

# REPORT ON MACHINERY.

No. 19627

Port of *Newport Mon*

Received at London Office *W.E.U. 220011919*

No. in Survey held at *Newport Mon*

Date, first Survey *3 Sept*

Last Survey *12 Sept* 1919

Book *57* on the *S/S Belle du Havre*

(Number of Visits *14*)

Gross Tons *5599*

Net Tons *3481*

Master *J. Henry* Built at *London Dock* By whom built *North of Island W.B. Co*

When built *1919*

Engines made at *Grunock* By whom made *John G. Kincaid & Co Ltd*

when made *1919*

Boilers made at *Grunock* By whom made *do*

when made *1919*

Registered Horse Power Owners *Cir. Harraire Pen de la p a la port belonging to Havre*

Dom. Horse Power as per Section 28 *462* Is Refrigerating Machinery fitted for cargo purposes *no* Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines *Inverted Triple Expansion* No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *25.41 x 68* Length of Stroke *48* Revs. per minute *75* Dia. of Screw shaft *14.3* Material of screw shaft *S*

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*

the propeller boss *Yes* If the liner is in more than one length are the joints burned *no* If the liner does not fit tightly at the part *no*

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *Yes* If two *no*

liners are fitted, is the shaft lapped or protected between the liners *Yes* Length of stern bush *4.10*

Dia. of Tunnel shaft *12.79* as per rule *12.69* Dia. of Crank shaft journals *13.22* as per rule *13.32* Dia. of Crank pin *13.62* Size of Crank webs *6.5 x 8.7* Dia. of thrust shaft under *13.62*

Collars *13.62* Dia. of screw *17.6* Pitch of Screw *17.6* No. of Blades *4* State whether moveable *no* Total surface *100 sq*

No. of Feed pumps *2* Diameter of ditto *4* Stroke *7 1/2* Can one be overhauled while the other is at work *Yes*

No. of Bilge pumps *2* Diameter of ditto *3 1/2* Stroke *7 1/2* Can one be overhauled while the other is at work *Yes*

No. of Donkey Engines *5* Sizes of Pumps *1 - 9 x 18 x 21 1.4 x 2.3 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps *1 - 5 x 5 x 6*

Engine Room *1.3 1/2 dia. 4.3* In Holds, &c. *See part 1.3. Not 2.3. no 2.2.3. no 3.2.3*

No of Bilge Injections *1* sizes *10* Connected to condenser to circulating pump *Yes* 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 *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 *Yes* of Stern Tube *Yes* Screw shaft and Propeller *Yes*

Is the Screw Shaft Tunnel watertight *As far as can be seen* Is it fitted with a watertight door *Yes* worked from *Top platform*

OILERS, &c.—(Letter for record *Yes*) Manufacturers of Steel *Yes*

Total Heating Surface of Boilers *6972* Is Forced Draft fitted *Yes* No. and Description of Boilers *3 cylindrical Multitubular 3SB*

Working Pressure *180 lbs* Tested by hydraulic pressure to *Yes* Date of test *Yes* No. of Certificate *Yes*

Can each boiler be worked separately *Yes* Area of fire grate in each boiler *53.59 sq* No. and Description of Safety Valves to *Yes*

each boiler *2 Spring loaded* Area of each valve *3 1/2* 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 *6 ft* Mean dia. of boilers *15.0* Length *11.81* Material of shell plates *S*

Thickness *1 1/2* Range of tensile strength *29/33* Are the shell plates welded or flanged *no* Descrip. of riveting: cir. seams *BR*

long. seams *T.R. DBS* Diameter of rivet holes in long. seams *1 1/4* Pitch of rivets *8 1/4* Lap of plates or width of butt straps *1.6 1/2*

Per centages of strength of longitudinal joint *85.8* Working pressure of shell by rules *183* Size of manhole in shell *16 x 12*

Size of compensating ring *2.5 x 2.1 x 2.1* No. *1* Description of Furnaces in each boiler *3 Annular* Material *S* Outside diameter *3.11*

Length of plain part *3.9* Thickness of plates *3 1/2* Description of longitudinal joint *weld* No. of strengthening rings *Yes*

Working pressure of furnaces by the rules *186* Combustion chamber plates: Material *S* Thickness: Sides *19* Back *5* Top *19* Bottom *14*

Pitch of stays to ditto: Sides *8 x 7 1/2* Back *8 1/2 x 7 1/2* Top *8 x 7 1/2* If stays are fitted with nuts or riveted heads *no* Working pressure by rules *196*

Material of stays *S* Diameter at smallest part *1.79* Area supported by each stay *62 sq* Working pressure by rules *260* End plates in steam space: *Yes*

Material *S* Thickness *1 1/2* Pitch of stays *1.6 x 1.5* How are stays secured *DN. H.* Working pressure by rules *207* Material of stays *S*

Diameter at smallest part *1.5* Area supported by each stay *340 sq* Working pressure by rules *229* Material of Front plates at bottom *S*

Thickness *1 1/8* Material of Lower back plate *S* Thickness *1 1/8* Greatest pitch of stays *12 1/4* Working pressure of plate by rules *183*

Diameter of tubes *2 1/2* Pitch of tubes *3 1/2* Material of tube plates *S* Thickness: Front *1 1/2* Back *1 1/8* Mean pitch of stays *9 3/8*

Pitch across wide water spaces *13* Working pressures by rules *315* Girders to Chamber tops: Material *S* Depth and *Yes*

thickness of girder at centre *9 1/4* Length as per rule *3.0* Distance apart *8* Number and pitch of stays in each *3. 7 1/2*

Working pressure by rules *184* Superheater or Steam chest; how connected to boiler *Yes* Can the superheater be shut off and the boiler worked *Yes*

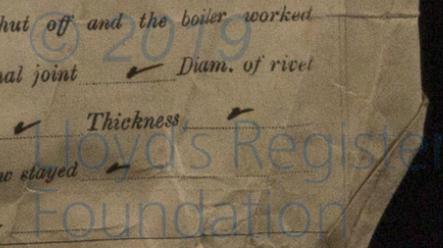
separately *Yes* Diameter *Yes* Length *Yes* Thickness of shell plates *Yes* Material *Yes* Description of longitudinal joint *Yes* Diam. of rivet *Yes*

holes *Yes* Pitch of rivets *Yes* Working pressure of shell by rules *Yes* Diameter of flue *Yes* Material of flue plates *Yes* Thickness *Yes*

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

Working pressure of end plates *Yes* Area of safety valves to superheater *Yes* *Yes* fitted with easing gear *Yes*

W268-0205



**VERTICAL DONKEY BOILER—** Manufacturers of Steel

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

**SPARE GEAR.** State the articles supplied:— *two propellers, 1 set of coupling bolts, one set of top & bottom end bolts, one eccentric rod & strap, one set of piston rings for H.P. IP & L.P. pistons, one set of feed & bulge pump valves & seats, & one discharge valve & seat, full set of air pump valves, 92 condenser tubes 4 5/8 in B tubes & 6 stay tubes, riveted bottom.*

The foregoing is a correct description, *2 Main bearing bolts*

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	During erection on board vessel - -	Total No. of visits	4	Is the approved plan of main boiler forwarded herewith	Yes
					" donkey "	No

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	Engines holding down bolts		
Completion of pumping arrangements	Boilers fixed	Engines tried under steam			
Main boiler safety valves adjusted	Thickness of adjusting washers				
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.		
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.		
Material of Steam Pipes		Test pressure			

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *This vessel was been placed in dry dock. Propellers & outside fastenings examined & found in order. Screw shaft drawn & examined continuous lines in two parts (stepped but not brass) The sea connections have been examined & found in order. Parts of Machinery opened out for survey are as follows. H.P. Cyl. & valve gear. IP Cyl. & fan. Port main boiler & donkey boiler (not mounted) scabbings of same have been checked with plan. supplied by the builders & kept on vessel. The boiler Reparatation status, the further examination of boiler, then mountings & Machinery will be done at Stairs.*

*Survey of Machinery has been taken & are as enumerated, with the exception of Dia L.P. cylinder & crank pins (not checked) No far as seen the workmanship is good & the machinery will be eligible for the Record of L.M.C. 9.19. Some shafts seen 9.19 on completion of survey.*

The amount of Entry Fee..	£	When applied for,
Special	£	19
Donkey Boiler Fee	£	When received,
Travelling Expenses (if any)	£	19

Committee's Minute  
Assigned

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

TUE. JUN. 22 1920  
FRI. DEC. 22 1920

