

REPORT ON MACHINERY.

No. 25895

THU. OCT. 30. 1913

Received at London Office

Date of writing Report 21-10-1913 When handed in at Local Office 21-10-1913 Port of SUNDERLAND

No. in Survey held at SUNDERLAND Date, First Survey Aug 28th 1912 Last Survey 21-10-1913

Supp 50 on the new steel S/S "SHABONEE".

Master *J. J. Reed* Built at *Sunderland* By whom built *Sing & Sons Ltd (N° 643)* Tons Gross *5167* Net *3230* When built *1913*

Engines made at *Sunderland* By whom made *George Blanks Ltd (N° 984)* when made *1913*

Boilers made at *Sunderland* By whom made *George Blanks Ltd (N° 984)* when made *1913*

Registered Horse Power _____ Owners *Bank Storage & Carriage Co Ltd (W. & Smith)* Port belonging to *Sunderland*

Nom. Horse Power as per Section 28 *475* 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 *26" 44" 72"* Length of Stroke *48* Revs. per minute *70* Dia. of Screw shaft as per rule *14.65"* Material of *J. steel* as fitted *15.8"* screw shaft

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 *5-1"*

Dia. of Tunnel shaft as per rule *13.1"* Dia. of Crank shaft journals as per rule *13.75"* Dia. of Crank pin *14.4"* Size of Crank webs *2 1/4" x 9"* Dia. of thrust shaft under collars *14 3/8"* Dia. of screw *17.9"* Pitch of Screw *16-3"* No. of Blades *4* State whether moveable *no* Total surface *95 #*

No. of Feed pumps *2 (Weirs)* Diameter of ditto *7" (9 1/2" diam)* Stroke *18"* Can one be overhauled while the other is at work *yes*

No. of Bilge pumps *2* Diameter of ditto *4 1/2"* Stroke *26"* Can one be overhauled while the other is at work *yes*

No. of Donkey Engines *3* Sizes of Pumps *9 & 10 x 10 7 1/2 & 8 x 7 6 & 4 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *Three @ 8 1/2" and four @ 2" in oil well, (fuel pump) Holds, &c. fore peak flat-2 @ 2 1/2" cargo hold 2 @ 2 1/2" connected to ballast pump in cargo hold only. 2 @ 2 1/2" in pump room connected to cargo pumps only.*

No. of Bilge Injections *1* sizes *6"* Connected to condenser, or to circulating pump *lo. p.* Is a separate Donkey Suction fitted in Engine room *yes* size *4"*

all the bilge suction pipes fitted with roses 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 *—*

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 *18-9-13* of Stern Tube *26-9-13* Screw shaft and Propeller *26-9-13*

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

BOILERS, &c.—(Letter for record (5) ✓) Manufacturers of Steel *John Spencer & Sons Limited.*

Total Heating Surface of Boilers *6805 #* Is Forced Draft fitted *yes* No. and Description of Boilers *two single ended marine*

Working Pressure *180* Tested by hydraulic pressure to *360* Date of test *6-9-13* No. of Certificate *3143*

Can each boiler be worked separately *yes* Area of fire grate in each boiler *80 #* No. and Description of Safety Valves to each boiler *two direct spring* Area of each valve *14.180"* Pressure to which they are adjusted *185* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *1-11"* Mean dia. of boilers *14.3"* Length *12-0"* Material of shell plates *steel*

Thickness *1 1/2"* Range of tensile strength *29 1/2 - 33* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *W.R.* long. seams *W.B.S. & R.* Diameter of rivet holes in long. seams *13/8"* Pitch of rivets *9 1/2"* Lap of plates or width of butt straps *20 5/8"*

Per centages of strength of longitudinal joint rivets *94* plate *84.78* Working pressure of shell by rules *181* Size of manhole in shell *16" x 13"*

Size of compensating ring *flanged* No. and Description of Furnaces in each boiler *4 Weighton bon* Material *steel* Outside diameter *3-10"*

Length of plain part top *—* bottom *—* Thickness of plates crown *39"* bottom *64"* Description of longitudinal joint *welded* No. of strengthening rings *—*

Working pressure of furnace by the rules *212* Combustion chamber plates: Material *steel* Thickness: Sides *3/16"* Back *3/4"* Top *3/4"* Bottom *13/16"*

Pitch of stays to ditto: Sides *10 3/4" x 11"* Back *10 3/4" x 10"* Top *10 1/2" x 10"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *180*

Material of stays *steel* Diameter at smallest part *2-360"* Area supported by each stay *107.50"* Working pressure by rules *197* End plates in steam space: Material *steel* Thickness *1 1/8"* Pitch of stays *24" x 2 1/4"* How are stays secured *W.N.* Working pressure by rules *180* Material of stays *steel*

Diameter at smallest part *8.950"* Area supported by each stay *4600"* Working pressure by rules *202* Material of Front plates at bottom *steel*

Thickness *15/16"* Material of Lower back plate *steel* Thickness *3/16"* Greatest pitch of stays *16 1/4" x 9 1/2"* Working pressure of plate by rules *183*

Diameter of tubes *2 1/2"* Pitch of tubes *3 3/4" x 3 5/8"* Material of tube plates *steel* Thickness: Front *15/16"* Back *3/4"* Mean pitch of stays *9 3/8"*

Pitch across wide water spaces *13 1/2"* Working pressures by rules *185* Girders to Chamber tops: Material *steel* Depth and thickness of girder at centre *2 @ 9 1/4" x 7/8"* Length as per rule *36"* Distance apart *10"* Number and pitch of stays in each *2 @ 10 1/2"*

Working pressure by rules *183* Superheater or Steam chest; how connected to boiler *none* Can the superheater be shut off and the boiler worked separately *—*

holes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description		When made		Where fixed
Made at	By whom made		When made		Where fixed
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with casing gear	If steam from main boilers can enter the donkey boiler		Dia. of donkey boiler	Length	
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams		
Dia. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating	Per centage of strength of joint	Rivets Plates
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

Handwritten: No. 8071 attached.

SEE SEPARATE REPORT

SPARE GEAR. State the articles supplied:—Two connecting rod top & bottom end bolts and nuts. two main bearing bolts one set of coupling bolts one set of feed bridge, air & circulating pump valves iron and bolts of various sizes one tail shaft, one propeller one eccentric strap, one valve spindle one pair of top and bottom end bearings one air pump bucket & rod one circ. & pump bucket & rod

The foregoing is a correct description,

FOR GEORGE CLARK, LIMITED

Manufacturer. 7th Marine Engineer TBorden

Dates of Survey while building	During progress of work in shops	1912 Aug 28 Nov 7 19 Dec 10 Mar 4 28 Apr 1 23 26 May 6 20 28 30
	During erection on board vessel	June 7 18 19 July 1 9 11 18 22 28 31 Aug 1 12 21 Sep 2 5 6 9 12 15 17 18 26 29
Total No. of visits		39

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

Dates of Examination of principal parts—Cylinders	7-6-13	Slides	21-8-13	Covers	20-5-13	Pistons	27-5-13	Rods	22-7-13
Connecting rods	28-7-13	Crank shaft	1-4-13	Thrust shaft	10-12-12	Tunnel shafts	None	Screw shafts	15-9-13
Propellers	28-5-13	Stern tube	5-9-13	Steam pipes tested	7-10-13	Engine and boiler seatings	19-6-13	Engines holding down bolts	29-9-13
Completion of pumping arrangements	17-10-13	Boilers fixed	17-10-13	Engines tried under steam	9-10-13	Main boiler safety valves adjusted	9-10-13	Thickness of adjusting washers	For Air: P 3/4, 5/16. Std Air: P 5/16, 5/16 1/2.

Material of Crank shaft *9 steel* Identification Mark on Do. *2051 MB*. Material of Thrust shaft *9 steel* Identification Mark on Do. *75 J.D.*
 Material of Tunnel shafts *None* Identification Marks on Do. ✓ Material of Screw shafts *9 steel* Identification Marks on Do. *45 J.O. & 88 J.O.*
 Material of Steam Pipes *Lapwelded steel 10 1/2" dia x 7/16" & 10 1/8" dia x 7/16"* Test pressure *540 lbs per square inch.*

General Remarks (State quality of workmanship, opinions as to class, &c. The materials and workmanship are good) The machinery has been made under special and is eligible in my opinion for classification and the Record + LMC 10.13 "Fitted for liquid fuel" - FP above 150°F. "Wireless".

It is submitted that this vessel is eligible for THE RECORD + LMC 10.13. F.D. Fitted for oil fuel 10.13. F.P. above 150°F.

Handwritten: JWD 30/10/13

The amount of Entry Fee .. £	3	When applied for,	
Special £	43 15	When received,	27.10.13
Donkey Boiler Fee £			
Travelling Expenses (if any) £			29.10.13

Signature: Lewis Lewis Davis
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI OCT 31 1913*
 Assigned *+ LMC 10.13*

MACHINERY CERTIFICATE WRITTEN

Handwritten: Fitted for oil fuel 10.13 F.P. above 150°F



Certificate (if required) to be sent to

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