

REPORT ON MACHINERY.

No. 23814.

SAT. 5 SEP 1908

No. 5596

JUL. 13 OCT 1908

Port of Sunderland

Received at London Office

No. in Survey held at Sunderland Date, first Survey 1st April Last Survey 1st Sept. 1908
 Reg. Book. S. S. Jamaica (Mub) 26th May (Number of Visits 34) (Mub) 14 5th Oct 1908
 on the

Master Built at Middlesbro' By whom built W. Harker & Sons When built 1908

Engines made at Sunderland By whom made James Mac Coll & Pollock when made 1908

Boilers made at Sunderland By whom made James Mac Coll & Pollock when made 1908

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 171 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 18" 29" 48" Length of Stroke 33" Revs. per minute 90 Dia. of Screw shaft as per rule 9.74 Material of Steel
as fitted 10.5" 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 3' 4 1/2"

Dia. of Tunnel shaft as per rule 8.94 Dia. of Crank shaft journals as per rule 9.35 Dia. of Crank pin 9 5/8" Size of Crank webs 12 1/2 x 6 1/2" Dia. of thrust shaft under

collars 9 5/8" Dia. of screw 11' 6" Pitch of Screw 14' 3" No. of Blades 4 State whether moveable no Total surface 56 sq

No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 17 1/2" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 3/4" Stroke 17 1/2" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps F. 3" x 6" x 6" B. 4" x 5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3 of 2" & 1 of 2 1/4" In Holds, &c. Fore hold, three 2" dia, aft.

hold, three 2" dia, Tunnel well, one 2 1/4" dia.

No. of Bilge Injections 1 sizes 4 3/4" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes - 2 1/4"

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 ✓

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 21. 7. 08 of Stern Tube 21. 8. 08 Screw shaft and Propeller 25. 8. 08

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel James J. Spencer & Sons

Total Heating Surface of Boilers 3000 sq Is Forced Draft fitted no No. and Description of Boilers 2 S.E. Cylindrical Built

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 17. 7. 08 No. of Certificate 2711

Can each boiler be worked separately yes Area of fire grate in each boiler 41.6 sq No. and Description of Safety Valves to

each boiler 2 spring Area of each valve 4.91 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork about 7' 1/2" Mean dia. of boilers 12' 9" Length 10' 6" Material of shell plates steel

Thickness 1 5/32" Range of tensile strength 28 1/2/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. lap

long. seams L. r. d. v. s. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18 1/4"

Per centages of strength of longitudinal joint rivets 92.1 Working pressure of shell by rules 206.2 lbs Size of manhole in shell 19 x 14 1/2 to 16 x 12

Size of compensating ring 2' 3" x 2' 7" x 1 5/32" No. and Description of Furnaces in each boiler 2 Brown Impressed Material steel Outside diameter 45 1/4"

Length of plain part top Thickness of plates crown 19/32 Description of longitudinal joint weld No. of strengthening rings ✓

Working pressure of furnace by the rules 192 lbs Combustion chamber plates: Material steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 1 1/8"

Pitch of stays to ditto: Sides 8 7/8" x 9 1/2" Back 9 1/2" x 8 3/8" Top 9 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 194 lbs

Material of stays steel Diameter at smallest part 2.03 Area supported by each stay 82.7 sq Working pressure by rules 220 lbs End plates in steam space:

Material steel Thickness 1 7/32" Pitch of stays 18 3/4" x 18 3/4" How are stays secured d. r. w. Working pressure by rules 189.2 lbs Material of stays steel

Diameter at smallest part 7.24 Area supported by each stay 351.56 sq Working pressure by rules 214.3 lbs Material of Front plates at bottom steel

Thickness 1 3/16" Material of Lower back plate steel Thickness 1 3/16" Greatest pitch of stays 13 x 8 3/8" Working pressure of plate by rules 190.8 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 1/2" Material of tube plates steel Thickness: Front 13/16" Back 13/16" Mean pitch of stays 13 1/2" x 9"

Pitch across wide water spaces 13 1/4" Working pressures by rules 261 lbs Girders to Chamber tops: Material steel Depth and

thickness of girder at centre 7 3/8" x 15" Length as per rule 27 7/8" Distance apart 9 3/8" Number and pitch of stays in each 2 - 8 1/2"

Working pressure by rules 185 lbs 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

holes ✓ 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						
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 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	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	Stayed by					
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey				

SPARE GEAR. State the articles supplied:— 2 Top end, 2 Bottom end, 2 Main bearing & 1 set of coupling bolts
6 pump ring bolts, 1 set Air, Circulating, Feed & Bilge pump Valves, 1 set Donkey pump Valves, 1 Main
Feed Check Valve, Bolts & Nuts assorted & iron of size, 1 slide Valve spindle, 1 pair bottom end tracers, 6 1/2"
Cover Studs, 1 Air pump rod, 1 Propeller

The foregoing is a correct description,
MAC COLL & POLLOCK LTD

Manufacturer.

Dates of Survey while building	During progress of work in shops - -	During erection on board vessel - -	Total No. of visits	Is the approved plan of main boiler forwarded herewith
			34	
			(Mub) 14	

Dates of Examination of principal parts—Cylinders	8.7.08	Slides	17.6.08	Covers	11.6.08	Pistons	8.7.08	Rods	3.7.08
Connecting rods	29.6.08	Crank shaft	19.6.08	Thrust shaft	22.6.08	Tunnel shafts	29.6.08	Screw shaft	29.6.08
Propeller	22.6.08	Stern tube	14.7.08	Steam pipes tested	24.8.08	Engine and boiler seatings	21.7.08	Engines holding down bolts	25.8.08
Completion of pumping arrangements	28.8.08	Boilers fixed	25.8.08	Engines tried under steam	1.9.08				
Main boiler safety valves adjusted	1.9.08	Thickness of adjusting washers							
Material of Crank shaft	Steel	Identification Mark on Do.	2377 AF	Material of Thrust shaft	Steel	Identification Mark on Do.	652 H.K.		
Material of Tunnel shafts	Steel	Identification Marks on Do.	2574, 2574 P.A.	Material of Screw shafts	Steel	Identification Marks on Do.	653 H.K.		
Material of Steam Pipes	Copper	Test pressure	400						

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under special survey, the material & workmanship found good & efficient fitted & tested in accordance with the rules & eligible in our opinion for classification with record of + LMC 10-08.
The vessel has now returned to the Isles for the completion of electric light installation etc. (Surveyors advised)

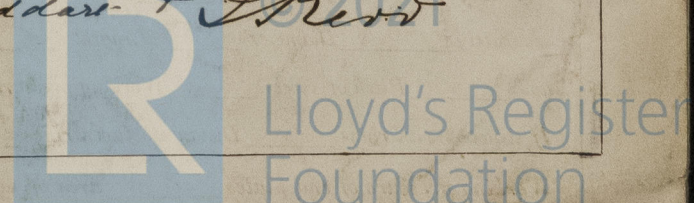
It is submitted that
this vessel is eligible for
THE RECORD. L.M.C. 10.08.
ELEC. LIGHT.

J.R.R.
13.10.08
J.R. 13.10.08

The amount of Entry Fee.	£ 2 : 0 :	When applied for,	4.9.1908
Special	£ 25 : 13 :	When received,	13.10.1908
Donkey Boiler Fee	£ :		
Travelling Expenses (if any)	£ :		

Committee's Minute
Assigned
FRI. 16 OCT 1908
+ L.M.C. 10.08
Elec. light

Wm. Coomber.
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.
T.J. Stoddart & J. Kerr



MACHINERY CERTIFICATE
WRITTEN.