

REPORT ON MACHINERY.

No. 85977.

Received at London Office 9 - OCT 1922

Date of writing Report Feb 7th 1922 When landed in at Local Office 9 - OCT 1922 Port of London
 No. in Survey held at London Date, First Survey 27th Sept. Last Survey Feb 6th 1922
 Reg. Book. 3770 on the S.S. "Aintree" ex "Atlas" (Number of Visits SEVEN)

Master Cowes Built at Cowes By whom built J. S. White & Co. Tons 1920
 Engines made at Cowes By whom made J. S. White & Co. when made 1920
 Boilers made at Cowes By whom made do. when made 1920
 Registered Horse Power 138 N.H.P. Owners Henry Alfred Rowland & Co. Port belonging to Liverpool
 Nom. Horse Power as per Section 28 157 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 17 x 29 x 49 Length of Stroke 33 Revs. per minute 9.73 Dia. of Screw shaft 10 3/16 Material of screw shaft as per rule
 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 no 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 42"
 Dia. of Tunnel shaft 8.75 Dia. of Crank shaft journals 9.19 Dia. of Crank pin 9 3/4 Size of Crank webs 18 x 6 Dia. of thrust shaft under collars 9 3/4 Dia. of screw 11.9 Pitch of Screw as fitted No. of Blades 4 State whether moveable no Total surface as fitted
 No. of Feed pumps 2 Diameter of ditto 3 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/2 Stroke 18 Can one be overhauled while the other is at work yes
 No. of Donkey Engines Three Sizes of Pumps 8 x 9 x 8 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2. 2" — 1- 2 1/2" — 2. 2 1/2" — 2. 2" — 1- 2 1/2" In Holds, &c. 2- 2" — 2. 2" — 1- 2 1/2"
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size 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 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 yes
 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
 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

Total Heating Surface of Boilers 2530 Is Forced Draft fitted no No. and Description of Boilers 2 Single ended.
 Working Pressure 180 Tested by hydraulic pressure to no Date of test no No. of Certificate no
 Can each boiler be worked separately yes Area of fire grate in each boiler 35.8 sq ft No. and Description of Safety Valves to each boiler 2 Spring loaded Area of each valve 3.98 sq in Pressure to which they are adjusted 185 lb sq in Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 7 1/2" Mean dia. of boilers 12' 3" Length 10' 3" Material of shell plates Steel
 Thickness 1 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams Butt R.
 long. seams Butt R. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8 1/2" Lap of plates or width of butt straps 16 7/8"
 Per centages of strength of longitudinal joint 87% Working pressure of shell by rules 180 Size of manhole in shell 16 x 12
 Size of compensating ring 3 1/4 x 1 1/2" No. and Description of Furnaces in each boiler 2. Bright Material Steel Outside diameter 47 1/4"
 Length of plain part 7 1/2" Thickness of plates 9/16" Description of longitudinal joint welded No. of strengthening rings no
 Working pressure of furnace by the rules 188 Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 5/8" Top 21/32" Bottom 23/32"
 Pitch of stays to ditto: Sides 8 1/2" x 8 7/8" Back 8 3/4" x 8 1/2" Top 8 1/2" x 8 1/2" If stays are fitted with nuts or riveted heads no Working pressure by rules 180
 Material of stays Steel Area at smallest part 1.79 sq in Area supported by each stay 74.5 sq in Working pressure by rules 200 End plates in steam space: no
 Material Steel Thickness 1 1/8" Pitch of stays 18 1/2" x 17 1/2" How are stays secured Washer Working pressure by rules 180 Material of stays Steel
 Area at smallest part 5.88 sq in Area supported by each stay 323 3/4 sq in Working pressure by rules 198 Material of Front plates at bottom Steel
 Thickness 1" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13' 12" Working pressure of plate by rules 180
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 7/16" Material of tube plates Steel Thickness: Front 1" Back 13/16" Mean pitch of stays 11 3/16"
 Pitch across wide water spaces 14" Working pressures by rules 191 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8 1/2" x 11 x 2 Length as per rule 2' 9" Distance apart 8 1/4" Number and pitch of stays in each 2- 8 7/8"
 Working pressure by rules 191 Steam dome: description of joint to shell no % of strength of joint no

Diameter no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet holes no
 Pitch of rivets no Working pressure of shell by rules no Crown plates no Thickness no How stayed no

SUPERHEATER. Type no Date of Approval of Plan no Tested by Hydraulic Pressure to noDate of Test no Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler noDiameter of Safety Valve no Pressure to which each is adjusted no Is Easing Gear fitted no

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IS A DONKEY BOILER FITTED?

No ✓

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

2 top end bolts & nuts - 2 bottom end bolts & nuts - 2 main bearing bolts. 1 set of coupling bolts. 2 sets of pump tracers. 2 safety valve springs. 3 Relief valve springs. 2 main check valves. 36 Condenser tubes & ferrules. 24 boiler tubes. 6 stoppers (tubs) 1 set of feed & bilge pump valves.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - }
Total No. of visits

Is the approved plan of main boiler forwarded herewith

Yes ✓

" " " donkey " " "

Dates of Examination of principal parts—Cylinders

Slides

Covers

Pistons

Rods

Connecting rods

Crank shaft

Thrust shaft

Tunnel shafts

Screw shaft

Propeller

Stern tube

Steam pipes tested

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Completion of fitting sea connections

Stern tube

Screw shaft and propeller

Main boiler safety valves adjusted

Thickness of adjusting washers

S. 5 9/32 p. 7/32 P. p. 9/32 S. 1/4 f.

Material of Crank shaft

Identification Mark on Do.

Material of Thrust shaft

Identification Mark on Do.

Material of Tunnel shafts

Identification Marks on Do.

Material of Screw shafts

Identification Marks on Do.

Material of Steam Pipes

Test pressure

Is an installation fitted for burning oil fuel

No ✓

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case

No ✓

If so, state name of vessel

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

Examined the cylinders, pistons, slides, crank, thrust, tunnel & tail end shafting - Air & circulating & feed & bilge pumps & valves, Condenser and sea-cocks & sea-cock & feed & bilge fastenings. Bilge suction & live cargo. Auxiliary pumps and pumping arrangement.

Two ribs of the L.P. cylinder cracked. 4 screw stays now fitted taking the place of the cross studs.

The Boilers with their mountings & safety valves examined and found in good condition. The safety valves adjusted under steam to blow at 185 lbs per sq. The Engines tried under steam.

The machinery & Boilers are in good order & safe working condition & eligible in my opinion for the notation of hull to 22.10.22. Working pressure 180 lbs per sq.

The amount of Entry Fee ... £ : :
Special ... £ 25. 0. 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for,

26/10/22

When received,

22.11.19 22

J. H. Gornick

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

1UE. 31 OCT. 1922

Assigned

L.M.C. 10.22

S. 10.22. C.L.

MACHINERY DEPT.
WRITTEN



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