

REPORT ON MACHINERY

No. 28075

of writing Report 18-4-21 When handed in at Local Office 19-4-21 Port of **SUNDERLAND.**
 in Survey held at **SUNDERLAND.** Date, First Survey 22 Aug 19 Last Survey 14 April 21
 on the **Shul S.S. TIDAL.** By whom built **Messrs. Colby Bros. Ltd.** When built 1921
 By whom made **Messrs. Mackell and Pollock, Ltd (N° 313)** When made 1921
 By whom made **do** When made 1921
 Owners **do** Port belonging to **do**
 Is Refrigerating Machinery fitted for cargo purposes **No.** Is Electric Light fitted **No.**

GINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3 No. of Cranks 3
 of Cylinders 14, 23, 39 Length of Stroke 24 Revs. per minute 95 Dia. of Screw shaft as per rule 8.4 Material of screw shaft Steel
 the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight
 the propeller boss Yes If the liner is in more than one length are the joints burned 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
 are fitted, is the shaft lapped or protected between the liners Length of stern bush 2'-10 1/2
 of Tunnel shaft as per rule 7.13 Dia. of Crank shaft journals as per rule 7 1/2 Dia. of Crank pin 7 5/8 Size of Crank webs 14 1/4 x 4 5/8 Dia. of thrust shaft under
 cars 7 5/8 Dia. of screw 11'-0" Pitch of Screw 10'-4 1/8 No. of Blades 4 State whether moveable No Total surface 41.2
 of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work Yes
 of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work Yes
 of Donkey Engines 2 Sizes of Pumps 5 1/4 x 3 1/2 x 5; 6 x 7 x 7 No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room 3 @ 2" In Holds, &c. 2 @ 2" in main hold.
 of Bilge Injections 1 sizes 3 1/2 Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes; 2"
 e all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible
 e all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both
 e they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the Discharge Pipes above or below the deep water line Above
 e 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 Low
 hat pipes are carried through the bunkers Main hold bilge pipes How are they protected Timber boards
 e all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 e the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 the Screw Shaft Tunnel watertight None Is it fitted with a watertight door Worked from Machinery aft.

ILERS, &c.—(Letter for record S.) Manufacturers of Steel **John Spencer & Sons, Ltd.**
 tal Heating Surface of Boilers 180 Is Forced Draft fitted No No. and Description of Boilers One S.E. Marine type
 orking Pressure 180 Tested by hydraulic pressure to 360 Date of test 21-6-20 No. of Certificate 3696
 n each boiler be worked separately Area of fire grate in each boiler 58.26 No. and Description of Safety Valves to
 h boiler Two, spring loaded Area of each valve 5.4 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes
 allest distance between boilers or uptakes and bunkers or woodwork 14 Internal Mean dia. of boilers 14-33 Length 10-6 Material of shell plates S.
 ickness 1 1/8 Range of tensile strength 28 3/4 to 32 3/4 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R., laps.
 g. seams T.R., D.B.S. Diameter of rivet holes in long. seams 1 3/16 Pitch of rivets 8 1/4 Lap of plates or width of butt straps 19 5/8
 r centages of strength of longitudinal joint rivets 88.4 plate 85.6 Working pressure of shell by rules 180.2 Size of manhole in shell 16 x 12
 ze of compensating ring 29 x 27 x 1 1/8 No. and Description of Furnaces in each boiler 3, plain Material S. Outside diameter 3'-8"
 ngth of plain part top 6-4 bottom 5-9 1/2 Thickness of plates crown 51 bottom 64 Description of longitudinal joint weld No. of strengthening rings 1
 orking pressure of furnace by the rules 185 Combustion chamber plates: Material S Thickness: Sides 11" Back 11" Top 11" Bottom 7"
 itch of stays to ditto: Sides 10 x 8 5/8 Back 11 x 8 5/8 Top 10 3/8 x 8 5/8 If stays are fitted with nuts or riveted heads nuts inside 32 Working pressure by rules 183
 aterial of stays S Area at smallest part 2.03 Area supported by each stay 95 Working pressure by rules 192 End plates in steam space:
 aterial S Thickness 1 1/4 Pitch of stays 23 x 15 How are stays secured D.N. & W. Working pressure by rules 185 Material of stays S
 rea at smallest part 6.1 Area supported by each stay 345 Working pressure by rules 183-8 Material of Front plates at bottom S
 ickness 1 Material of Lower back plate S Thickness 27 Greatest pitch of stays 13 1/4 x 8 5/8 Working pressure of plate by rules 196
 ameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 5/8 Material of tube plates S Thickness: Front 1" Back 53/64 Mean pitch of stays 11 7/16
 itch across wide water spaces 14 1/2 Working pressures by rules 182.4 Girders to Chamber tops: Material S. Depth and
 ickness of girder at centre 7 3/8 x 2 Length as per rule 2-4 1/8 Distance apart 10 3/8 Number and pitch of stays in each 2 @ 8 1/2
 orking pressure by rules 187 Steam dome: description of joint to shell % of strength of joint
 iameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes
 itch of rivets Working pressure of shell by rules Crown plates Thickness How staged
PERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to
 ate of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
 iameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— *Two connecting rod top + bottom end bolts + nuts, two main bearing bolts + nuts, one set of coupling bolts + nuts, one set of feed + bilge pump valves, bolts, nuts, + iron of various sizes; one propeller.*

The foregoing is a correct description,
MACCOLL & POLLOCK, LTD.

J. Richardson
Director

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1919 Aug 22 Sep 8. 22 Oct 1. 14 22 Nov 2. 19 Dec 5. 18 Jan 7. 21 29 Mar 11. 23 26
During erection on board vessel - - - Apr. 14. 27. 29 May 14. 31 June 8. 21 24 Jul 13. 28 Aug. 11. 22 Oct 4. 6 Mar 2. 4. 29. 14. 16. 19
Total No. of visits 23. 30 Apr. 7. 12. 14.

Is the approved plan of main boiler forwarded herewith *Yes*

(43 +

" " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 23-3-20 Slides 29-4-20 Covers 3-11-20 Pistons 28-7-20 Rods 3-11-20

Connecting rods 23-3-20 Crank shaft 1-8-19 Thrust shaft 28-10-19 Tunnel shafts ✓ Screw shaft 24-10-19 Propeller 6-10-20

Stern tube 14-4-20 Steam pipes tested 14-3-21 Engine and boiler seatings *LWT* Engines holding down bolts 16-3-21

Completion of pumping arrangements 7-4-21 Boilers fixed 16-3-21 Engines tried under steam 23-3-21

Completion of fitting sea connections *LWT* Stern tube 2-3-21 Screw shaft and propeller 4-3-21

Main boiler safety valves adjusted 23-3-21 Thickness of adjusting washers *P. 3/8, 3/8*

Material of Crank shaft *Steel* Identification Mark on Do. *4968 G.R.E.* Material of Thrust shaft *Steel* Identification Mark on Do. *867 J.H.M.*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Steel* Identification Marks on Do. *3265 M.*

Material of Steam Pipes *Solid drawn Copper* Test pressure *400 lbs. □*

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 Section 49 of the Rules 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 Materials + Workmanship are good.

The Machinery has been Constructed under special survey, and is eligible in my opinion for Classification and the record. ✕ LMC 4, 21

It is submitted that
this vessel is eligible for
THE RECORD. + LMC. 4. 21. C.L.

Roll
2/3/21
ARR

SUNDERLAND.

Certificate (if required) to be sent to
The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 3 :

Special ... £ 25 : 5 :

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

19 APR 1921

When received,

2.5.21

Ed. H. Potter

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE MAY 3 1921

+ L.M.C. 4. 21

C.L.



© 2021

Lloyd's Register
Foundation