

## REPORT ON MACHINERY.

No. 72213

Received at London Office

WED. 3 SEP. 1919

Date of writing Report 19 When handed in at Local Office 19 Port of Newcastle-on-Tyne  
 Date, First Survey 1st Apr Last Survey 19th Aug 1919  
 (Number of Visits 30)  
 on the SCREEN STEAMER PASHA  
 Built at Holland By whom built Swan Hunter, Wigham Richardson When built 1919  
 Engines made at Newcastle-on-Tyne By whom made Swan Hunter, Wigham Richardson when made 1919  
 Milers made at Newcastle-on-Tyne By whom made Swan Hunter, Wigham Richardson when made 1919  
 Registered Horse Power \_\_\_\_\_ Owners Atlantic Steam Navigation Co. Ltd Port belonging to London  
 m. Horse Power as per Section 28 517 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders Three No. of Cranks Three  
 a. of Cylinders 24" 44" 48" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft as per rule 14 1/2" Material of 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 the length 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  
 are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5' 0 1/2"  
 a. of Tunnel shaft as per rule 13 1/2" Dia. of Crank shaft journals as per rule 13 9/8" Dia. of Crank pin 14 1/2" Size of Crank webs 23 x 9" Dia. of thrust shaft under  
 lars 14 1/2" Dia. of screw 17 1/2" Pitch of Screw 16 1/2" No. of Blades 4 State whether moveable No Total surface 98.2 sq. ft.  
 a. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes WEIR'S FEED PUMPS  
 a. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes 10 1/2" x 8" x 21"  
 a. of Donkey Engines 3 Sizes of Pumps 10 1/2" x 4" x 24" 2 9 1/2" x 4" x 18" No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room Three 3 1/2" dia. In Holds, &c. No. 1 HOLD. Two 3 1/2" dia. No. 2 HOLD. Two 3 1/2" dia.  
 a. of Bilge Injections 1 sizes 1 1/2" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"  
 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 Yes  
 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 Below  
 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 Bilge suction pipes How are they protected Wood casing  
 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 Yes Is it fitted with a watertight door Yes worked from upper platform  
 MILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer & Sons Ltd  
 Total Heating Surface of Boilers 7668 Is Forced Draft fitted Yes No. and Description of Boilers 3: Cylindrical, Single  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 12/6/19 No. of Certificate 9243  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq. ft No. and Description of Safety Valves to  
 each boiler 2: Direct Spring loaded Area of each valve 9.62" Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 2' 0" Mean dia. of boilers 15' 6" Length 11' 6" Material of shell plates Steel  
 Thickness 1 1/4" Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap Double  
 long. seams Double Tackle Diameter of rivet holes in long. seams 1 5/8" Pitch of rivets 9" 4 3/4" Lap of plates or width of butt straps 19 1/2"  
 Percentages of strength of longitudinal joint 87.8 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring plate flange No. and Description of Furnaces in each boiler 3: Doughton's Material Steel Outside diameter 50 3/4"  
 Length of plain part top 4 1/2" Thickness of plates crown 1 1/2" Description of longitudinal joint Weld No. of strengthening rings None  
 Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material Steel Thickness: Sides 3 1/2" Back 1 1/2" Top 3 1/2" Bottom 3 1/2"  
 Pitch of stays to ditto: Sides 9 1/2" x 10 1/2" Back 10 1/2" x 8 1/2" Top 10 1/2" x 9 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs  
 Material of stays Steel Area at smallest part 2 3/8" Area supported by each stay 98" Working pressure by rules 215 lbs End plates in steam space:  
 Material Steel Thickness 1 1/2" Pitch of stays 21 1/2" x 21 1/2" How are stays secured Nuts & washers Working pressure by rules 184 lbs Material of stays Steel  
 Area at smallest part 8 1/2" x 9" Area supported by each stay 456" Working pressure by rules 192 lbs Material of Front plates at bottom Steel  
 Thickness 3 1/2" Material of Lower back plate Steel Thickness 3 1/2" Greatest pitch of stays 10 1/2" Working pressure of plate by rules 184 lbs  
 Diameter of tubes 2 1/4" Pitch of tubes 4 x 3 1/2" Material of tube plates Steel Thickness: Front 3 1/2" Back 3 1/4" Mean pitch of stays 9.81"  
 Pitch across wide water spaces 13 1/2" Working pressures by rules 181 lbs 209 lbs Girders to Chamber tops: Material Steel Depth and  
 Thickness of girder at centre 10" x 1 1/2" Length as per rule 35 3/8" Distance apart 10 1/2" Number and pitch of stays in each 3' 9 1/4"  
 Working pressure by rules 184 lbs 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 \_\_\_\_\_  
 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 \_\_\_\_\_

W1025-02017



IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes, attached

SPARE GEAR. State the articles supplied:—

2 Conn. Rod top and Bottom Ends. 2 Conn. Rod Bottom Ends. 2 main Bearing Bolts nuts. 6 Shaft Coupling Bolts nuts. 2 Feed Pump valves. 2 Bilge Pump valves. 3 main Feed Check valves. 1 Donkey Feed Check valves. 50 Bolts nuts assorted. 6 C. Studs 8 nuts. 6 Steam chest Cover Studs nuts. 12 Joint Ring Studs nuts. Propeller. 3 Bars Iron. 3 Spare Crank shaft. 1 Tail shaft. 1 Eccentric Strap Complete. 1 Set Crank pin Bushes. 1 main Bearing Bush. 12 Condenser tubes 50 terminals 100 Packings. 6 Air valves. 2 Packing Rings for each Piston Rod & valve Spindle. 1 Feed Escape Spring. 1 set Springs for each Piston valve spindle. 1 H.P. Piston valve. 12 Boiler tubes. and spare Gear for Centrifugal. Feed. General & Ballast pumps. Fan engine and winches.

The foregoing is a correct description.

G. J. Iwer

Manufacturer.

Dates of Survey while building

During progress of work in shops - - - 1919  
During erection on board vessel - - -  
Total No. of visits

Is the approved plan of main boiler forwarded herewith

Yes

Dates of Examination of principal parts—Cylinders

Slides Covers Pistons Rods

Connecting rods 29/1/19 Crank shaft 29/1/19 Thrust shaft 1/1/19 Tunnel shafts 22/6/19 Screw shaft 13/6/19 Propeller 1/6/19

Stern tube 5/6/19 Steam pipes tested see Report. Engine and boiler seatings 18/6/19 Engines holding down bolts 20/4/19

Completion of pumping arrangements 18/6/19 Boilers fixed 19/5/19 Engines tried under steam 19/5/19

Completion of fitting sea connections 18/6/19 Stern tube 18/6/19 Screw shaft and propeller 18/6/19

Main boiler safety valves adjusted 11/8/19 Thickness of adjusting washers Port. Centre. Stayd. Donkey.

Material of Crank shaft Steel Identification Mark on Do. 4066 BV Material of Thrust shaft Steel Identification Mark on Do. 4066 BV

Material of Tunnel shafts Steel Identification Marks on Do. 4066 BV Material of Screw shafts Steel Identification Marks on Do. 4066 BV

Material of Steam Pipes 4066 BV Test pressure 840 lb

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 Standard

Is this machinery duplicate of a previous case Yes If so, state name of vessel

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

The Engines and Boilers of this vessel were built under special

and the materials and workmanship are good. On completion the

were examined while running full power trials at sea and found to

work satisfactorily.

The machinery throughout is now in good and efficient condition

and eligible in our opinion to have the record of L.M.C.S.

marked in the Society's Register Book.

It is submitted that

this vessel is eligible for

THE RECORD + LMC 8.19. F.D.

The amount of Entry Fee £ 37 : 10

Special £ 37 : 10

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for, 2 - SEP 1919

When received, 4/10/19

Committee's Minute

Assigned

Lmb 8.19

F. D.

Wm. Austin

Engineer Surveyor to Lloyd's Register of Shipping.

James Mullan

Survey Fee

Travelling Expense

Committee's Minute

Assigned

Lmb 8.19

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