

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

(Received at London Office 26 JAN 1942)

Date of writing Report May 30, 1941. When handed in at Local Office May 30, 1941. Port of Newport News, Va.,

No. in Reg. Book. Survey held at Norfolk, Va. Date, First Survey Oct. 29, 1940 Last Survey May 2, 1941. (No. of Visits 6.)

on the Machinery of the ~~Wood~~ Steel "ALABAMA D.D. & S.B. Co's., Hull No. 223"

Tonnage { Gross _____ Vessel built at Mobile, Ala. By whom Alabama D.D. & S.B. Co. When 1941 -
 Net _____ Engines made at Auburn, N.Yk. By whom McIntosh & Seymour Corp. When 1929.

Nominal Horse Power _____ Boilers, when made (Main) _____ (Donkey) _____

No. of Main Boilers _____ Owners National Bulk Carriers, Inc. Owners' Address _____ (if not already recorded in Appendix to Register Book.)
 No. of Donkey Boilers _____ Managers _____ Port _____ Voyage _____

Steam Pressure in Main Boilers _____ If Surveyed Afloat or in Dry Dock At Army Base, Norfolk, Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

in Donkey Boilers _____

Last Report No. _____ Port _____
 Particulars of Examination and Repairs (if any) Part LMC.

(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.)

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?

" " 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?

State latest date of internal examination of each boiler _____ Present condition of funnel(s)

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

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? , 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? , and of the Donkey Boilers?

Has screw shaft now been drawn and examined? 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 _____ Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated?

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

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 _____

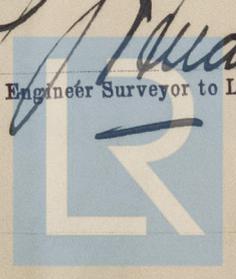
These engines were built by the McIntosh & Seymour Corp., in 1929, at Auburn, New York.
They are 8 cylinder, single acting, 4 stroke cycle and were originally fitted on board the M/S "DEFIANCE". The engine Nos. are 2054 & 2057, are now the starboard and port engines when fitted on board. They are duplicates of the engines fitted to M/S "PETROFUEL" recently built at the Alabama D.D. & S.B. Co's., Plant are intended for that Company's hull No. 223. These engines drove generators to supply current to the propelling motors and ran in one direction only while so fitted. They were subsequently removed from the vessel named and placed in storage at the Army Base, Norfolk, Va. The engines are of good, sturdy design and all forgings and castings requiring tests were passed by the American Bureau of Shipping. There are (8) cylinders per engine, 16 in all and the crank shafts are one piece solid forgings and machined for the necessary

General Observations, Opinion, and Recommendation:— These engines are of good design and
(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, E.S.M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)
workmanship and the materials are good and efficient. The forgings were tested by the American Bureau of Shipping. The engines have now been carefully overhauled and adjusted and have been sent to Mobile for installation. In my opinion, this machinery will be eligible for the record of L.M.C. with date upon completion of the survey.

Survey Fee (per Section 29) \$ 177 00 : Fees applied for Nov. 29 1941
 Special Damage or Repair Fee (if any) £ :
 Travelling expenses (if chargeable) £ 9 00 : Received by me, 19

Committee's Minute
 Assigned See First Entry k/t. attached.

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.



Lloyd's Register Foundation
 011800 - 011804 - 0129 1/3

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

In a Certificate required, if so, to be sent to

"ALABAMA D.D. & S.B. Co's., Hull No. 223"

lubricating arrangements.

The shafts are stamped as follows:- Port:- E.F.Co., 7994-P9, A.B. M.& S. 70638

P. 12 A.B. H. A.B.S. 3156. H. 42822 116. 8.24.28 Erie, Pa., G.F.M.

Starboard:- E.F.Co., 7994-P12. (H) M.& S. 70638. A. 54382 P.10 (H).

A.B.S. 3275. H. 42831 (A.B.) 116. 7.24.28 Erie, Pa., E.G.S.

Connecting Rods P. Eng. No. 2057:-

8047, 42708, 42789, D.R. 37451, O.R.D. 36016, O.R.D. 7157, O.R.D. 36016.

A.B.S. 1, 2, 3 & 4, 3056, 51988, 43641, 51988.

Connecting Rod starboard Engine (2054):-

8047, 4289, 42708, A.B.S. 1, 2, 3 & 4. 3037, 3038, 3040, 3041, 3045, 3057.

No thrust shaft or block fitted up here.

The bedplate, framing and liner housing cleaned, examined and found in good order.

Cooling water spaces around liners scaled and recoated. All cylinder heads over-

hauled. Cooling water spaces cleared of all rust and dirt. Hand hole joints and

studs renewed as necessary. All cylinder head valves and safety valves overhauled,

cleared of carbon and all valves ground in as found necessary.

Main air compressor cylinders and cylinder heads opened up. Cooling water spaces

cleaned and all valves ground in.

Port and starboard M.P. air compressor liners renewed.

Stamped Lloyd's 333 T.B.

Cooling water spaces around all compressor cylinders cleaned out.

H.P., M.P., & L.P. compressor piston rings renewed.

All cylinder liners examined - Nos. 2, 4 & 7 of the port engine (N. 2052) renewed.

Stamped Lloyd's 335. 2.12.40. T.B. Shoulders on all other cylinder liners

ground off.

All lubricating oil injector nozzles removed, cleaned, repaired as found necessary and refitted in place with new packing.

All pistons (16) removed from engines. Pistons and piston skirts disconnected,

All carbon removed from baffle grooves in pistons (oil cooled) and pistons and

piston skirts re-connected. Piston rings renewed as necessary.

Top end pins and bushes for same examined.

Connecting rods examined and found in good condition and stamped by American Bureau

Surveyors as shown. Crank pin blocks examined.

Top end pins and bushings and connecting rods examined.

Port and starboard crank shafts lifted and examined - condition good.

Port and starboard crank shafts for main air compressor examined and found in good order. Bottom half main bearings examined.

All bearings cleaned and shafts bedded in same and adjusted to working clearance.

All plugs removed from crank shafts, oil passages cleaned out and plugs refitted.

As these engines were constructed to run in one direction only, the necessary reversing gear has now been fitted.

There are two small injection air bottles 45" long - 12" outside diameter. Drilled

1/2" thick, solid drawn steel, fitted with drain cock. Bottom hemispherical and

neck drawn - cannot be examined internally.

"ALABAMA D.D. & S.B. Co's., Hull No. 223"

There are two larger bottles - solid drawn steel 19 1/2" diameter, 9'-3", 3/4" thick by drilling. Hemispherical bottom; necks drawn and fitted with drain cocks. Can be examined only and partly by a light bulb.

Small bottles stamped: Icc. 3A 1800 - 6 & 9. A.B. 36. M.S. Corpn. 2-28. 71305.

Large bottles stamped: No. 1 & No. 2, 2000 Lbs. tested, 9-28, A.B. 67.



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