

N. No. 11875
Sunderland No 20958

REPORT ON MACHINERY.

Port of WEST HARTLEPOOL

Received at London Office SAT. 14 JUN 1902

To. in Survey held at Hartlepool Date, first Survey 23rd Oct. 1901 (Last Survey 27th May 1902)

Book. on the Steel S.S. "Ramsay" (Number of Visits 87) Tons { Gross 4318
Net 2779

By J. C. Mullan. Built at Sunderland By whom built J. L. Thompson & Son When built 1902

Engines made at Hartlepool By whom made Richardsons Westgarth & Co. When made 1902

Boilers made at Hartlepool By whom made do do when made 1902

Registered Horse Power 330 Owners Bolton S.S. Co. Ltd. Port belonging to London.

Is Refrigerating Machinery fitted No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders three No. of Cranks three

No. of Cylinders 25" 40" 64" Length of Stroke 45" Revs. per minute 60 Dia. of Screw shaft as per rule 13 1/2" Lgth. of stern bush 4 1/2"

Dia. of Tunnel shaft as per rule 11 1/2" Dia. of Crank shaft journals as per rule 12 1/2" Dia. of Crank pin 13" Size of Crank webs 8 x 18 1/2" Dia. of thrust shaft under bars 13-0" Dia. of screw 14-0" Pitch of screw 14-0" No. of blades 4 State whether moceable no Total surface 81 sq ft.

No. of Feed pumps 2 Diameter of ditto 3" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Donkey Engines Two Sizes of Pumps Feed 4 1/2 x 6" Ballast 8 1/2 x 4" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Three 3 1/2" dia In Holds, &c. two of 3 1/2" each hold peak 2 1/2"

Tunnel well 2 1/2" a P. 2 1/2"

No. of bilge injections one sizes 5" Connected to condenser, or to circulating pump circ pump 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 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

How are they protected none

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock never 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) Total Heating Surface of Boilers 5381 sq ft Is forced draft fitted no

No. and Description of Boilers 2 single ended. byf. Mult Working Pressure 160lb Tested by hydraulic pressure to 320lbs.

Date of test 18-3-02 Can each boiler be worked separately Yes Area of fire grate in each boiler 51 sq ft No. and Description of safety valves to each boiler 2 Spring direct Area of each valve 4.04 sq" Pressure to which they are adjusted 160 165lb Are they fitted with easing gear Yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 14" Mean dia. of boilers 16-4" Length 11-0" Material of shell plates steel

Thickness 1 3/16" Range of tensile strength 28-32 Are they welded or flanged no Descrip. of riveting: cir. seams double long. seams treble

Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/8" Lap of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint rivets 85.5 Working pressure of shell by rules 161lb Size of manhole in shell 13" x 16 1/2"

Size of compensating ring 29" x 30" x 1 3/16" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 49 1/2"

Length of plain part top 6-6" bottom 4-2" Thickness of plates crown 9" bottom 9 1/16" Description of longitudinal joint weld No. of strengthening rings —

Working pressure of furnace by the rules 148lb Combustion chamber plates: Material steel Thickness: Sides 9 1/16" Back 9 1/16" Top 9 1/16" Bottom 13 1/16"

Pitch of stays to ditto: Sides 8" x 8 1/2" Back 8" x 4 1/2" Top 8" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 160.8lb

Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 68 sq" Working pressure by rules 174lb End plates in steam space:

Material steel Thickness 1" Pitch of stays 17 1/2" x 18 1/2" How are stays secured D. N. M. Working pressure by rules 161lb Material of stays steel

Diameter at smallest part 2 1/2" Area supported by each stay 2930" Working pressure by rules 167lb Material of Front plates at bottom steel

Thickness 3/8" Material of Lower back plate steel Thickness 3/4" Greatest pitch of stays 13" Working pressure of plate by rules 166lb

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" Material of tube plates steel Thickness: Front 15 1/16" Back 3/4" Mean pitch of stays 9"

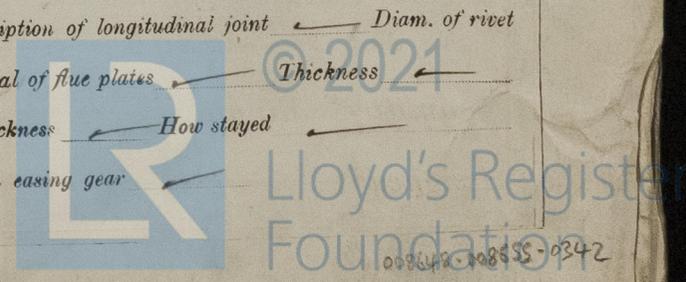
Pitch across wide water spaces 14 1/4" Working pressures by rules 166lb Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8" x 1 1/2" Length as per rule 2'-9" Distance apart 8 1/2" Number and pitch of Stays in each 3 - 8"

Working pressure by rules 160lb Superheater or Steam chest; how connected to boiler none 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 —



Particulars of donkey boiler appended

DONKEY BOILER— No. *one* Description *Cylindrical multitablet two plain furnace*
 Made at *S Shields* By whom made *J Eltrougham & Co* When made *1902* Where fixed *on deck*
 Working pressure *160* tested by hydraulic pressure to *6263* No. of Certificate *31,302* Fire grate area *7.6 sq m* Description of safety valves
 No. of safety valves *2* Area of each *3.14* Pressure to which they are adjusted *160* If fitted with easing gear *Yes* If steam from main boilers
 enter the donkey boiler *No* Dia. of donkey boiler Length Material of shell plates Thickness Range of ten-
 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 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
 joint Thickness of furnace crown plates Stayed by Working pressure of shell by rules
 Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:— *2 bon. rod top + 2 bon. rod bottom end bolts & nuts, 2 main bearings
 + one set of coupling bolts, one set of feed, bilge, air, cir. ballast & feed donkey pump valves, bolts
 nuts & iron various sizes, propellers, propellers shaft, 3/4" crank shaft, air & ex-
 pump rods & nuts, feed pump ram, set of packing rings for H.P. piston, piston valve, 4 feed
 check valves.*
 The foregoing is a correct description,

For RICHARDSONS, WESTGARTH & CO. LIMITED Manufacturer.

J. Richardson
 Dates of Survey while building
 During progress of work in shops— 1901. Dec. 1, 2, 3, 4, 5, 6, 7, 8, 9, 13, 14, 15, 18, 20, 21, 26, 27, 28, 30, Dec. 2, 3, 5, 6, 7, 9, 10, 11, 12, 14, 16, 17, 18, 19, 20, 1902
 During erection on board vessel— 19, 20, 21, 22, 23, 24, 27, 28, 29, 31, Feb. 1, 4, 5, 7, 10, 11, 12, 13, 17, 18, 19, 24, 25, 26, 27, 28, Mar. 3, 6, 7, 10, 12, 17
 Total No. of visits— 87. Sld. visits. 1901— April 23, May 8, 21, 27. Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *No*

General Remarks (State quality of workmanship, opinions as to class, &c.)

Material of screw shaft *Iron*. 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 *Yes* If two liners are fitted, is the shaft lapped or protected between the liners ✓

The main steam pipes have been tested by hydraulic pressure to 320 lbs. per sq. m. and found tight.
 The engines & boilers of this vessel have been built under Special Survey in accordance with the Rule requirements. The materials and workmanship are good and efficient, when completed and fitted on board were tried under steam at moorings with satisfactory results, and are now in good working order, and in our opinion, eligible to have notation **L.M.C. 5-02** in the Register's Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5-02

Certificate (if required) to be sent to W. Warthelood

The amount of Entry Fee. £ *3* : : When applied for, *8.5.02*
 Special £ *36 10* : :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :
 Committee's Minute TUES. 17 JUN 1902

C.M.
17.6.02
M. Smith
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Assigned *+ L.M.C. 5, 02*

