

Received at London Office 105 22 MAY 1900

Nom. Horse Power as per Section 28	7277	Is Refrigerating Machinery fitted for cargo purposes	No	Is Electric Light fitted	Yes
			Turbine		

BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Myers, Stewart & Lloyd.*

Working pressure of end plates	Area of safety cover to be determined	Area of safety cover to be determined

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. *None* 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:— *Set coupling bolts for one coupling. Fed & bilge pump valves. Safety valve springs. Boiler check valves. Rings for thrust bearing. etc. Assorted iron & bolts.*

THE FAIRFIELD SHIPBUILDING AND ENGINEERING CO., LIMITED.

The foregoing is a correct description,

Manufacturer.

Allen Cleghorn MANAGER

Dates of Survey while building _____

During progress of work in shops:— *1905 Aug 1. 16 Sep 1. 16 Oct 9. 12 24. 25 Nov 1. 6 16 16 24 28 Dec 9. 13 19 1906 Jan 9 22 30 Feb 5 8 9 24 28 Mar 9 12 19 Apr 2 20 23 May 2 7 9 11 14*

During erection on board vessel:— _____

Total No. of visits:— *26*

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *8.2.06* Slides *✓* Covers *8.2.06* Pistons *✓* Rods *✓*

Connecting rods *✓* Crank shaft *✓* Thrust shaft *13.12.05* Tunnel shafts *13.12.05* Screw shaft *13.12.05* Propeller *9.3.06*

Stern tube *9.1.06* Steam pipes tested *14.4.06* Engine and boiler seatings *12.3.06* Engines holding down bolts *2.4.06*

Completion of pumping arrangements *23.4.06* Boilers fixed *23.4.06* Engines tried under steam *2.5.06*

Main boiler safety valves adjusted *20.4.06* Thickness of adjusting washers *for 6 lbs. P. $\frac{1}{16}$ a $\frac{1}{16}$ S. $\frac{1}{16}$ a $\frac{1}{16}$ for 8 lbs. P. $\frac{1}{16}$ a $\frac{1}{16}$ S. $\frac{1}{16}$ a $\frac{1}{16}$*

Material of Crank shaft *✓* Identification Mark on Do. *✓* Material of Thrust shaft *✓* Identification Mark on Do. *✓*

Material of Tunnel shafts *Steel* Identification Marks on Do. *10291* Material of Screw shafts *Steel* Identification Marks on Do. *10280*

Material of Steam Pipes *Iron, lap welded $8 \times \frac{5}{16}$ & $6 \times \frac{5}{16}$* Test pressure *500 lbs. per sq. in.*

General Remarks (State quality of workmanship, opinions as to class, &c. *H.P. turbine in 4 "expansions" having respectively 13, 13, 14 & 14 rows of moving blades, the blade heights being $1\frac{1}{2}$, $2\frac{1}{4}$, 3 & $4\frac{1}{2}$. L.P. turbines in 8 "expansions" having each 7 rows of moving blades, of heights $1\frac{1}{2}$, $2\frac{1}{4}$, 3 , $4\frac{1}{2}$, 6 , 8 , 8 "semi-winged" & 8 "full winged". The astern turbines have casing diameters $31\frac{1}{2}$, 33 , 36 . Drum diam. 30 . Five "expansions" 10 rows $\frac{7}{8}$ blades, 10 rows 2 blades, 30 rows $3\frac{1}{2}$ blades arranged in three stages of ordinary, semi-winged & winged blades. H.P. turbine grooves $\frac{23}{64}$ on drum & $\frac{3}{8}$ on casing. L.P. grooves from $\frac{23}{64}$ to $\frac{47}{64}$ for largest blades. Spacing of rows of blades longitudinally on drum from $1\frac{1}{4}$ to $2\frac{1}{4}$ ins. On trial the speed attained was 21 knots with natural draught & over 22 with moderate forced draught. The astern speed on three runs on the mile was $14\frac{1}{2}$ knots. From going full speed ahead the vessel was stopped in less than 1 min 30 secs. The machinery has been well made & fitted & is in my opinion eligible for the record of L.M.C 5.06 in the Register.*

It is submitted that this vessel is eligible for THE REDUCED H.L.M.C. 5.06 F.D. ELEC. LIGHT TURBINES 3 SCREWS.

The amount of Entry Fee. £ *3* : — : When applied for, *21 MAY 1906*

Special £ *80* : *17* : : When received, *21 MAY 1906*

Donkey Boiler Fee £ : : : *21 MAY 1906*

Travelling Expenses (if any) £ : : : *21 MAY 1906*

Committee's Minute

Glasgow 21 MAY 1906

Assigned

+ L.M.C. 5.06

Arthur L. Jones Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



© 2021 Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN 22.5.06