

## REPORT ON MACHINERY.

No. 31190

Received at London Office

Date of writing Report 3/7/19 When handed in at Local Office 3/7/19 Port of Hull SAT. 5-JUL. 1919  
 No. in Survey held at Hull Date, First Survey 9.10.18 Last Survey 26/6/19  
 Reg. Book. on the FLORENCE JOHNSON (late Lewis McKenzie) (Number of Visits)  
 Master Built at Hull By whom built Belmont & Sons Ltd Tons { Gross 324  
 Engines made at Hull By whom made Thos. J. Holmes & Son Ltd Net 148  
 Boilers made at Hull By whom made Do. When built 1919  
 Registered Horse Power 87 Owners James Johnson Port belonging to Scarborough  
 Com. Horse Power as per Section 28 87 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 13"-23"-37" Length of Stroke 26" Revs. per minute 115 Dia. of Screw shaft as per rule 8.29 Material of Steel  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube No Is the after end of the liner made water tight  
 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 No liner (Vickers type) Length of stern bush 36"  
 Dia. of Tunnel shaft as per rule 7.04 Dia. of Crank shaft journals as per rule 7.39 Dia. of Crank pin 7 1/2" Size of Crank webs 15x11" Dia. of thrust shaft under  
 rollers 7 1/2" Dia. of screw 9-7 1/2" Pitch of Screw 11-0 No. of Blades 4 State whether moveable No Total surface 33 sq  
 No. of Feed pumps one Diameter of ditto 2 1/2" Stroke 14 3/4" Can one be overhauled while the other is at work ✓  
 No. of Bilge pumps one Diameter of ditto 2 1/2" Stroke 14 3/4" Can one be overhauled while the other is at work -  
 No. of Donkey Engines one 1/2 inch Sizes of Pumps 6", 4 1/2" x 6" duplex No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room Two 2" dia. In Holds, &c. one 2" dia in each compartment  
all motions also connected to ejectors  
 No. of Bilge Injections one sizes 3 1/2" Connected to condenser, or circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 3 1/2 inch  
 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  
 That pipes are carried through the bunkers For motions & which steam How are they protected strong 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 ✓ Is it fitted with a watertight door worked from  
 MILLERS, &c.—(Letter for record 5) Manufacturers of Steel Pat Talbot & J. Spencer & Sons

Total Heating Surface of Boilers 1440 sq Is Forced Draft fitted No No. and Description of Boilers one single ended multi  
 Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs Date of test 30/4/19 No. of Certificate 3354  
 In each boiler be worked separately ✓ Area of fire grate in each boiler 48 sq No. and Description of Safety Valves to  
 each boiler Two spring loaded Area of each valve 4.9 sq Pressure to which they are adjusted 205 lbs Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 8" clear Mean dia. of boilers 16 1/2" Length 10' 8" Material of shell plates Steel  
 Thickness 1 1/4" Range of tensile strength 28-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams double  
 Long. seams T.R. JBS Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 5/8" Lap of plates or width of butt straps 18"  
 Percentages of strength of longitudinal joint 85.9% Working pressure of shell by rules 202 lbs Size of manhole in shell 16x12"  
 Size of compensating ring 7" x 1 1/4" No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 40"  
 Length of plain part top 78 1/2" Thickness of plates bottom 89" Description of longitudinal joint welded No. of strengthening rings -  
 Working pressure of furnace by the rules 206 Combustion chamber plates: Material Steel Thickness: Sides 3/4" Back 3/2" Top 3/4" Bottom 3/4"  
 Pitch of stays to ditto: Sides 10x8" Back 9 1/2x8 1/2" Top 11x8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 208 lbs  
 Material of stays Steel Area at smallest part 2.07 sq Area supported by each stay 88 sq Working pressure by rules 211 lbs End plates in steam space:  
 Material Steel Thickness 1 1/2" Pitch of stays 19x17 1/2" How are stays secured IN & W Working pressure by rules 210 lbs Material of stays Steel  
 Area at smallest part 7.5 sq Area supported by each stay 335 sq Working pressure by rules 233 Material of Front plates at bottom Steel  
 Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 13 1/2x9 1/2" Working pressure of plate by rules 218  
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 5/8" Mean pitch of stays 10"  
 Pitch across wide water spaces 14" Working pressures by rules 215 lbs Girders to Chamber tops: Material Steel Depth and  
 Thickness of girder at centre 11 1/8x1 1/2" Length as per rule 36.2" Distance apart 11" Number and pitch of stays in each 3x8"  
 Working pressure by rules 201 lbs Steam dome: description of joint to shell ✓ % 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 ✓ 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 ✓

W893 0031



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied: *Two top end bolts & nuts, two main bearing bolts & nuts, two bottom end bolts & nuts, one set coupling bolts & nuts, one set air feed & bilge pump valves & pump ring, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, three condenser tubes, one set feeders, & a quantity of bolts & nuts, & iron of various sizes.*

The foregoing is a correct description,

**CHARLES D. HOLMES & CO. LTD.**

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1918 Oct 9-10-24-26-28-29-31-Nov 8-15-22-26-30-Dec 6-10-18-24  
During erection on board vessel - - 30-31-Jan, 3-10-11-16-20-29-30 Feb 6-8-27-Mar 19 Apr 2-9-10-Jun 16-17-23-26  
Total No. of visits 36

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

Dates of Examination of principal parts—Cylinders 3/1/19 Slides 8/2/19 Covers 3/1/19 Pistons 10/4/19 Rods 11/1/19  
Connecting rods 16/1/19 Crank shaft 8/2/19 Thrust shaft 27/2/19 Tunnel shafts - Screw shaft 29/10/18 Propeller 29/10/18  
Stern tube 31/10/18 Steam pipes tested 17/6/19 Engine and boiler seatings 16/5/19 Engines holding down bolts 16/6/19  
Completion of pumping arrangements 26/6/19 Boilers fixed 25/6/19 Engines tried under steam 26/6/19  
Completion of fitting sea connections 31/10/18 Stern tube 31/10/18 Screw shaft and propeller 31/10/18  
Main boiler safety valves adjusted 25/6/19 Thickness of adjusting washers *9 1/2" F 3/8"*  
Material of Crank shaft *Steel* Identification Mark on Do. 2304 Material of Thrust shaft *Steel* Identification Mark on Do. 2306  
Material of Tunnel shafts - Identification Marks on Do. - Material of Screw shafts *Steel* Identification Marks on Do. 2179  
Material of Steam Pipes *Copper* Test pressure *400 lbs*

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 -

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Mersey class.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boiler of this vessel have been built under special survey, and the materials & workmanship are good. On completion they were examined while running full power trials in the Dumbey and found satisfactory. The machinery throughout is now in good & efficient condition, & eligible in my opinion to have the word L.M.C. 6-19 marked in red in the Surveyor's Register Book.*

It is submitted that  
this vessel is eligible for  
**THE RECORD. + LMC 6-19**

Roll

5-7-19

The amount of Entry Fee ... £ 2-0-0  
Special ... £ 26-2-0  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, 4/7/19  
When received, 18/7/19

*Harbottle*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 8-JUL 1919

Assigned

+ L.M.C. 6-19

MACHINERY CERTIFICATE  
2/7 WRITTEN



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Lloyd's Register  
Foundation