

REPORT ON MACHINERY

No. 2879

APR 10 1920

Date of writing Report 27th March 1920 When handed in at Local Office

Port of

Melbourne

No. in Survey held at Pembroke Dock
Reg. Book. on the S.T. "Edward Collingwood"Date, First Survey 26 February Last Survey 27 March 1920
(Number of Visits 6)Master Built at Glasgow By whom built Bow MacLellan Tons Gross 1917
Net 1917

Engines made at Glasgow By whom made Bow MacLellan when made 1917

Boilers made at Glasgow By whom made Bow MacLellan when made 1917

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 87 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 12 1/2" 21" 35 Length of Stroke 26 Revs. per minute 110 Dia. of Screw shaft as per rule 7.56 Material of screw shaft as fitted 7 1/2" Iron

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 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 34"

Dia. of Tunnel shaft as per rule 6.57 Dia. of Crank shaft journals as per rule 6.9 Dia. of Crank pin 7 1/2" Size of Crank webs 14 1/2" Dia. of thrust shaft under

collars 7 1/2" Dia. of screw 9.6 Pitch of Screw 11 1/2 No. of Blades 4 State whether moveable No Total surface 32

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes

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

In Engine Room 1, 2' forward 1, 2' aft Separate 4" in Holds, &c. 1 2' from fore head 1 2' from

stachwell also separate 2' ejector suction from black well

No. of Bilge Injections 1 sizes 3/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size 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 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 Forward Suction 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 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 Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel I.S.B.

Total Heating Surface of Boilers 15900 Is Forced Draft fitted No No. and Description of Boilers 1 Single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test No. of Certificate

Can each boiler be worked separately Area of fire grate in each boiler 48.75 No. and Description of Safety Valves to

each boiler Two spring loaded Area of each valve 4.9 Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 8" dia. of boilers 162 Length 10 1/2 Material of shell plates S

Thickness 1 3/32 Range of tensile strength 28.32 Are the shell plates welded or flanged Descrip. of riveting: cir. seams double

long seams T.R.O.B.S Diameter of rivet holes in long. seams 1 5/32 Pitch of rivets 8" Lap of plates or width of butt straps 17"

Per centages of strength of longitudinal joint rivets 89.3 Working pressure of shell by rules 180 Size of manhole in shell 16 x 12"

Size of compensating ring 9" 1 3/32 No. and Description of Furnaces in each boiler 3 plain Material S Outside diameter 40 9/16

Length of plain part top 8 1/2 Thickness of plates crown 25 Description of longitudinal joint Welded No. of strengthening rings

bottom 7 1/2 Thickness of plates bottom 32 Working pressure of shell by rules 180 Back 21/32 Top 1/16 Bottom 7/8

Working pressure of furnace by the rules 188 Combustion chamber plates: Material S Thickness: Sides 1/16 Back 21/32 Top 1/16 Bottom 7/8

Pitch of stays to ditto: Sides 9 1/2-9 3/4 Back 9-9 Top 9 1/2-9 3/4 If stays are fitted with nuts or riveted heads None Working pressure by rules 181

Material of stays S Area at smallest part 2.07 Area supported by each stay 9415 Working pressure by rules 205 End plates in steam space:

Material S Thickness 1 1/16 Pitch of stays 17 1/2 x 17 How are stays secured B, R, & L Working pressure by rules 181 Material of stays S

Area at smallest part 6-10 Area supported by each stay 295 Working pressure by rules 215 Material of Front plates at bottom S

Thickness 31/32 Material of Lower back plate S Thickness 15/16 Greatest pitch of stays 14.9 Working pressure of plate by rules 219

Diameter of tubes 3 1/2 Pitch of tubes 5.4.75 Material of tube plates S Thickness: Front 31/32 Back 7/8 Mean pitch of stays 10 1/2

Pitch across wide water spaces 14 Working pressures by rules 184 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 8 1/2 1 3/4 Length as per rule 32 Distance apart 9 1/2 Number and pitch of stays in each 2 9 1/2

Working pressure by rules 197 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

W1635 0043

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

No
Four top end bolts and nuts
Two bottom end bolts and nuts
Two main bearing bolts and nuts
1 set of coupling bolts and nuts
3 hook tubes, and 2 tube stoppers
1 set of feed & bilge pump valves.
See M.B. No. 3074/20.

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

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

19 March 20 Thickness of adjusting washers

P $\frac{9}{32}$ S $\frac{5}{16}$

Material of Crank shaft

Iron

Identification Mark on Do.

Material of Thrust shaft

Iron

Identification Mark on Do.

Material of Tunnel shafts

Iron

Identification Marks on Do.

Material of Screw shafts

Identification Marks on Do.

Material of Steam Pipes

S D Copper

Test pressure

360 lb

Is an installation fitted for burning oil fuel

No

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

Yes

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

Standard Coal

General Remarks

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

This vessel has been recommissioned in H.M. Dockyard Pembroke, main and auxiliary engines have been tested under steam, and all aspects made good; main boiler has been examined internally and externally, and has been hydrostatic tested to 270 lb. and safety valves adjusted, and found satisfactory. The machinery of this vessel was built under British Corporation Survey, to plan, and specification of the Admiralty Standard Castle Class trawler, which plans were mutually approved by Lloyd's, and British Corporation. The workmanship appears good and in my opinion the vessel is eligible to be classed L.M.C. 3.20

The amount of Entry Fee ... £

When applied for,

Special ... £

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When received,

Committee's Minute

Assigned

J. H. Johnstone

Engineer Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register Foundation