

Rpt. 4.

## REPORT ON MACHINERY.

No. 35537

Received at London Office

-8 OCT 1924

Date of writing Report Sept 29<sup>th</sup> 1924 When handed in at Local Office 29. 9. 24 Port of HULL  
No. in Survey held at Hull Date, First Survey 27. 4. 24 Last Survey Sept. 28<sup>th</sup> 1924  
Reg. Book. on the S. S. "ST. MERRYN." (Number of Visits 22)  
Master Burley Built at Burley By whom built Cook, Lellon & Gemmule Ld Tons { Gross 311  
Engines made at Hull By whom made C. Holmes & Co. Ld when made 1924  
Boilers made at Hull By whom made C. Holmes & Co. Ld when made 1924  
Registered Horse Power 96 Owners Thomas Hambling & Co. Ld Port belonging to Hull  
Nom. Horse Power as per Section 28 96 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
Dia. of Cylinders 13. 23. 34 Length of Stroke 26 Revs. per minute 4.94 Material of Steel  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube ☒ 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 36"  
Dia. of Tunnel shaft 4.04 Dia. of Crank shaft journals 4.39 Dia. of Crank pin 4 1/2 Size of Crank webs 44x48 Dia. of thrust shaft under  
collars 4 1/2 Dia. of screw 9.9 Pitch of Screw 11'-0" No. of Blades 4 State whether moveable no Total surface 34 sq. ft.  
No. of Feed pumps one Diameter of ditto 2 7/8 Stroke 14 3/4 Can one be overhauled while the other is at work ☒  
No. of Bilge pumps one Diameter of ditto 2 7/8 Stroke 14 3/4 Can one be overhauled while the other is at work ☒  
No. of Donkey Engines one Sizes of Pumps 6x4 1/2 x 6 & 1 Ejector No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room 2 @ 2" + 1 @ 3" Ejector In Holds, &c. 1 @ 2" in each Compartment.

No. of Bilge Injections one sizes 3 1/2" Connected to condenser circulating pump ☒ Is a separate Donkey Suction fitted in Engine room & size Yes, 3"  
Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible ☒ Are the sluices on Engine room bulkheads always accessible ☒  
Are all connections with the sea direct on the skin of the ship ☒ Are they Valves or Cocks Both  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ☒ 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 ☒ Are the Blow Off Cocks fitted with a spigot and brass covering plate ☒  
What pipes are carried through the bunkers Forward Suctions 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 ☒  
Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges ☒  
Is the Screw Shaft Tunnel watertight ☒ Is it fitted with a watertight door ☒ worked from ☒

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel Port Talbot Steel Co.  
Total Heating Surface of Boilers 1698 sq. ft. Is Forced Draft fitted no No. and Description of Boilers One Simple ended  
Working Pressure 200 lbs. sq. in. Tested by hydraulic pressure to 350 lbs. sq. in. Date of test 5. 9. 24 No. of Certificate 3533  
Can each boiler be worked separately ☒ Area of fire grate in each boiler 49.2 sq. ft. No. and Description of Safety Valves to  
each boiler 2 Spring loaded Area of each valve 4.9 sq. in. Pressure to which they are adjusted 200 lbs. sq. in. Are they fitted with easing gear ☒  
Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 14'-0" Length 10'-8" Material of shell plates Steel  
Thickness 1 3/32 Range of tensile strength 28/32 Tons Are the shell plates welded or flanged ☒ Descrip. of riveting: cir. seams BR.  
long. seams T.R. ABS. Diameter of rivet holes in long. seams 1 3/32 Pitch of rivets 8 3/16 18 3/16  
Per centages of strength of longitudinal joint 85.0 Working pressure of shell by rules 201 Size of manhole in shell 16 x 12"  
Size of compensating ring 34 x 27 x 1 3/32 No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 41  
Length of plain part 46" Thickness of plates 13/16 Description of longitudinal joint welded No. of strengthening rings ☒  
Working pressure of furnace by the rules 219 Combustion chamber plates: Material Steel Thickness: Sides 3/4 Back 23/32 Top 3/4 Bottom 3/4  
Pitch of stays to ditto: Sides 9 x 8 3/4 Back 9 x 8 1/2 Top 9 x 8 3/4 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 230  
Material of stays Steel Area at smallest part 2.04 sq. in. Area supported by each stay 78 3/4" Working pressure by rules 230 End plates in steam space:  
Material Steel Thickness 1 3/16 Pitch of stays 18" How are stays secured by nuts Working pressure by rules 220 Material of stays Steel  
Area at smallest part 7.5 Area supported by each stay 324 sq. in. Working pressure by rules 275 Material of Front plates at bottom Steel  
Thickness 15/16 Material of Lower back plate Steel Thickness 29/32 Greatest pitch of stays 14 x 8 3/4 Working pressure of plate by rules 228  
Diameter of tubes 3 1/2 Pitch of tubes 4 7/8 Material of tube plates Steel Thickness: Front 15/16 Back 7/8 Mean pitch of stays 9 3/4  
Pitch across wide water spaces 13 3/4 Working pressures by rules 212 Girders to Chamber tops: Material Steel Depth and  
thickness of girder at centre 10 3/4 x 13 3/4 Length as per rule 36 3/32 Distance apart 9" Number and pitch of stays in each 3 @ 8 3/4  
Working pressure by rules 210 Steam dome: description of joint to shell ☒ % of strength of joint ☒  
Diameter ☒ Thickness of shell plates ☒ Material ☒ Description of longitudinal joint ☒ Diam. of rivet holes ☒  
Pitch of rivets ☒ Working pressure of shell by rules ☒ Crown plates ☒ Thickness ☒ How stayed ☒

SUPERHEATER. Type ☒ Date of Approval of Plan ☒ Tested by Hydraulic Pressure to ☒  
Date of Test ☒ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ☒  
Diameter of Safety Valve ☒ Pressure to which each is adjusted ☒ Is Easing Gear fitted ☒

00230-00339-0071



IS A DONKEY BOILER FITTED?

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 + nuts. Set of coupling bolts + nuts. Valves for air, feed + bilge pumps. Impeller + spindle for circulating pump. Main + donkey check valves. Valves for donkey pump. Safety valve spring. Feed pump plunger.

The foregoing is a correct description,

F. H. CHARLES D. HOLMES & CO. LTD.  
Harold Sheardson

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1924: Apr 27, May 2, 13, Jun 6, 10, 30, July 9, 11, 15, Aug 11, 14, 25, 29, Sep 2, 4, 5. During erection on board vessel -- 12, 16, 20, 24, 25. Total No. of visits 22

Is the approved plan of main boiler forwarded herewith See below

Dates of Examination of principal parts—Cylinders 2.9.24 Slides 8.9.24 Covers 2.9.24 Pistons 8.9.24 Rods 8.9.24 Connecting rods 8.9.24 Crank shaft 29.8.24 Thrust shaft 29/8/24 Tunnel shafts ✓ Screw shaft 11.7.24 Propeller 11.7.24 Stern tube 11.7.24. Steam pipes tested 16.9.24 Engine and boiler seatings 15.7.24 Engines holding down bolts 16.9.24. Completion of pumping arrangements 18.9.24. Boilers fixed 12.9.24. Engines tried under steam 20.9.24. Completion of fitting sea connections 15.7.24. Stern tube 15.7.24. Screw shaft and propeller 15.7.24. Main boiler safety valves adjusted 20.9.24. Thickness of adjusting washers A. 9/32 F. 5/16.

Material of Crank shaft 114 J.H.M. Identification Mark on Do. Shul Material of Thrust shaft Shul Identification Mark on Do. 114 J.H.M. Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Shul Identification Marks on Do. 114 J.H.M. Material of Steam Pipes S.O. Copper, 4" Bore x 6 lbs. Test pressure 400 lbs per sq. in.

Is an installation fitted for burning oil fuel ✓ 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 Yes If so, state name of vessel "St. Bonats" ✓

General Remarks (State quality of workmanship, opinions as to class, &c.) The engines + boiler of this vessel have been built under special survey, and in accordance with the approved plans + the Society's Rules. They have been satisfactorily fitted on board, tried under working conditions + found good. Safety valves adjusted, + pumping arrangements found in order. The machinery is eligible in my opinion to have record of + L.M.C. 9.24, + C.L.

The approved plan of boiler sent with report upon the sister vessel St. Bonats ✓

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.24. CL.

The amount of Entry Fee ... £ 2 : : When applied for, 7-10 1924  
Special ... £ 24 : 0 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When received, 31/10/24

Committee's Minute

Assigned

FRI. 10 OCT 1924

+ L.M.C. 9.24  
C.L.

Engineer Surveyor to Lloyd's Register of Shipping.



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