

# REPORT ON MACHINERY.

Received at London Office

THU. 28. SEP. 1916

Date of writing Report 25. Sept. 1916 When handed in at Local Office 27. Sept. 1916 Port of Southampton 27. Feb. 1917

No. in Survey held at Southampton Date, First Survey 27. Nov. 1906 Last Survey 27. Sept. 1916

Reg. Book. on the Messrs. Swan, Hunter & Wigham Richardson's No. 1031/25 "SOUTHWICK" Gross 443 Tons Net 218 Tons

Master Cutter Built at Sunderland By whom built Swan Hunter, Wigham Rich. When built 1917

Engines made at Southampton By whom made Messrs. Day, Summers & Co. Ld. when made 1907

Boilers made at Heldrum & Tyne By whom made Palmer's & Co. Ld. (No. 849) when made 1917

Registered Horse Power 56 Owners Anglo-American Oil Co. Ld. (J. Hamilton) Port belonging to Sunderland

Nom. Horse Power as per Section 28 56 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 11", 17 1/2" & 28" Length of Stroke 21" Revs. per minute as per rule 6.6 Dia. of Screw shaft as fitted 7.0 Material of screw shaft Iron

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 yes

In the propeller boss yes If the liner is in more than one length are the joints burned yes 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 yes If two liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 2'-4"

Dia. of Tunnel shaft as per rule 5.68 Dia. of Crank shaft journals as fitted 5 5/8 Dia. of Crank pin 5 5/8 Size of Crank webs 7 1/2" x 3 1/2" Dia. of thrust shaft under collars 6 5/8 Dia. of screw 8" 6" Pitch of Screw 8" 6" No. of Blades 4 State whether moveable no Total surface 25 sq. ft.

No. of Feed pumps one Diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work yes See Low. Ltr 13/3/17

No. of Bilge pumps one Diameter of ditto 2 3/4" Stroke 9" Can one be overhauled while the other is at work yes

No. of Donkey Engines two Sizes of Pumps 5 1/2" & 3 1/2" & 5" 6" & 4" & 6" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 @ 2" In Hold, &c. 2 @ 2"

No. of Bilge Injections 1 sizes 3" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes. 2"

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 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 are carried through the bunkers none How are they protected yes

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

Dates of examination of completion of fitting of Sea Connections 13-11-16 of Stern Tube 22-12-16 Screw shaft and Propeller 22-12-16

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record) See separate Report attached Manufacturers of Steel See separate Report attached

Total Heating Surface of Boilers 1135 sq. ft. Is Forced Draft fitted yes No. and Description of Boilers See separate Report attached

Working Pressure 165 lb. Tested by hydraulic pressure to 200 lb. Date of test 22-12-16 No. of Certificate See separate Report attached

Can each boiler be worked separately yes Area of fire grate in each boiler See separate Report attached No. and Description of Safety Valves to each boiler See separate Report attached

Area of each valve See separate Report attached Pressure to which they are adjusted See separate Report attached Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork See separate Report attached Mean dia. of boilers See separate Report attached Length See separate Report attached Material of shell plates See separate Report attached

Thickness See separate Report attached Range of tensile strength See separate Report attached Are the shell plates welded or flanged yes Descrip. of riveting: cir. seams See separate Report attached

long. seams See separate Report attached Diameter of rivet holes in long. seams See separate Report attached Pitch of rivets See separate Report attached Lap of plates or width of butt straps See separate Report attached

Per centages of strength of longitudinal joint See separate Report attached Working pressure of shell by rules See separate Report attached Size of manhole in shell See separate Report attached

Size of compensating ring See separate Report attached No. and Description of Furnaces in each boiler See separate Report attached Material See separate Report attached Outside diameter See separate Report attached

Length of plain part See separate Report attached Thickness of plates See separate Report attached Description of longitudinal joint See separate Report attached No. of strengthening rings See separate Report attached

Working pressure of furnace by the rules See separate Report attached Combustion chamber plates: Material See separate Report attached Thickness: Sides See separate Report attached Back See separate Report attached Top See separate Report attached Bottom See separate Report attached

Pitch of stays to ditto: Sides See separate Report attached Back See separate Report attached Top See separate Report attached If stays are fitted with nuts or riveted heads yes Working pressure by rules See separate Report attached

Material of stays See separate Report attached Diameter at smallest part See separate Report attached Area supported by each stay See separate Report attached Working pressure by rules See separate Report attached End plates in steam space: See separate Report attached

Material See separate Report attached Thickness See separate Report attached Pitch of stays See separate Report attached How are stays secured See separate Report attached Working pressure by rules See separate Report attached Material of stays See separate Report attached

Diameter at smallest part See separate Report attached Area supported by each stay See separate Report attached Working pressure by rules See separate Report attached Material of Front plates at bottom See separate Report attached

Thickness See separate Report attached Material of Lower back plate See separate Report attached Thickness See separate Report attached Greatest pitch of stays See separate Report attached Working pressure of plate by rules See separate Report attached

Diameter of tubes See separate Report attached Pitch of tubes See separate Report attached Material of tube plates See separate Report attached Thickness: Front See separate Report attached Back See separate Report attached Mean pitch of stays See separate Report attached

Pitch across wide water spaces See separate Report attached Working pressures by rules See separate Report attached Girders to Chamber tops: Material See separate Report attached Depth and thickness of girder at centre See separate Report attached Length as per rule See separate Report attached Distance apart See separate Report attached Number and pitch of stays in each See separate Report attached

Working pressure by rules See separate Report attached Superheater or Steam chest; how connected to boiler See separate Report attached Can the superheater be shut off and the boiler worked separately yes Diameter See separate Report attached Length See separate Report attached Thickness of shell plates See separate Report attached Material See separate Report attached Description of longitudinal joint See separate Report attached Diam. of rivet holes See separate Report attached Pitch of rivets See separate Report attached Working pressure of shell by rules See separate Report attached Diameter of flue See separate Report attached Material of flue plates See separate Report attached Thickness See separate Report attached

If stiffened with rings yes Distance between rings See separate Report attached Working pressure by rules See separate Report attached End plates: Thickness See separate Report attached How stayed See separate Report attached

Working pressure of end plates See separate Report attached Area of safety valves to superheater See separate Report attached Are they fitted with easing gear yes



*If so, is a report now forwarded?*

one propeller, 2 piston rod bolts + nuts, 2 Connecting rod, one set coupling + 2 main bearing bolts + nuts, 1 set feed pump valves, 1 set bilge pump valves, Assorted iron & bolts + nuts

For DAY SUMMERS & Co. Ltd.

*Graham E. L. Day* Director

*Manufacturer.*

Dates of Survey while building { During progress of work in shops - - } 1906 - Nov. 22, 26 + 28. Dec 7. 19. 1907 - Jan 7. 14. Feb. 8. 12. 15. 28. Mar. 4. 11. 14. + 18. Apr 4. 11  
 { During erection on board vessel - - } Sep. 14. - 1908. May 28. June 1, Aug. 11. Nov. 24 + Dec. 17. 1906 - Mar 3. 22. Apr 5. 17. 27. June 2. 12. 22.  
 { } July 13. 18. Aug. 16. Sep 20<sup>th</sup>. 27<sup>th</sup>  
 Total No. of visits 36.

Is the approved plan of main boiler forwarded herewith No ✓

Is the approved plan of main boiler forwarded herewith

Sl. Nails. 1916. Nov 23. Dec 22. Jan 9. Feb. 19. 21. 26. 27. (7)

" " " donkey " " " " " ho ✓

*Dates of Examination of principal parts—Cylinders ✓ Slides ✓ Covers ✓ Pistons ✓ Rods*

Connecting rods      Crank shaft      Thrust shaft      Tunnel shafts      Screw shaft      Propeller

Stern tube ..... Steam pipes tested ..... Engine and boiler seatings **23-11-16** Engines holding down bolts **9-1-17**

Completion of pumping arrangements 9-1-17 Boilers fixed 26-2-17 Engines tried under steam 26-2-17

Main boiler safety valves adjusted 26-2-17 Thickness of adjusting washers Port  $\frac{9}{32}$ . Starboard  $\frac{7}{64}$

Material of Crank shaft Steel Identification Mark on Do. \_\_\_\_\_ Material of Thrust shaft Iron Identification Mark on Do. None R.E.

Material of Tunnel shafts None Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts Iron Identification Marks on Do. Slaps K.E.

Material of Steam Pipes Solid drawn Copper Test pressure 330 pounds per sq. in.

Is an installation fitted for burning oil fuel..... 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.....✓ If so, state name of vessel.....✓

*General Remarks* (State quality of workmanship, opinions as to class, &c. *Workmanship material good.*

These engines were built under special survey and have been practically completed since 1907. They have now been forwarded to Sunderland to be fitted in Messrs. Swan, Hunter & Wigham Richardsons SS. No 1031. Before being forwarded the different <sup>parts</sup> have been opened, cleaned, examined, & found in order.

For crank shaft please see Secry's letter E 20/5/14

Sunderland 28-2-17 The machinery has been satisfactorily fitted in the vessel and is eligible in my opinion for Classification and the record  $\pm$  LMC 2, 17

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 2. 17.

for  
JC 2. 17.  
JWD.  
7/2/17.  
JFK

R. Elliott. J. H. Davis

*Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.*

The amount of Entry Fee	...	£ 1	:	0	:	0	When applied for,
Special	...	£ 8	:	8	:	0	27/9/16
Donkey Boiler Fee	...	£	:		:		When received at
Travelling Expenses (if any)	£	:	:		:		25.10.16

Committee's Minute

FRI. 9-MAR. 1917

*Assigned*

+ Lm 2.17

MACHINERY CERTIFICATE  
WRITTEN.

Lloyd's Register  
Foundation

Committee

*Assigned*