

REPORT ON MACHINERY.

No. 3942H.

WED. DEC. 10. 1919

Received at London Office

Date of writing Report 29th Nov 1919 When handed in at Local Office 2/12/19 Port of Glasgow
No. in Survey held at Glasgow Date, First Survey 28/6/1918 Last Survey 28th Nov 1919
Reg. Book. on the Rescue tug "St Kitts" (Number of Visits 53)
Master Built at Port Glasgow By whom built Murdoch & Murray. Lho. 295 When built 1919
Engines made at Glasgow By whom made Ross & Duncan. Lho. 1056 when made 1919
Boilers made at Glasgow By whom made Ross & Duncan Lho. 1575/6 when made 1919
Registered Horse Power Owners The Admiralty Port belonging to London
Nom. Horse Power as per Section 28 208 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 18" x 28" x 48" Length of Stroke 28 Revs. per minute 128 Dia. of Screw shaft as per rule 9.6" Material of screw shaft as fitted 10.2" S
Is the screw shaft fitted with a continuous liner the whole length of the stern tube No liner 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 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 42"
Dia. of Tunnel shaft as per rule 8.5" Dia. of Crank shaft journals as per rule 8.95" Dia. of Crank pin 9" Size of Crank webs 16 3/4 x 6 1/8 Dia. of thrust shaft under collars 9" Dia. of screw 10.7" Pitch of Screw 12-0" No. of Blades 4 State whether moveable No Total surface 34 ft²
No. of Feed pumps 2 Diameter of ditto 3 1/8 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 3 1/8 Stroke 13 1/2 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Fuel General Sizes of Pumps 2.000 5 1/2 x 7 1/2 x 15 In Engine Room 1 @ 2 1/2: Strokehold 1 @ 2 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps In Holds, &c. Fox Leak 1 @ 3" After Leak 1 @ 3"
No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes-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 None
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
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 D. Colville & Sons. Steel Co. of Scotland.
Total Heating Surface of Boilers 3384 ft² Is Forced Draft fitted Yes No. and Description of Boilers Two single ended multitubular
Working Pressure 180 lbs Tested by hydraulic pressure to 360 Date of test 19-9-19 No. of Certificate 14906
Can each boiler be worked separately Yes Area of fire grate in each boiler 43.5 ft² No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 7.06 in² 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 27" dia. of boilers 12-6" Length 11-0" Material of shell plates S
Thickness 1 1/32" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams L.R.R.
long. seams T.R. & all stays Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 7 3/8" Lap of plates width of butt straps 16"
Per centages of strength of longitudinal joint rivets 87 plate 85.5 Working pressure of shell by rules 182 Size of manhole in shell 20 x 16"
Size of compensating ring 31 x 27 x 1 1/32 No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 39 1/4"
Length of plain part top Thickness of plates crown 7 1/2" Description of longitudinal joint Weld No. of strengthening rings None
bottom Thickness of plates bottom 3 1/2" Working pressure of furnace by the rules 192 Combustion chamber plates: Material S Thickness: Sides 21/32" Back 21/32" Top 21/32" Bottom 3/4"
Pitch of stays to ditto: Sides 9 x 8" Back 9 1/8 x 8 1/8" Top 8 3/4 x 8 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 202
Material of stays S Area at smallest part 1.73 in² Area supported by each stay 74.2 in² Working pressure by rules 187 End plates in steam space: Material S Thickness 1 1/8" Pitch of stays 18 x 18" How are stays secured D. nuts Working pressure by rules 185 Material of stays S
Area at smallest part 6.33 in² Area supported by each stay 324 in² Working pressure by rules 204 Material of Front plates at bottom S
Thickness 15/16" Material of Lower back plate S Thickness 27/32" Greatest pitch of stays 14" Working pressure of plate by rules 188
Diameter of tubes 2 1/2" Pitch of tubes 3 3/4 x 3 3/8" Material of tube plates S Thickness: Front 15/16" Back 23/32" Mean pitch of stays 7 3/8"
Pitch across wide water spaces 13 1/2" Working pressures by rules 180 Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 1/2 x 13 1/4" Length as per rule 30 1/8" Distance apart 8 3/4" Number and pitch of stays in each 2 @ 8 1/2"
Working pressure by rules 184 Steam dome: description of joint to shell Yes % of strength of joint Yes
Diameter Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet holes Yes
Pitch of rivets Yes Working pressure of shell by rules Yes Crown plates Yes Thickness Yes How stayed Yes
SUPERHEATER. Type Yes Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes
Date of Test Yes Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes
Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:—

1 brace of top & bottom end, main bearing & coupling bolts & nuts
1 piston rod, 2 eccentric rods, 1 pair each of top & bottom end braces, 2 guide shoes, 1 set of piston rings
for each piston & for piston valve. 1 pair of eccentric strap bolts, 2 safety valve springs, 1 air pump rod, 1 set of air pump
valves, 2 feed & 2 bilge pump valves, assorted iron bars, nuts & bolts, screw stays for boilers (14 set) and other
spares as per Specification ✓

The foregoing is a correct description,

Row & Duncan

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 June 28. Nov 25. Dec 2. 27. 1919. Jan. 10. 14. 17. 23. Feb. 4. 10. 13. 18. 26. Mar. 10. 14. 20. 28. May 7. 12. 13. 15.
During erection on board vessel -- 23. 26. 29. June 4. 9. 16. 19. 24. July 6. 8. Aug 6. 12. 22. 25. Sept 2. 9. 10. 12. 16. 18. 19. Oct 1. 9. 10. 21. 24. 28. 31.
Total No. of visits 53

Is the approved plan of main boiler forwarded herewith

no

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 24-6-19 Slides 22-8-19 Covers 23-5-19 Pistons 9-9-19 Rods 9-9-19

Connecting rods 24-6-19 Crank shaft 24-6-19 Thrust shaft 24-6-19 Tunnel shafts 29-5-19 Screw shaft 23-5-19 Propeller 23-5-19

Stern tube 13-5-19 Steam pipes tested 16-6-19. 10-10-19 Engine and boiler seatings Greenock Rept Engines holding down bolts 10-10-19

Completion of pumping arrangements 26-11-19. Boilers fixed 10-10-19 Engines tried under steam 31-10-19

Completion of fitting sea connections Greenock Report Stern tube Greenock Report Screw shaft and propeller Greenock Report

Main boiler safety valves adjusted 31-10-19 Thickness of adjusting washers FORD 11" P.V. 3/8" S.V. AFT 11" P.V. 1/2" S.V.

Material of Crank shaft S Identification Mark on Do. 24-6-19. J.E.S. Material of Thrust shaft S Identification Mark on Do. 24-6-19. J.E.S.

Material of Tunnel shafts S Identification Marks on Do. 24-6-19. J.E.S. Material of Screw shafts S Identification Marks on Do. 23-5-19. J.E.S.

Material of Steam Pipes Seamless Copper Test pressure 340 lbs

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 Yes If so, state name of vessel "St Keyne" Rept no "39212"

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

These Engines and Boilers have been built under Special Survey, in accordance with the Rules and Admiralty Specification: the materials and workmanship are sound and good: they have been fitted on board in an efficient manner, tried under working conditions and found satisfactory and are eligible in my opinion to be classed with record of L.M.C. 11-19.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 11-19. F.D.

The amount of Entry Fee ... £ 64 : 16 :
Special ... £ : :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :

When applied for, 19/12/19
When received, 31/1/20

London J. S. S. S.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 9-DEC-1919

Assigned + L.M.C. 11, 19



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