

REPORT ON MACHINERY.

No. 24782

Port of Sunderland Received at London Office THUR. 6 APR 1911

No. in Survey held at Sunderland Date, first Survey August 18 Last Survey March 24 1911
 g. Book. SS "Rudmore" (Number of Visits 28)

on the SS "Rudmore" Tons { Gross 969 Net 574

Master Hewson Built at Sunderland By whom built Messrs S.P. Austin & Sons Ltd When built 1911

Engines made at Sunderland By whom made G. Clark Ltd (No 935) when made 1911

Motors made at Sunderland By whom made G. Clark Ltd do when made 1911

Registered Horse Power 162 Owners James Westall Port belonging to Sunderland

Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

GINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 14 1/2 x 20 x 48 Length of Stroke 33 Revs. per minute 40 Dia. of Screw shaft 10 Material of screw shaft 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

the propeller boss yes If the liner is in more than one length are the joints burned yes 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 yes If two

liners are fitted, is the shaft lapped or protected between the liners yes Length of stern bush 3'-4"

Dia. of Tunnel shaft 8 1/2 as per rule 8 1/2 Dia. of Crank shaft journals 9 1/2 as per rule 9 1/2 Dia. of Crank pin 9 3/8 Size of Crank webs 14 x 6 3/8 Dia. of thrust shaft under

collars 10 as fitted 10 Dia. of screw 11-6 Pitch of Screw 12-6 3/4 No. of Blades 4 State whether moveable no Total surface 44.5

No. of Feed pumps 2 Diameter of ditto 2 3/4 Stroke 18 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 Stroke 18 Can one be overhauled while the other is at work yes

No. of Donkey Engines Two Sizes of Pumps Sub 5 1/4 x 3 1/2 x 5 Ballast 9 x 10 x 10 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room after well port & starboard 2 1/2" dia In Holds, &c. Main well 2 1/2" dia, Fore Well 2 1/2" dia

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 yes 5"

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 yes

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 yes

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 23-2-11 of Stern Tube 23-2-11 Screw shaft and Propeller 23-2-11

Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer & Sons

Total Heating Surface of Boilers 2482 Is Forced Draft fitted no No. and Description of Boilers One single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 23-2-11 No. of Certificate 82

Can each boiler be worked separately yes Area of fire grate in each boiler 82 sq ft No. and Description of Safety Valves to

each boiler 2 Spring loaded Area of each valve 11.04 sq ft 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 16'-6" dia. of boilers 16'-6" Length 11'-0" Material of shell plates Steel

Thickness 1 3/8" Range of tensile strength 28 3/4 to 32 1/2 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.

long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 8 1/8" Lap of plates or width of butt straps 20"

Per centages of strength of longitudinal joint 88.4 Working pressure of shell by rules 180 lbs Size of manhole in shell 16 x 12

Size of compensating ring none No. and Description of Furnaces in each boiler Four plain Material Steel Outside diameter 3'-6 5/8"

Length of plain part 7'-5" Thickness of plates 1 3/8" Description of longitudinal joint weld No. of strengthening rings none

Working pressure of furnace by the rules 186 lbs Combustion chamber plates: Material Steel Thickness: Sides 23 3/8" Back 23 3/8" Top 32" Bottom 1 1/2"

Pitch of stays to ditto: Sides 9 1/2 x 10 1/4 Back 9 3/8 x 10 3/8 Top 8 1/4 x 11 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs

Material of stays Steel Diameter at smallest part 2-03 Area supported by each stay 99.5 sq ft Working pressure by rules 185 lbs End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 20 3/8 x 20 3/8 How are stays secured D.R. Working pressure by rules 188 lbs Material of stays Steel

Diameter at smallest part 8 29/32 Area supported by each stay 49 1/4 sq ft Working pressure by rules 181 lbs Material of Front plates at bottom Steel

Thickness 1 3/8" Material of Lower back plate Steel Thickness 1 5/8" Greatest pitch of stays 17 1/4 x 9 3/8 Working pressure of plate by rules 199 lbs

Diameter of tubes 3" Pitch of tubes 4 1/4 x 4 3/8 Material of tube plates Steel Thickness: Front 13 1/8" Back 14 1/8" Mean pitch of stays 10 1/2"

Pitch across wide water spaces 14 1/4" Working pressures by rules 184 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 20 9/16 x 7 1/8" Length as per rule 32' Distance apart 11" Number and pitch of stays in each 2 @ 8 3/4"

Working pressure by rules 184 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked

separately yes Diameter 11" Length 11" Thickness of shell plates 15 1/8" Material Steel Description of longitudinal joint none Diam. of rivet

holes 1 5/16" Pitch of rivets 8 1/8" Working pressure of shell by rules 180 lbs Diameter of flue 11" Material of flue plates Steel Thickness 1 1/2"

If stiffened with rings yes Distance between rings 11" Working pressure by rules 180 lbs End plates: Thickness 1 1/2" How stayed yes

Working pressure of end plates 180 lbs Area of safety valves to superheater 11.04 sq ft Are they fitted with easing gear yes

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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:— One propeller, One propeller shaft, One set Air & Air pump valves, 1 set feed & bilge pump valves & seats, 1 set Check valves, 2 1/2" expend bolts & nuts, 2 bottom end bolts & nuts, 2 Main bearing bolts & nuts, 1 set Coupling bolts, Assorted bolts, nuts & iron.

The foregoing is a correct description,

Manufacturer. of the Main Engines & Boilers FORBES & CLARK, LIMITED

Dates { During progress of work in shops - - 1910 Aug 18 Sep 7 12 14 19 22 26 Oct 4 7 13 18 20 25 Nov 2 4 15 21 28
Of Survey { During erection on board vessel - - Dec 8 1911 Jan 31 Feb 6 22 Mar 7 9 13 14 22 24
while building { Total No. of visits (28)

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

Dates of Examination of principal parts—Cylinders 14-10-10 Slides 13-10-10 Covers 13-10-10 Pistons 13-10-10 Rods 14-10-10
Connecting rods 14-10-10 Crank shaft 8-10-10 Thrust shaft 14-2-11 Tunnel shafts 14-2-11 Screw shaft 14-2-11 Propeller 31-1-11
Stern tube 31-1-11 Steam pipes tested 9-3-11 Engine and boiler seatings 23-2-11 Engines holding down bolts 14-3-11
Completion of pumping arrangements 14-3-11 Boilers fixed 14-3-11 Engines tried under steam 14-3-11
Main boiler safety valves adjusted 14-3-11 Thickness of adjusting washers 9th 13/32 14th 1/2"
Material of Crank shaft Steel Identification Mark on Do. 5931 K.H. Material of Thrust shaft Steel Identification Mark on Do. 5954 K.H.
Material of Tunnel shafts Iron Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 5946 K.H.
Material of Steam Pipes New Copper 14" dia 5 1/2" bore + 4 W.G. Test pressure 400 lbs ✓

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

The Machinery of this vessel has been built under special survey, the materials and workmanship are of good quality and the boilers were satisfactorily tested under hydraulic pressure. The whole of the machinery has been securely fitted on board & satisfactorily tried under steam.

The Machinery of this vessel is in good & safe working condition & eligible in my opinion to be classed & have record **LMC 3-11** in the Register Book.

It is submitted that this vessel is eligible for THE RECORD, + LMC 3.11.

The amount of Entry Fee.. £ 2 : 0 : 0 When applied for, 3 4 19
Special £ 24 : 6 : 0
Donkey Boiler Fee : : :
Travelling Expenses (if any) £ : : : 7 14 19

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

Committee's Minute

FRI. 7 APR 1911

Assigned

MACHINERY CERTIFICATE WRITTEN.