

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report 1-6- 1931 When handed in at Local Office 2-6- 1931 Port of Aberdeen 3 JUN 1931

No. in Survey held at Aberdeen Date, First Survey 18-11-30 Last Survey 26-5- 1931
 Reg. Book. on the S.S. "ST. SUNNIVA" (Number of Visits 26)

Built at Aberdeen By whom built Hall, Russell & Co. Ltd. Yard No. 723 Tons { Gross 1367.64
 Net 668.53
 When built 1931

Engines made at Aberdeen By whom made Hall, Russell & Co. Ltd. Engine No. 723 When made 1931

Boilers made at Aberdeen By whom made Hall, Russell & Co. Ltd. Boiler No. 723 When made 1931

Registered Horse Power Owners North of Scotland & Orkney & Shetland Steam Navigation Co. Ltd. Port belonging to Aberdeen

Nom. Horse Power as per Rule 255 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which Vessel is intended Coasting

ENGINES, &c.—Description of Engines Triple expansion Revs. per minute 100

Dia. of Cylinders 20-33½-56 Length of Stroke 36 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 10.74 Crank pin dia. 11¼ Crank webs Mid. length breadth 17½ Thickness parallel to axis 7
 as fitted 11½ Mid. length thickness 7 shrunk Thickness around eye-hole 5¾

Intermediate Shafts, diameter as per Rule 10.22 Thrust shaft, diameter at collars as per Rule 10.74
 as fitted 10½ as fitted 11½

Tube Shafts, diameter as per Rule 11.26 Screw Shaft, diameter as per Rule 11.58 Is the tube shaft fitted with a continuous liner yes
 as fitted 11.58 as fitted 11.58 Is the screw shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule .64 Thickness between bushes as per Rule .48 Is the after end of the liner made watertight in the
 as fitted ¾ as fitted ¾ propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner —

If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive —

If two liners are fitted, is the shaft lapped or protected between the liners — Is an approved Oil Gland or other appliance fitted at the after end of the tube
 shaft no If so, state type — Length of Bearing in Stern Bush next to and supporting propeller 4-0

Propeller, dia. 12-6 Pitch 16-6 No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 48 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3¼ Stroke 20 Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3¼ Stroke 20 Can one be overhauled while the other is at work yes

Feed Pumps { No. and size (A) 6x8½x18; (B) 6x4½x6 Duplex Pumps connected to the { No. and size (B) 6x4½x6 Duplex; (C) 9x6x10 Duplex
 How driven Steam Main Bilge Line How driven Steam

Ballast Pumps, No. and size (C) 9x6x10 Duplex Lubricating Oil Pumps, including Spare Pump, No. and size none

Are two independent means arranged for circulating water through the Oil Cooler — Suctions, connected to both Main Bilge Pumps and Auxiliary
 Bilge Pumps;—In Engine and Boiler Room two @ 2½ in engine room; one @ 2½ in boiler room

In Pump Room — In Holds, &c. One 2 in from chain locker; Two 2¼ from No 1 Hold;
Two 2¼ from No 2 Hold; One 2¼ from tunnel; One 2¼ from No 3 hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 6 Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One 3¼ in eng. room; One 3¼ in boiler room Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yes Are the Overboard Discharges above or below the deep water line above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel yes Are the Blow Off Cocks fitted with a spigot and brass covering plate yes

What Pipes pass through the bunkers none How are they protected —

What pipes pass through the deep tanks none Have they been tested as per Rule —

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one
 compartment to another yes Is the Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platform

MAIN BOILERS, &c.—(Letter for record T) Total Heating Surface of Boilers 4440 sq. ft.

Is Forced Draft fitted no No. and Description of Boilers Two S.E. Main 258 Working Pressure 200 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded? —

Is the donkey boiler intended to be used for domestic purposes only —

PLANS. Are approved plans forwarded herewith for Shafting yes Main Boilers yes Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)

Superheaters — General Pumping Arrangements yes Oil fuel Burning Piping Arrangements —

SPARE GEAR

Has the spare gear required by the Rules been supplied yes

State the principal additional spare gear supplied One air pump rod; 1 LP valve spindle; 1 pair
 top & bottom end brasses; Safety valve spring; One main & one auxy feed check
 valve; 6 boiler tubes.

The foregoing is a correct description,
 FOR HALL, RUSSELL & CO., LTD.

James H. Hunter
 DIRECTOR

Manufacturer.



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Lloyd's Register
 Foundation

2900-021M

1930. Nov. 18. 21. Dec. 19. 29. 1931. Jan 7. 14. 30. Feb. 6. 10. 16. 20. 23. Mch. 6. 23.
 During progress of work in shops --
 Dates of Survey while building
 During erection on board vessel --- April 13. 14. 16. 22. 24. 28. 30 May 6. 12. 13. 20. 26.
 Total No. of visits 26

Dates of Examination of principal parts—Cylinders 23-2-31 Slides 6-3-31 Covers 23-2-31
 Pistons 6-3-31 Piston Rods 12-3-31 Connecting rods 23-3-31
 Crank shaft 17-11-30 Thrust shaft 24-10-30 Intermediate shafts 30-1-31
 Tube shaft ✓ Screw shaft 23-2-31 Propeller 23-3-31
 Stern tube 23-3-31 Engine and boiler seatings 25-3-31 Engines holding down bolts 22-4-31
 Completion of fitting sea connections 25-3-31
 Completion of pumping arrangements 13-5-31 Boilers fixed 22-4-31 Engines tried under steam 20-5-31
 Main boiler safety valves adjusted 12-5-31 Thickness of adjusting washers F. P $\frac{1}{2}$ " S $\frac{1}{2}$ " A. P $\frac{9}{16}$ " A $\frac{15}{32}$ "
 Crank shaft material Steel Identification Mark 3999 AF Thrust shaft material Steel Identification Mark 953 JH
 Intermediate shafts, material Steel Identification Marks 3999 P.F Tube shaft, material ✓ Identification Mark ---
 Screw shaft, material Steel Identification Mark 3999 P.F Steam Pipes, material Steel Test pressure 600 lbs. Date of Test 29-4-31
 Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F. ✓
 Have the requirements of the Rules for the use of oil as fuel been complied with ✓
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No If so, have the requirements of the Rules been complied with ✓
 If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with ✓
 Is this machinery duplicate of a previous case No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)

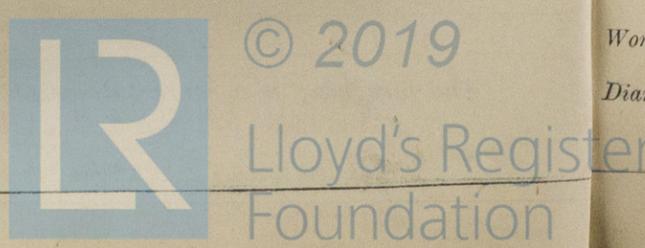
The machinery of this vessel has been constructed under Special Survey in accordance with the approved plans & the Rules of this Society.
 The materials and workmanship are good.
 The machinery has been efficiently installed on board the vessel, tried under working conditions, and found good. It is eligible in my opinion to have the record - LMC 5. 31. C.L. in the Register Book.

The amount of Entry Fee ... £ 4 : - :
 Special ... £ 63 : 5 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 2-6-1931
 When received, 3-6-1931

P. Fitzgerald.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 9 JUN 1931

Assigned + LMC. 5, 31 C.L.



The Surveyors are requested not to write on or below the space for Committee's Minute.

CERTIFICATE WRITTEN