

REPORT ON MACHINERY

Id No. 22555
New No. 49808

Port of Sunderland

Received at London Office PHL 15 DEC 1905
New 13 Dec 1905
Last Survey 1 December 1905
(Number of Visits 23)

No. in Survey held at Sunderland Date, first Survey 5th July, 1905
 Reg. Book. 64 on the Steel Screw Steamer "ALGA" Tons { Gross 2752
 Master J. Randich Built at Newcastle By whom built Hunter + Nippon, Richardon When built 1905
 Engines made at Sunderland By whom made Richardson, Warton & Co., Ltd. when made 1905
 Boilers made at Sunderland By whom made Richardson, Warton & Co., Ltd. when made 1905
 Registered Horse Power _____ Owners Alga S. S. Co. Ltd. Port belonging to Trieste
 Nom. Horse Power as per Section 28 262 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion, Inverted No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 23-38-62 Length of Stroke 42 Revs. per minute 65 Dia. of Screw shaft as per rule 12.75 Material of Iron
 as fitted 13.50 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 4-4
 Dia. of Tunnel shaft as per rule 11.80 Dia. of Crank shaft journals as per rule 11.80 Dia. of Crank pin 12 Size of Crank webs 4 1/2 x 7 1/8 Dia. of thrust shaft under
 collars 13 Dia. of screw 15-9 Pitch of screw 16-6 No. of blades four State whether moveable no Total surface 48.5
 No. of Feed pumps Two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 3 1/2 Stroke 24 Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps 10x10 - 6x4x6 feed No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3" min one 3 1/2" Centre In Holds, &c. In all holds two 3"
Tunnel well one 2 1/4"
 No. of bilge injections one sizes 5" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size yes 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 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
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock while build? 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 4140 Is forced draft fitted no
 No. and Description of Boilers Two single ended, Cyb. Mult. Working Pressure 160 lb Tested by hydraulic pressure to 320 lb
 Date of test 14/11/05 Can each boiler be worked separately yes Area of fire grate in each boiler 58 No. and Description of safety valves to
 each boiler Two direct spring Area of each valve 7.07 Pressure to which they are adjusted 165 lb Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 18 Mean dia. of boilers 15-0 Length 10-6 Material of shell plates steel
 Thickness 1 1/8 Range of tensile strength 28 1/2 Are they welded or flanged no Descrip. of riveting: cir. seams Lap DR long. seams DRS-TR
 Diameter of rivet holes in long. seams 1 1/8 Pitch of rivets 8 Lap of plates or width of butt straps 16 1/2
 Per centages of strength of longitudinal joint 85-28 Working pressure of shell by rules 162.8 lb Size of manhole in shell end 16x12
 Size of compensating ring flanged No. and Description of Furnaces in each boiler Three plain Material steel Outside diameter 43 1/2
 Length of plain part top 4-0 Thickness of plates rown 3/4 Description of longitudinal joint Weld No. of strengthening rings one
 bottom 2-6 bottom 3/4
 Working pressure of furnace by the rules 162 lb Combustion chamber plates: Material steel Thickness: Sides 4/8 Back 4/8 Top 4/8 Bottom 3/4
 Pitch of stays to ditto: Sides 11 1/2 x 8 1/2 Back 11 1/4 x 8 1/8 Top 11 1/2 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 160 lb
 Material of stays steel Diameter at smallest part 1.57 Area supported by each stay 97.03 Working pressure by rules 166 lb End plates in steam space:
 Material steel Thickness 1 3/8 Pitch of stays 22x14 How are stays secured steel Working pressure by rules 163.4 lb Material of stays steel
 Diameter at smallest part 2.79 Area supported by each stay 374 Working pressure by rules 165.1 lb Material of Front plates at bottom steel
 Thickness 3/4 Material of Lower back plate steel Thickness 3/4 Greatest pitch of stays 13 x 8 5/8 Working pressure of plate by rules 159.8 lb
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 x 4 1/2 Material of tube plates steel Thickness: Front 3/4 Back 3/4 Mean pitch of stays 13 1/2 x 9
 Pitch across wide water spaces 14 Working pressures by rules 206.4 lb Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9 x 1 1/2 Length as per rule 30 Distance apart 11 1/2 Number and pitch of Stays in each Two 8 1/2
 Working pressure by rules 162 lb 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 —

See letter dated 16.12.05 - Prof



DONKEY BOILER— No. 1 Description See attached Ref.

Made at _____ By whom made _____ When made _____ Where fixed Main Deck

Working pressure tested by hydraulic pressure to _____ No. of Certificate _____ Fire grate area _____ 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 _____

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 _____ 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 _____ 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:— Propeller, two top end, two bottom end, two main bearings & one set of coupling bolts, feed & bilge valves, piston rings, assorted bolts & nuts a few bars of iron & other small gear

The foregoing is a correct description, **RICHARDSONS, WESTGARTH & CO., LTD**
 Manufacturer Frederic S. Russell ASSISTANT MANAGER.

Dates of Survey while building { During progress of work in shops - - } 1905: July 5, Aug: 22, Sept: 4, 15, 28, 29, Oct: 13, 6, 11, 14, 16, 19, 23, 27, Nov: 1, 4, 8, 14, 22, 25, 27, 29, Dec: 1, 11
 { During erection on board vessel - - } Nov: 1905 Dec: 12
 Total No. of visits 23

Is the approved plan of main boiler forwarded herewith Yes
 " " " donkey " " " Yes

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 sound & good. The Boilers & Steam pipes have been tested by Hydraulic Pressure in accordance with the Rules, the Machinery worked satisfactorily at the pressure & the safety valves recalcitrated under steam to their working pressure.

This vessel is eligible in my opinion to have the Notation **L M C 12-05** in the Register Book

It is submitted that this vessel is eligible for **THE RECORD L.M.C. 12.05**

The amount of Entry Fee. . . £ 2 : :
 Special £ 33 : :
 Donkey Boiler Fee £ : :
 Travelling Expenses (if any) £ : :

When applied for, 9.12.1905
 When received, 16.12.1905

Ed. P. H. S.
 15.12.05
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 15 DEC 1905

Assigned

+ L.M.C. 12.05

MACHINERY CERTIFICATE WRITTEN.



© 2020

Lloyd's Register Foundation

Surveyors on-Tyne

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

Rpt. No. Reg. Master Engine Donkey Boiler Register MUL (Letter Boilers No. of safety Are the Smallest Material Descrip Lap of rules boiler Descrip plates: Top smallest Pitch of Area su Lower b Pitch of water sp girder Working separatel holes If stiffene Working VERT Made at Working No. of saf enter the a strength Lap of pl Radius of Thickness plates FOR RILEY BR Dates of Survey while building