

REPORT ON MACHINERY.

No. 286

Received at London Office

of writing Report 14-6-1918 When handed in at Local Office 14-6-1918 Port of *Sheffield* WED. 7-AUG. 1918
o. in Survey held at *Birmingham* Date, First Survey *20/11/17* Last Survey *5-6-18*
eg. Book. on the *H.M. "Racia" Type Lug "Saucy"* (Number of Visits *14* *30-7-18* Hull
Tons }
Gross }
Net }
Master Built at *Hull* By whom built *Livingstone & Co. 186* When built *1918-2*
Engines made at *Birmingham* By whom made *Bellis Morcom Ltd* when made *1918-2*
Boilers made at *Hull* By whom made *Earle & Co* when made *1918-2*
Registered Horse Power *1200 SHP* Owners *British Admiralty* Port belonging to
Nom. Horse Power as per Section 28 *186.5* 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 *18 1/2 x 28 1/2 x 48 1/2* Length of Stroke *28"* Revs. per minute *130* Dia. of Screw shaft *9 1/2"* Material of screw shaft *steel*
Is the screw shaft fitted with a continuous liner the whole length of the stern tube *no liner* Is the after end of the liner made water tight
If the liner is in more than one length are the joints burned *yes* 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
liners are fitted, is the shaft lapped or protected between the liners *no* Length of stern bush *3' 6"* (Whitworth)
Dia. of Tunnel shaft *8.53* as per rule *8.95* Dia. of Crank shaft journals *9"* as fitted *9"* Dia. of Crank pin *9"* Size of Crank webs *16 1/2 x 16 1/2* Dia. of thrust shaft under
collars *9"* Dia. of screw *10 7/8"* Pitch of Screw *12' 0"* No. of Blades *4* State whether moveable *no* Total surface *34 sq ft* W. tank
No. of Feed pumps *one* Diameter of ditto *3 1/2"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes* Live Win *7 1/2, 5 1/2 x 15*
No. of Bilge pumps *one* Diameter of ditto *3 1/2"* Stroke *13 1/2"* Can one be overhauled while the other is at work *yes*
No. of Donkey Engines *two* Sizes of Pumps *5" - 8" x 12" & 8" - 6" x 12"* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *one 2 1/2" & two 2 1/2" in stokeholds* In Holds, &c. *one 2 1/2" Chain Locker one 2 1/2", Truck*
water tank one *3 1/2"* After peak tank one *3 1/2"*
No. of Bilge Injections *one* sizes *6"* Connected to condenser, or to circulating pump *no* Is a separate Donkey Suction fitted in Engine room & size *yes 2 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 *no*
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 *For suction, Exhaust to Atmos & steam* How are they protected *strong casings*
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 *yes*

BOILERS, &c.—(Letter for record) Manufacturers of Steel
Total Heating Surface of Boilers *3600* Is Forced Draft fitted *NO* No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of fire grate in each boiler No. and Description of Safety Valves to
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork 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 joints 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 top Thickness of plates crown Description of longitudinal joint No. of strengthening rings
bottom 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 End plates in steam space:
Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom
Area at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
Thickness Material of Lower back plate Thickness Greatest pitch of stays Mean pitch of stays
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 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
Tested by Hydraulic Pressure to
SUPERHEATER. Type Date of Approval of Plan Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler
Date of Test Pressure to which each is adjusted Is Easing Gear fitted

W1230-0072

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 bottom end bolts & nuts
two main bearing bolts & nuts, one set of coupling bolts & nuts, valves for all
pumps, & except crank shaft, screw shaft & propeller all spare gear as per
specification.

The foregoing is a correct description,

For Belliss & Morcom Limited.

N. H. Denton

Manufacturer of Main Engine.

Dates of Survey while building { During progress of work in shops - - 22/4/17- 8/5-18/5- 20/5- 27/5- 14/6- 10/6- 18/6- 24/6- 5/7- 10/7- 12/6/18
During erection on board vessel - - - See Hull Rpt No. 30643.
Total No. of visits

Is the approved plan of main boiler forwarded herewith

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 8/5 to 8/6/18 Slides 8/5 to 8/6/18 Covers 8/5 to 8/6/18 Pistons 8/5 to 8/6/18 Rods 8/5 to 8/6/18
Connecting rods 8/5 to 8/6/18 Crank shaft 10/6/18 Thrust shaft 12/6/18 Tunnel shafts 12/6/18 Screw shaft 12/6/18 Propeller 30-4-18
Stern tube 8/5 to 8/6/18 Steam pipes tested 27-5-18 Engine and boiler seatings 22-5-18 Engines holding down bolts 3-7-18

Completion of pumping arrangements 20-6-18 Boilers fixed 27-5-18 Engines tried under steam 30-6-18

Completion of fitting sea connections 17-4-18 Stern tube 30-4-18 Screw shaft and propeller 30-4-18

Main boiler safety valves adjusted 18-7-18 Thickness of adjusting washers For P 3/8 S 3/8 B 1/4 P 3/8 B S 3/8 F 1

Material of Crank shaft Steel Identification Mark on Do. 1755 Material of Thrust shaft Steel Identification Mark on Do. 852

Material of Tunnel shafts Steel Identification Marks on Do. 857 PM Material of Screw shafts Steel Identification Marks on Do. 8546

Material of Steam Pipes Solid drawn copper on length steel Test pressure 600 lbs 320 steel 520

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 no. If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been built under special survey and in accordance with the specification and the Society's Rules, material and workmanship are found and good

The propeller shafts were forwarded to Hall to be fitted in the propeller at that port
The machinery has been properly fitted & secured on board the vessel in accordance with the specification & the rules of this Society & on completion tested under full power for four hours found satisfactory
The safety valves have been adjusted under steam & tested for accumulation which did not exceed 180 lbs.
In my opinion the vessel is eligible for the record + L.M.C. 8.18.

The amount of Entry Fee ... £ : :
Special as agreed with Admiralty 29: 18 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 14 : 19 :
When applied for, 14/8/18
When received, 20/10/18

Committee's Minute TUE. 13 AUG. 1918

Assigned + L.M.C. 8.18.

P. F. Morton Frank A. Langer
Engineer Surveyor to Lloyd's Register of Shipping
this vessel is eligible for THE RECORD. + L.M.C.
Lloyd's Register Foundation