

REPORT ON MACHINERY.

No. 17385

Port of Hull

Received at London Office 11/25 5 DEC 1905

No. in Survey held at Hull Date, first Survey July 26th Last Survey 2nd Dec 1905
 Reg. Book. 20444 on the Steel S. K. Emperor (Number of Visits 33)
 Master Built at Selby By whom built Messrs Buchanan Sons Tons { Gross 250
 Engines made at } Hull By whom made } Messrs Charles D. Holmes & Co when made } 1905
 Boilers made at } Hull By whom made } Charles D. Holmes & Co when made } 1905
 Registered Horse Power 70 Owners Anchor Steam Fishing Co, Ltd Port belonging to Grimsby
 Nom. Horse Power as per Section 28 69.6 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 12 $\frac{1}{4}$ " - 21 $\frac{1}{2}$ " - 35" Length of Stroke 24 Revs. per minute 112 Dia. of Screw shaft as per rule 7.04 Material of Steel
 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 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 30 $\frac{1}{2}$ "
 Dia. of Thrust shaft as per rule 6.35 Dia. of Crank shaft journals as per rule 6.67 Dia. of Crank pin 6 $\frac{3}{8}$ " Size of Crank webs 13 $\frac{1}{2}$ " x 4 $\frac{1}{2}$ " Dia. of thrust shaft under
 collars 6 $\frac{1}{8}$ " Dia. of screw 8'-6" Pitch of screw 10'-6" 6" 11'-6" No. of blades 4 State whether moveable No Total surface 28 sq
 No. of Feed pumps 1 Diameter of ditto 2 $\frac{1}{2}$ " Stroke 24" Can one be overhauled while the other is at work
 No. of Bilge pumps 1 Diameter of ditto 2 $\frac{1}{2}$ " Stroke 24" Can one be overhauled while the other is at work
 No. of Donkey Engines One Sizes of Pumps 2 $\frac{3}{4}$ " x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 2" In Holds, &c. One each, 2" to each slush well
 and ejector suction from Eng. Room bilge, and slush wells
 No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size Yes 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 0
 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 Slush well suction How are they protected wood casing
 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 launching Is the screw shaft tunnel watertight None
 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record 8) Total Heating Surface of Boiler 1135 sq Is forced draft fitted No
 No. and Description of Boilers One Cyl. Multi. Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs
 Date of test 14.11.05 Can each boiler be worked separately Area of fire grate in boiler 35 sq No. and Description of safety valves to
 boiler Two Spring Area of each valve 3.98 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 7 $\frac{1}{2}$ " Mean dia. of boilers 12'-6" Length 10'-0" Material of shell plates Steel
 Thickness 1 $\frac{1}{2}$ " Range of tensile strength 29.32 Are they welded or flanged Descrip. of riveting: cir. seams L. D. long. seams D. B. S. & R
 Diameter of rivet holes in long. seams 1 $\frac{1}{32}$ " Pitch of rivets 7" Lap of plates or width of butt straps 15"
 Per centages of strength of longitudinal joint rivets 86. plate 85.2 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 $\frac{1}{32}$ " No. and Description of Furnaces in each boiler Two Holmes Material Steel Outside diameter 43"
 Length of plain part top 4" Thickness of plates crown 1 $\frac{1}{16}$ " Description of longitudinal joint Welded No. of strengthening rings 4 Cor.
 bottom 1 $\frac{1}{16}$ " Working pressure of furnace by the rules 198 lbs Combustion chamber plates: Material Steel Thickness: Sides 23" Back 11" Top 23" Bottom 23"
 Pitch of stays to ditto: Sides 9' x 8 $\frac{1}{2}$ " Back 9' x 8 $\frac{1}{2}$ " Top 8' x 8 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 207 lbs
 Material of stays Steel Diameter at smallest part 1 $\frac{1}{2}$ " Area supported by each stay 105.75 sq Working pressure by rules 204 lbs End plates in steam space:
 Material Steel Thickness 1 $\frac{1}{16}$ " Pitch of stays 16" x 16" How are stays secured screwed into both end plates and washers outside Working pressure by rules 208 lbs Material of stays Steel
 Diameter at smallest part 5.78" Area supported by each stay 256 sq Working pressure by rules 225 lbs Material of Front plates at bottom Steel
 Thickness 2 $\frac{1}{8}$ " Material of Lower back plate Steel Thickness 1 $\frac{1}{16}$ " Greatest pitch of stays 14 $\frac{3}{4}$ " Working pressure of plate by rules 197 lbs
 Diameter of tubes 3 $\frac{1}{4}$ " Pitch of tubes 4 $\frac{1}{2}$ " x 4 $\frac{1}{8}$ " Material of tube plates Steel Thickness: Front 2 $\frac{1}{8}$ " Back 1 $\frac{1}{8}$ " Mean pitch of stays 9 $\frac{1}{8}$ "
 Pitch across wide water spaces 15" Working pressures by rules 180 lbs Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 8 $\frac{3}{4}$ " x 1 $\frac{1}{4}$ " Length as per rule 2'-8 $\frac{3}{4}$ " Distance apart 8" Number and pitch of Stays in each three 8 $\frac{1}{2}$ "
 Working pressure by rules 188 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

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 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:—

Two each top and bottom end connecting
rod bolts and nuts, two main bearing bolts and nuts,
one set coupling bolts and nuts, one set each, air, circulating
feed and bilge pump valves, and a quantity assorted bolts and nuts.

The foregoing is a correct description,

Charles S. Holmby
Manufacturer.

Dates
of Survey
while
building

During progress of
work in shops—

During erection on
board vessel—

Total No. of visits

1905:— July 26 Aug 15. 21. 22. 25. 31 Sep 8. 12. 13. 19. 23. 26. 27. 29. 30 Oct 3. 4. 10. 19.
Oct 20. 24. 25. Nov 1. 2. 13. 14. 23. 24. 25. 28. 30 Dec 2nd

Is the approved plan of main boiler forwarded herewith Yes

General Remarks

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

The machinery and boiler
of this vessel have been inspected throughout
construction in accordance with the Society's Rules.
The materials and workmanship are sound & good.
The boiler tested by hydraulic pressure and with the
engines placed on board & tested under steam, they are
now in good order, and safe working condition
and respectfully submitted as being eligible in
my opinion to be classed with the notification
of L.M.C. 12.05 in the Register Book.

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

The amount of Entry Fee..

£ 1

When applied for,

Special

£ 10

4/12/05

Donkey Boiler Fee

£ 1

When received,

Travelling Expenses (if any) £

8

29/12/05

Committee's Minute

FRI. 8 DEC 1905

Assigned

+ L.M.C. 12.05

MACHINERY CERTIFICATE
WRITTEN.



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Foundation