

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

(Received at London Office)

FEB 27 1940

Date of writing Report Jan. 29th, 1940 When handed in at Local Office 19 Port of SAN FRANCISCO

No. in Reg. Book 28805 Survey held at San Francisco Date, First Survey Dec. 27th, 1939 Last Survey Jan. 17th, 1940  
(No. of Visits Eleven)

on the Machinery of the ~~Woodfin~~ Steel T.S.S. "LURLINE"

Tonnage { Gross 18,009 Vessel built at Quincy, Mass. By whom Bethlehem S.B. Corp., Ltd. Year: Month. 1932 -12  
Net 10,304 Engines made at do. By whom do. When 1932

Nominal Horse Power 5363 NHP Boilers, when made (Main) 1932 (Donkey) -

No. of Main Boilers 12 WT Owners Matson Navigation Co. Owners' Address San Francisco Voyage -  
(If not already recorded in Appendix to Register Book.)

No. of Donkey Boilers - Managers - Port San Francisco

Steam Pressure in Main Boilers 400# If Surveyed Afloat or in Dry Dock Both Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

in Donkey Boilers - (State name of Dock.) Hunters' Point D.D. & Pier 32.

Last Report No. PortParticulars of Examination and Repairs (if any) BOILER SURVEY & PT. M. S.

(Periodical Surveys, when held, must be reported in detail and serially 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.)

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

Was a damage report made by anyone else? If so, by whom?

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

" " 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? Tested by water pressure to 600 lbs. per sq. inch.

State latest date of internal examination of each boiler 6 Forward Boilers 29-12-39 Present condition of funnel(s) Good  
6 Aft Boilers 12-1-40

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes To what pressure were they afterwards adjusted under steam? 400 lbs.

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 Boilers? -

Did the Surveyor examine the drain plugs of the Main Boilers? - and of the Donkey Boilers? -

Did the Surveyor examine all the mountings of the Main Boilers? Yes and of the Donkey Boilers? -

Has 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? -

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

Has the shaft now 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? -

State date of examination of Screw Shaft - State the distance between lignum vitae or bearing metal of stern bush and top of after bearing of screw shaft Port - 1/8" Starbd. 11/64"

Engine parts, when referred to by numbers, should be counted from forward. Is electric light and/or power fitted? Yes

If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses?

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms?

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

Vessel placed on drydock. Fastenings of propellers, stern bushes and sea connections examined.

Starboard stern bush, lower half retaining ring stud fastenings renewed.

BOILER SURVEY - Main boilers (12 W.T.) opened up, cleaned, examined throughout with mountings, superheaters, steam pipes and connections and found in satisfactory working condition. Boilers, superheaters, main steam pipes tested to 600 lbs. per sq. inch water pressure as per U. S. Steamboat Inspection Regulations, examined and found satisfactory. Safety valves adjusted under steam to 400# per sq. inch. Fuel oil burning system, connections, valves and deck controls examined under working conditions and found in order.

REPAIRS - Feed water regulating valves on all boilers removed, overhauled, examined and refitted in good order. (SEE PAGE NO. 2)

General Observations, Opinion, and Recommendation:—

(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.S.M.S. 9, 11, & L.M.C. 9, 11, or L.M.C. 140 lb., F.D., &c.)

The Machinery of this vessel is eligible in my opinion to remain as classed with fresh record in the Register Book of B.S. 1-40 and notation M. S. with date when the survey has been completed.

Survey Fee (per Section 20) \$ 200.00 Fees applied for Jan. 29, 1940

Special Damage or Repair Fee (if any) £

Travelling expenses (if chargeable) \$ 5.00 Received by me, 19

Committee's Minute

Assigned As now

B.S. 1-40

NEW YORK FEB 7 - 1940

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation

014159 - 014165 - 0032 1/2

T. S. S. "LURLINE"

BOILER SURVEY:

REPAIRS: (Continued)

One section of main steam pipe from #7 and #10 Boiler found leaking slightly at one flange. Pipe removed, examined, flange made tight and pipe tested to 800 lbs. per sq. inch water pressure and found good.

Brickwork in boiler furnaces overhauled, and part renewed.

MACHINERY SURVEY:

Sea connections opened up, overhauled, examined with connections and closed in good order.

Main Turbine - Starboard L. P. Turbine opened up, cleaned and examined, rotor, bearings, thrust, blading, casings and blading and flexible coupling. Centre binding wire on last row of forward flow, ahead blades, rebrazed on a number of blades and turbine closed in good order.

Main Circulating Water Pumps, Port and Starboard opened up, examined steam turbine throughout, impeller and casing and closed in good order.

Impeller bearing bushes renewed.

Pumps tested under working conditions.

Main Feed Pumps, (3 stage) Port and Starboard, opened up, examined steam turbines and water ends throughout and closed in good order.

Pumps tested under working conditions.

Port Feed Pump - Main bearing bushes forward and aft end renewed. Water seal rings between pump stages, built up, machined and refitted.

Main Generator, Starboard outboard (#4) opened up, examined, turbine, casing, blading bearings, reduction gears and closed in good order.

Rotor removed and dynamically balanced.

Generator examined under working conditions.

Main Steam Pipes- One section removed from #7 and #10 Boilers, examined and tested to 800 lbs. per sq. inch water pressure and found satisfactory.

Other minor repairs carried out.

S. R.: - M. S. advanced as above.

To complete M. S.:- To be examined

Main Engines

Port and Starboard H. P. Turbine. 1140

Port and Starboard I. P. Turbine 1140

Port and Starboard main thrust, intermediate shaft and bearings.

Auxiliary steam pipes over 3" bore to test and examine.

Separate pumps and connections (except main feed pumps, main and auxiliary circulating water pumps, Bilge and Ballast pump in Forward boiler room)

Main and Auxiliary condensers.

Pumping arrangements and connections.

Fuel oil burning system, pumps and equipment.

Electric Generator Turbine, Port (#1) Port Inboard (#2) and Starboard Inboard (#3)

Electric equipment to examine and test.