

REPORT ON MACHINERY.

Wwe 52861.
No. 25141

Port of Glasgow

Received at London Office

WED 8 MAY 1901

No. in Survey held at Glasgow & Newcastle Date, first Survey 12 Nov 06 Last Survey 17 April 1907
(Number of Visits)

Reg. Book. 66 on the Shue S-S "DICH-TAOO"

Gross Tons
Net Tons

Master _____ Built at Newcastle By whom built Wm Thorne Leslie (N^o 416) When built 1907

Engines made at Glasgow By whom made Ross & Duncan (N^o 703) when made 1907

Boilers made at Do By whom made Do (N^o 1117 & 1118) when made 1907

Registered Horse Power _____ Owners Russian Steam Nav & Trading Co Port belonging to Odesa

Nom. Horse Power as per Section 28 143 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 16", 26", 44" Length of Stroke 33" Revs. per minute 95 Dia. of Screw shaft as per rule 9.52 Material of screw shaft iron
as fitted 9 3/4"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight in the propeller boss ✓ 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 3' 3"

Dia. of Tunnel shaft as per rule 8.32 Dia. of Crank shaft journals as per rule 8.73 Dia. of Crank pin 8 7/8" Size of Crank webs 12 3/4" x 5 1/2" Dia. of thrust shaft under collars 8 7/8" Dia. of screw 10.9" Pitch of Screw 12.0" No. of Blades 4 State whether moveable no Total surface 50 sq

No. of Feed pumps 2 Diameter of ditto 3" Stroke 16 1/2" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 16 1/2" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps Ballast 6" x 8" x 8" DRY 8" 3 1/2" x 2" x 4" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Four 2" In Holds, &c. In all holds two 2" Lateral Well One 2 1/4"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump C P Is a separate Donkey Suction fitted in Engine room & size ye 2 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 ✓

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 at line

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 7 ord bilge pipes How are they protected strong 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

Dates of examination of completion of fitting of Sea Connections 26-3-07 of Stern Tube 26-3-07 Screw shaft and Propeller 26-3-07

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.) Manufacturers of Steel Stewart & Lloyd

Total Heating Surface of Boilers 2480 sq Is Forced Draft fitted no No. and Description of Boilers 2, single ended

Working Pressure 185 lbs Tested by hydraulic pressure to 370 lbs Date of test 12.3.07 No. of Certificate 8760

Can each boiler be worked separately yes Area of fire grate in each boiler 40.25 sq No. and Description of Safety Valves to each boiler Pair spring loaded Area of each valve 3.97 sq Pressure to which they are adjusted 190 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean dia. of boilers 12.0" Length 10.0" Material of shell plates steel

Thickness 1 1/8" Range of tensile strength 58/52 tons Are the shell plates welded or flanged D.B.S. Descrip. of riveting: cir. seams D.Pit. long. seams T.A.O.B.S. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7/8" Lap of plates or width of butt straps 1-3 1/2"

Per centages of strength of longitudinal joint rivets 85.6% Working pressure of shell by rules 195 lbs Size of manhole in shell 16" x 12" plate 85.5%

Size of compensating ring 6 3/4" x 1 1/8" No. and Description of Furnaces in each boiler 2, horizontal Material steel Outside diameter 49 5/8"

Length of plain part top 19 1/2" Thickness of plates crown 19 1/2" Description of longitudinal joint weld No. of strengthening rings ✓ bottom 13 1/2"

Working pressure of furnace by the rules 190 lbs Combustion chamber plates: Material steel Thickness: Sides 23/32" Back 31/32" Top 31/32" Bottom 33/32"

Pitch of stays to ditto: Sides 9 1/2" x 8" Back 9 1/2" x 8 1/2" Top 9" x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 186 lbs

Material of stays steel Diameter at smallest part 2.07" Area supported by each stay 99.78 sq Working pressure by rules 233 lbs End plates in steam space:

Material steel Thickness 1 3/32" Pitch of stays 16 1/2" x 16" How are stays secured D.N. wash Working pressure by rules 190 lbs Material of stays steel

Area at smallest part 5.18 sq Area supported by each stay 264 sq Working pressure by rules 196 lbs Material of Front plates at bottom steel

Thickness 7/8" Material of Lower back plate steel Thickness 7/8" Greatest pitch of stays 13 1/2" x 9 1/4" Working pressure of plate by rules 197 lbs

Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates steel Thickness: Front 7/8" Back 3/4" Mean pitch of stays 9 27/32"

Pitch across wide water spaces 13 3/4" Working pressures by rules 206 lbs Girders to Chamber tops: Material iron Depth and thickness of girder at centre 7 1/2" x 2 1/4" Length as per rule 30 9/32" Distance apart 8 1/2" Number and pitch of stays in each 2 @ 9"

Working pressure by rules 207 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 _____

Lloyd's Register Foundation

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ 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:— 20 per tubes; 1 set piston rings, 1 spare propeller; 1 pair connecting rod brasses; 1 pair crosshead brasses; 1 air pump rod; 1 circulating pump rod; 1 A.P valve spindle 1-1/2 crank shaft; 1 propeller shaft; 2 dozen boiler tubes; 3 dozen condenser tubes; 1 A.P escape valve spring; 1 set safety valve springs

The foregoing is a correct description,

Ross & Duncan for W. Morrison. Manufacturer.

Dates of Survey while building

During progress of work in shops - -	1906. Nov. 12	Dec. 12	18	27	1907. Jan. 9	16	23	28	Feb. 2	6	11	19	Mar. 5	12	22	
	During erection on board vessel - -		April 12	17	Nov. 26	Dec. 19	26	1907. Feb. 6	19	Mar. 12	18	26	Apr. 9	16	23	30
	Total No. of visits		17													

Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Cylinders 6.2.07 Slides 18.12.06 Covers 9.1.07 Pistons 18.12.06 Rods 18.12.06

Connecting rods 12.11.06 Crank shaft 9.1.07 Thrust shaft 9.1.07 Tunnel shafts 9.1.07 Screw shaft 16.1.07 Propeller 16.1.07

Stern tube 27.12.06 Steam pipes tested 17.4.07 Engine and boiler seatings 26.3.07 Engines holding down bolts 23.4.07

Completion of pumping arrangements 26.4.07 Boilers fixed 23.4.07 Engines tried under steam 26.4.07

Main boiler safety valves adjusted 26.4.07 Thickness of adjusting washers all washers 3/8 thick C.E. 17.18

Material of Crank shaft steel Identification Mark on Do. Pins 170 Material of Thrust shaft steel Identification Mark on Do. 409

Material of Tunnel shafts steel Identification Marks on Do. 409. 410 Material of Screw shafts iron Identification Marks on Do. 703

Material of Steam Pipes Copper Test pressure 400 lbs per sq in

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

The machinery has been built under special survey; the material and workmanship being good

It is submitted that above vessel will be eligible for a record of + L.M.C (with date) subject to machinery being satisfactorily fitted aboard

The boilers are duplicates of No 114-15 plan of which has been forwarded

The whole of the above has been forwarded to Newcastle for fitting aboard

The Mach^y has been properly fitted & is eligible in my opinion for classification & the record + L.M.C 5.07.

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 5.07

John H Heck.

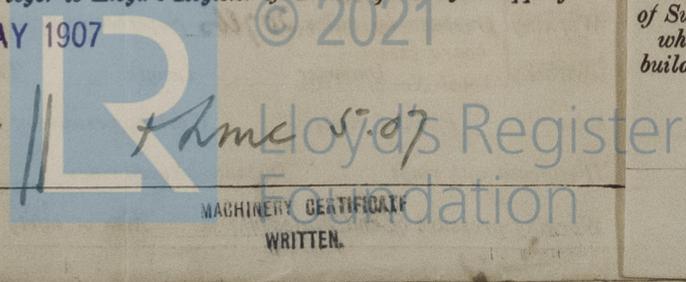
A. S. Thomas John H Heck. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping. FRI, 10 MAY 1907

The amount of Entry Fee..	£ 2 : 0 : 0	When applied for,
Special	£ 14 : 6 : 0	2 APR 1907
Donkey Boiler Fee	£ 7 : 3 : 0	
Travelling Expenses (if any) £	:	When received, 26.4.1907

Committee's Minute Glasgow 22 APR 1907

Assigned Deffered. for completion

John Nwe



Certificate (if required) to be sent to Glasgow.

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