

REPORT ON MACHINERY.

Hull Rpt No: 31635

WED FEB. 18. 1920 No. 10961

FRI. 30 MAY. 1919

Date of writing Report 19 *29 May 1919* When handed in at Local Office *29 May 1919* Port of *Grimsey*
 No. in Survey held at *Grimsey* Date, First Survey *Dec 6. 1918* Last Survey *May 21. 1919*
 Reg. Book: *League for Flag 51115* (Number of Visits *5*)
 Master *Ben Holland* Built at *Ben Holland* By whom built *W.H. Warren* Tons {Gross *1919* Net *1919*
 Engines made at *Grimsey* By whom made *R.C. Walker & Co (1907)* when made *1919*
 Boilers made at _____ By whom made _____ when made *1920*
 Registered Horse Power _____ Owners *B.W. Steamship Co Ltd* Port belonging to *Hull*
 Nom. Horse Power as per Section 28 *15* Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted

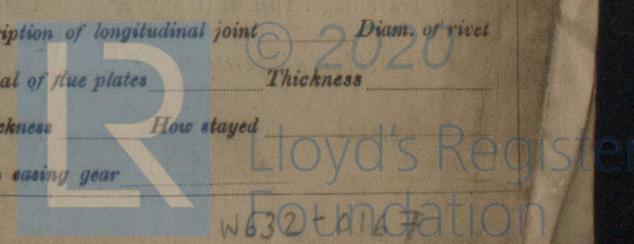
ENGINES, &c.—Description of Engines *Compound* No. of Cylinders *2* No. of Cranks *2*
 Dia. of Cylinders *9 & 18* Length of Stroke *12* Revs. per minute *200* Dia. of Screw shaft as per rule *4.2* Material of screw shaft *Steel*
 as fitted *4.4*
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No liners* Is the after end of the liner made water tight
 in the propeller boss _____ 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 *20 1/2*
 Dia. of Tunnel shaft as per rule *3.8* Dia. of Crank shaft journals as per rule *4* Dia. of Crank pin *4* Size of Crank web *14 x 2 1/8* Dia. of thrust shaft under
 as fitted *3.8* as fitted _____ collars *4* Dia. of screw *4-9* Pitch of Screw *5-0* No. of Blades *4* State whether moveable *No* Total surface *9.5*
 No. of Feed pumps *1* Diameter of ditto *1 1/4* Stroke *6* Can one be overhauled while the other is at work _____
 No. of Bilge pumps *1* Diameter of ditto *2* Stroke *6* Can one be overhauled while the other is at work _____
 No. of Donkey Engines *one* Sizes of Pumps *4 x 4 & 3 Single* No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room *3 @ 2"* In Holds, &c. *1 @ 2"*
 No. of Bilge Injections *1* sizes *3* Connected to condenser, or to circulating pump *Chap* Is a separate Donkey Suction fitted in Engine room & size *3"*
 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 *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 *4/6/19* of Stern Tube *4/6/19* Screw shaft and Propeller *4/6/19*
 Is the Screw Shaft Tunnel watertight *Yes* Is it fitted with a watertight door _____ worked from _____

BOILERS, &c.—(Letter for record *(5)*) Manufacturers of Steel _____
 Total Heating Surface of Boilers *3250* Is Forced Draft fitted *No* No. and Description of Boilers *one cyl. smth.*
 Working Pressure *130 lbs.* Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____
 Can each boiler be worked separately _____ Area of fire grate in each boiler *12.8* No. and Description of Safety Valves to
 each boiler *2 Spring loaded* Area of each valve *3.1416* Pressure to which they are adjusted *135 lbs* Are they fitted with easing gear *Yes*
 Smallest distance between boilers or uptakes and bunkers or woodwork *6" Brakelaged* Mean dia. of boilers _____ Length _____ Material of shell plates _____
 Thickness _____ Range of tensile strength _____ Are the shell plates welded or flanged _____ Descrip. of riveting: cir. seams _____
 long. seams _____ Diameter of rivet holes in long. seams _____ Pitch of rivets _____ Lap of plates or width of butt straps _____
 Per centages of strength of longitudinal joint _____ Working pressure of shell by rules _____ Size of manhole in shell _____
 Size of compensating ring _____ No. and Description of Furnaces in each boiler _____ Material _____ Outside diameter _____
 Length of plain part _____ Thickness of plates _____ Description of longitudinal joint _____ No. of strengthening rings _____
 Working pressure of furnace by the rules _____ Combustion chamber plates: Material _____ Thickness: Sides _____ Back _____ Top _____ Bottom _____
 Pitch of stays to ditto: Sides _____ Back _____ Top _____ If stays are fitted with nuts or riveted heads _____ Working pressure by rules _____
 Material of stays _____ Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ End plates in steam space: _____
 Material _____ Thickness _____ Pitch of stays _____ How are stays secured _____ Working pressure by rules _____ Material of stays _____
 Diameter at smallest part _____ Area supported by each stay _____ Working pressure by rules _____ Material of Front plates at bottom _____
 Thickness _____ Material of Lower back plate _____ Thickness _____ Greatest pitch of stays _____ Working pressure of plate by rules _____
 Diameter of tubes _____ Pitch of tubes _____ Material of tube plates _____ Thickness: Front _____ Back _____ Mean pitch of stays _____
 Pitch across wide water spaces _____ Working pressures by rules _____ Girders to Chamber tops: Material _____ Depth and
 thickness of girder at centre _____ Length as per rule _____ Distance apart _____ Number and pitch of stays in each _____
 Working pressure by rules _____ Superheater or Steam chest; how connected to boiler _____ Can the superheater be shut off and the boiler worked
 separately _____ 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 _____
 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 _____

Copper or Y.M. in Ship _____
 Iron in Ship *1 1/2*
 Inches required per Run *1 1/2*
 Clamp _____
 Clamp _____
 Deck _____

Iron or Steel give the

WRITTEN 18/3/20



VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description				
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
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with easing 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	
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		

SPARE GEAR. State the articles supplied:— *Two connecting rods top end & two connecting bottom end & 1 set coupling bolts & nuts. 2 main bearing bolts & nuts 1 set air feed & bilge pump valves, one feed & donkey check valve a quantity of bolts & nuts & iron of various sizes.*

The foregoing is a correct description,
FOR R. G. WALKER, LTD.
 Arthur Walker (manager) Manufacturer.

Dates of Survey while building: During progress of work in shops -- Hull: Jun 4, Aug. 19, Oct. 2, Dec. 11, 30 - 1920: - Feb. 6, 13. = 8.
 During erection on board vessel ---
 Total No. of visits

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts	Cylinders	Dec 6-1918	Slides	31/3/19	Covers	6/12/18	Pistons	6/12/18	Rods	31/3/19	
Connecting rods	31/3/19	Crank shaft	31/3/19	Thrust shaft	27/1/19	Tunnel shafts	✓	Screw shaft	27/1/19	Propeller	5/1/19
Stern tube	27/1/19	5/2/19	Steam pipes tested	2/10/19	Engine and boiler seatings	19/8/19	Engines holding down bolts	19/8/19			
Completion of pumping arrangements	30/12/19	Boilers fixed	11/12/19	Engines tried under steam	30/12/19						
Main boiler safety valves adjusted	11/12/19	Thickness of adjusting washers	5 3/8" P 5/8"								
Material of Crank shaft	Steel	Identification Mark on Do.	G.S.A.		Material of Thrust shaft	Steel	Identification Mark on Do.				
Material of Tunnel shaft	✓	Identification Marks on Do.	✓		Material of Screw shafts	5"	Identification Marks on Do.				
Material of Steam Pipes	tougher				Test pressure	260.					

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery has been built under special survey; the materials & workmanship are good. The machinery has been sent to Hull where it will be fitted on board. The machinery has been satisfactorily fitted on to the completion the machinery was tried in the Dumba with satisfactory results. The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the head L.M.C.-2-20 marked in Red in the Society's Register Book.*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 2.20

*2-2-0
 2-13-4
 3-4-8
 8-0-0*

JWD 19/2/20
J.R.R.
J. Shuttle
J.S. Ritchie
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

The amount of Entry Fee	£ 1	When applied for	
Special	£ 2	19 May 1919	Hull
Donkey Boiler Fee	£ 3	7/2/20	Com.
Travelling Expenses (if any)	£ 3	12-16-1919	Hull
Committee's Minute	ERI.5-MAR.19	5/3/20	Hull
Assigned	+ L.M.C. 2.20		

Certificate (if required) to be sent to Committee's Minute.