

REPORT ON MACHINERY.

No. 17036

Port of HullReceived at London Office 14th 3 AUG 1905

No. in Survey held at Hull Date, first Survey April 25th Last Survey July 14th 1905
 Reg. Book. Supp on the Screw Trawler "Arran" (Number of Visits 21) Gross 176
 Tons Net 60
 Master Built at Hull By whom built Charles S. B. & Co. Ltd. When built 1905
 Engines made at Hull By whom made Charles S. B. & Co. Ltd. when made 1905
 Boilers made at do By whom made do when made 1905
 Registered Horse Power Owners Hull Steam Fishing & Ice Co. Ltd. Port belonging to Hull
 Nom. Horse Power as per Section 28 464 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 10", 17", 28" Length of Stroke 22" Revs. per minute 112 Dia. of Screw shaft as per rule 6.65 Material of 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 ✓ If two
 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 2' 8 1/2"
 Dia. of Tunnel shaft as per rule 5.57 Dia. of Crank shaft journals as per rule 5.84 Dia. of Crank pin 6 1/4" Size of Crank webs 12 1/2" x 3 1/2" Dia. of thrust shaft under
 collars 6 1/4" Dia. of screw 8-9 Pitch of screw 8-0 root, 9-6 tip No. of blades 4 State whether moveable No Total surface 24 sq. ft.
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 11" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 2 Sizes of Pumps 6" x 3" x 6" 5" x 5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room One 2" dia. In Holds, &c. One 2" dia.
Ejector suction from Eng. bilge, hold, & ballast tanks, & discharge on deck.
 No. of bilge injections 1 sizes 3 1/2" Connected to condenser, or to circulating pump Cond. Is a separate donkey suction fitted in Engine room & size 3" Ejector
 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
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launch Is the screw shaft tunnel watertight None
 Is it fitted with a watertight door ✓ worked from ✓

BOILERS, &c.— (Letter for record (S)) Total Heating Surface of Boilers 750 sq. ft. Is forced draft fitted No
 No. and Description of Boilers One S.E. Cyl. Mult. Working Pressure 200 lbs Tested by hydraulic pressure to 400 lbs
 Date of test 28.6.05 Can each boiler be worked separately ✓ Area of fire grate in each boiler 25 1/2 sq. ft. No. and Description of safety valves to
 each boiler Two direct spring Area of each valve 3.14" 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 7 1/2" Mean dia. of boilers 10.6" Length 9.3' Material of shell plates Steel
 Thickness 1" Range of tensile strength 28-32 Are they welded or flanged ✓ Descrip. of riveting: cir. seams SR Lap long. seams SR S Pins
 Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 1/4" Lap of plates or width of butt straps 16"
 Per centages of strength of longitudinal joint rivets 91.3 Working pressure of shell by rules 207 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 3.4" x 2.6" x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 35.53"
 Length of plain part top 5.4 1/2" Thickness of plates crown 4.9" Description of longitudinal joint welded No. of strengthening rings ✓
 Working pressure of furnace by the rules 229 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 5/8" Top 5/8" Bottom 1 1/16"
 Pitch of stays to ditto: Sides 8 1/2" x 7" Back 7 1/2" x 7 1/2" Top 8 1/2" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 230 lbs
 Material of stays Steel Diameter at smallest part 1 3/8" Area supported by each stay 50.7" Working pressure by rules 233 lbs End plates in steam space:
 Material Steel Thickness 1 5/16" Pitch of stays 4 1/2" x 14" How are stays secured nut & wash. Working pressure by rules 208 lbs Material of stays Steel
Area at smallest part 5.18" Area supported by each stay 199.5" Working pressure by rules 259 lbs Material of Front plates at bottom Steel
 Thickness 1 5/16" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 15 1/2" x 12 1/2" Working pressure of plate by rules 210 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 5/8" Material of tube plates Steel Thickness: Front 1 5/16" Back 7/8" Mean pitch of stays 9 3/4" x 9 1/4"
 Pitch across wide water spaces 13 3/4" Working pressures by rules 202 lbs Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 7 1/2" x 1 3/4" Length as per rule 2.6 1/8" Distance apart 7" Number and pitch of Stays in each 22 8 1/4"
 Working pressure by rules 212 lbs 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 ✓

DONKEY BOILER—

No. Description

Made at _____ By whom made _____ When made _____ Where fixed _____
 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 boiler _____
 enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of _____
 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:— *Two top-end + two bottom-end connecting rod bolts + nuts. Two main bearing bolts + nuts. One set of coupling bolts + nuts. One set of feed + bilge pump valves. Main + donkey feed check valves. Assorted bolts + nuts, &c.*

The foregoing is a correct description,

F. J. Palethorpe Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1905: - Apr 25. 28. May 3. 11. 18. 22. 25. 31. June 2. 7. 14. 15. 19. 22. 23. 28. July 3. 6. 11. 13. 14.
 { During erection on board vessel - -
 Total No. of visits 21

Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " "

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

The Engines and Boiler of this vessel have been constructed under Special Survey, are of good material and workmanship, and have been fitted and secured on board in accordance with the Rules. They are now in good working condition and in my opinion eligible to have the notation of + LMC 7.05 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. *ILMC 7.05.*

Ans. 3.8.05

ES. 3.8.05

The amount of Entry Fee. £ 1 : : :
 Special £ 8 : : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 31/7/1905
 When received, 29/9/05

J. Kerr
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 4 AUG 1905

Assigned

+ LMC 7.05

MACHINERY CERTIFICATE WRITTEN.



© 2020

Lloyd's Register Foundation

STRAI

FLAT PLATE K
 (If Bar Keel, at
 GARBOARD OF

State actual
 thickness in
 way of Double
 Bottom.

Write 'Sheer Strake' opposite its corresponding letter.

DOUBLING OF

Length of
 and
 thickness

POOP SIDES
 RAISED QU
 BRIDGE SI
 FORECAST
 LENGTHS

Man
 manufact
 Plates, ou
 Donkey

Has the
 FRAME
 REVER

Lower
 Bowspr
 Topma
 Riggi
 Sails

Equ
 Num
 Certi

54
 54
 54

Certificate (if required) to be sent to _____

(The Surveyors are requested not to write on or below the space for Committee's Minute.)