered on H.P. to suit poppet valve gear. Eccentric sheaves renewed & straps machined out to suit same.

See Continuation.

S.S. "LLANARTH"

Alterations Com^{id}

Condenser tube plate holes plugged as necessary for new arrangement of tubes, repacked & afterwards tested satisfactorily.

New Exhaust Steam (Direct Contact) feed heater, and surface live steam feed heater, new weir dependent feed pump (4' x 9 1/2' x 21'), Cascade feed filler tank & vacuum augmentor fitted.
All new feed piping, where fitted, tested as per Rules satisfactorily.

Superheaters:

Smoke tube type Superheater System fitted to main boiler. Certificates of test for elements & headers attached herewith.

All Superheater Steam mountings, pipes & branches (steel) tested as per Rules satisfactorily.

All main Steam pipe line (steel) renewed & tested as per Rules satisfactorily.

Superheater system tested by hydraulic pressure of 360 lbs aft. installation.

On completion of the work the machinery was tried under working conditions alongside wharf satisfactorily, boilers & superheaters examined under steam & safety valves of all boilers & superheaters adjusted to working pressure as above.

[Signature]