

REPORT ON MACHINERY.

No. 76008

Received at London Office

THU. OCT. 4 1922

Date of writing Report Sept 21 1922 When handed in at Local Office Sept 25th 1922 Port of NEWCASTLE-ON-TYNE
 No. in Survey held at Newcastle-on-Tyne Date, First Survey Aug 29th 1921 Last Survey Sept 21st 1922
 Reg. Book. Y2621 on the Steel Screw Steamer "Sanicava" (Number of Visits 43)
 Master — Built at Mallwood By whom built James Bunter & Co. Ltd. "Richardson" When built 1922
 Engines made at Mallwood By whom made Mallwood Shipway Co. Ltd. No. 849 when made 1922
 Boilers made at Mallwood By whom made Mallwood Shipway Co. Ltd. when made 1922
 Registered Horse Power 548 Owners Anglo-Persian Petroleum Co. Ltd. Port belonging to London
 Nom. Horse Power as per Section 28 544.68 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24½-42½-74" Length of Stroke 48" Revs. per minute 68 Dia. of Screw shaft 15.05 as per rule 14.52 as fitted 16.50 Material of screw shaft steel
 Is 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 in 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 liners are fitted, is the shaft lapped or protected between the liners — Length of stern bush 5-6"
 Dia. of Tunnel shaft 13.57 as per rule 14.26 as fitted 14.98 Dia. of Crank shaft journals 14.98 as per rule 14.98 as fitted 14.98 Dia. of Crank pin 14.98 Size of Crank webs 23½ x 9½ Dia. of thrust shaft under collars 14.98 Dia. of screw 18-0 Pitch of Screw 14-9 No. of Blades 4 State whether moveable No Total surface 105 sq ft
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4½" Stroke 26" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps main feed = 8" x 10½" x 21"
aux = 5½" x 7½" x 15"
ballast = 8" x 10½" x 10"
 No. and size of Suctions connected to both Bilge and Donkey pumps —
 In Engine Room 3-3½" In Holds, &c. 2-3½" cross bunker one 3" off deck
3-3½" oil fuel bilges with separate oil fuel bilge pump.
 No. of Bilge Injections One sizes 10" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 5"
 Are 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 None
 Are all connections with the sea direct on the skin of the ship Yes Are they 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 Discharge Pipes above or below the deep water line Both
 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 are carried through the bunkers None How are they protected —
 Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes
 Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door — worked from —

BOILERS, &c.—(Letter for record -5-) Manufacturers of Steel John Spencer
7617 sq ft for plates
 Total Heating Surface of Boilers 7458 Is Forced Draft fitted Yes No. and Description of Boilers 3 S.S. Multitubular
 Working Pressure 220 lbs Tested by hydraulic pressure to 380 lbs Date of test 25.4.22 No. of Certificate 9672
 Can each boiler be worked separately Yes Area of fire grate in each boiler 61.5 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 9.60" Pressure to which they are adjusted 225 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2-5" Mean dia. of boilers 183/25 Length 11-7½ Material of shell plates steel
 Thickness 1/16" Range of tensile strength 30-34 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S.L.
 long. seams S.L. Diameter of rivet holes in long. seams 1½" Pitch of rivets 10½" Lap of plates or width of butt straps 22½"
 Per centages of strength of longitudinal joint 86.0 rivets 85.3 plate Working pressure of shell by rules 221 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 36½ x 34½ x 1½ No. and Description of Furnaces in each boiler 3. Harisons Material steel Outside diameter 45½"
 Length of plain part top bottom Thickness of plates crown 1/16" Description of longitudinal joint welded No. of strengthening rings None
 Working pressure of furnace by the rules 223 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 1/2"
 Pitch of stays to ditto: Sides 4½" x 7½" Back 4½" x 7½" Top 10" x 8½" If stays are fitted with nuts or riveted heads R. heads Working pressure by rules 236 lbs
 Material of stays steel Area at smallest part 2.36 sq ft Area supported by each stay 56.2 sq ft Working pressure by rules 228 End plates in steam space: 236 lbs
 Material steel Thickness 1/4" Pitch of stays 20½" x 15½" How are stays secured D. nuts Working pressure by rules 224 Material of stays steel
 Area at smallest part 6.10 sq ft Area supported by each stay 3.12 sq ft Working pressure by rules 224 Material of Front plates at bottom steel
 Thickness 1" Material of Lower back plate steel Thickness 3/32" Greatest pitch of stays 14½" x 7½" Working pressure of plate by rules 258
 Diameter of tubes 2½" Pitch of tubes 3½" x 3½" Material of tube plates steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8.375"
 Pitch across wide water spaces 3½" x 7½" Working pressures by rules 252 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8½" x 1½" Length as per rule 32" Distance apart 8½" Number and pitch of stays in each 2-10"
 Working pressure by rules 228 Steam dome: description of joint to shell None % of strength of joint —
 Diameter — Thickness of shell plates — Material — Description of longitudinal joint — Diam. of rivet holes —
 Pitch of rivets — Working pressure of shell by rules — Crown plates — Thickness — How stayed —

SUPERHEATER. Type None Date of Approval of Plan — Tested by Hydraulic Pressure to 2019
 Date of Test — Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler —
 Diameter of Safety Valve — Pressure to which each is adjusted — Is Easing Gear fitted —

Lloyd's Register

W550-0156

IS A DONKEY BOILER FITTED?

20

If so, is a report now forwarded?

2 top & 2 bottom end, 2 holding down, and a set of coupling bolts & nuts. one cast iron propeller. one examination
SPARE GEAR. State the articles supplied:— straps & sheave complete. 6 cylinder cover bolts, one main engine guide shoe
nuts & bolts. one set each of piston rings & springs for main engines. 12 fine ring shades & iron nuts.
one slide valve spindle with slide block complete. one pair of crank pin bushes with liners.
one pair of top end bushes with liners. one piston rod with glands & neck rings for main engines
2 nuts metal studs & nuts for stern gland. one air pump rod with nuts complete. one feed pump
plunger. one helge pump plunger. 55 condenser tubes. one third part crankshaft. one air pump
impeller & shaft. one coil shaft with liner & nuts. one set of air pump valves and 2 valve
guards. 2 feed & 2 helge pump valves. 20 boiler tubes. 2 set of valves for the ballast pump. iron and
bolts & nuts assorted and sundry other minor parts.

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO., LIMITED.

A. Lang

DIRECTOR.

Manufacturer.

Dates of Survey while building
During progress of work in shops - - 1921. Aug 29. Oct 27. Dec 8. 20. 1922. Jan 6. 9. 13. 17. 31. Feb 4. 21. March 2. 8. 9. 14. 29. 30. April 19. May 4. 10. 18.
During erection on board vessel - - 1922. June 28. July 6. 9. 10. 18. 25. 28. Aug 1. 3. 8.
Total No. of visits 43

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

" " " donkey " " " *None*

Dates of Examination of principal parts—Cylinders 31.1.22 Slides 20.12.21 Covers 21.2.22 Pistons 18.7.22 Rods 10.4.22
Connecting rods 7.7.22 Crank shaft 25.7.22 Thrust shaft 25.7.22 Tunnel shafts *None* Screw shaft 25.7.22 Propeller 18.7.22 & 20
Stern tube 10.4.22 Steam pipes tested 1.8.22 18.8.22 23.8.22 Engine and boiler seatings 14.8.22 Engines holding down bolts 28.8.22
Completion of pumping arrangements 21.9.22 Boilers fixed 22.8.22 Engines tried under steam 21.9.22
Completion of fitting sea connections 9.8.22 - 18.9.22 Stern tube 9.8.22 - 18.9.22 Screw shaft and propeller 15.9.22
Main boiler safety valves adjusted 21.9.22 Thickness of adjusting washers *FORD* $S = \frac{1}{16}$ $P = \frac{1}{32}$ *STARD AFT* $S = \frac{3}{16} + \frac{1}{32}$ $P = \frac{1}{16}$ *PORT AFT* $S = \frac{1}{32}$ $P = \frac{1}{16}$
Material of Crank shaft *steel* Identification Mark on Do. 28.7.22 WRA 6166 Material of Thrust shaft 25.7.22 Identification Mark on Do. *steel*
Material of Tunnel shafts *None* Identification Marks on Do. - Material of Screw shafts *steel* Identification Marks on Do. 25.7.22 WRA 6166
Material of Steam Pipes *steel* Test pressure 660 lbs

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S.S. Spirida & S.S. Helen*

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel's machinery has been*

examined during construction, & the materials and workmanship are good, and in accordance with the approved plans & the requirements of the rules.

On completion it was submitted to a satisfactory steam trial, at which time the safety valves were adjusted to the working pressure.

It is therefore eligible in my opinion to be classed in the Register book, with the notation of + LMC 9.22. Fitted for oil fuel 9.22 - FP above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.22. FD. CL.

Fitted for oil fuel 9.22. FP above 150°F.

Ans. 5/10/22

Maurice Patton

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 6 :

Special ... £ 102 : 8

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

4/10/22

When received,

9.10.22

FRI. 6 OCT. 1922

Committee's Minute

Assigned

+ LMC 9.22 FD, CL.

Fitted for oil fuel 9.22 FP above 150°F

MACHINERY DEPT.
WRITTEN



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Lloyd's Register
Foundation

Newcastle

Certificate (if required) to be sent to
The Surveyors are required to write on or below the space for Committee's Minute.