

REPORT ON MACHINERY

No. 41517

Received at London Office

23 NOV. 1921

of writing Report 18th Nov. 1921 When handed in at Local Office 18th Nov. 1921. Port of Glasgow
 in Survey held at Glasgow Date, First Survey 13th Feb 1928 Last Survey 17th November 1921
 g. Book. on the S.S. ESSONITE (Number of Visits 46) Tons { Gross 64.98
 Net 265.67
 Master Built at Glasgow By whom built Jarrow & Co. Ltd (1460) When built 1921
 Engines made at Glasgow By whom made Jarrow & Co. Ltd (1460) when made 1921
 Boilers made at Glasgow By whom made North Shipbuilding & Eng^g Co. Ltd (1428/9) when made 1921
 Registered Horse Power Owners William Robertson Port belonging to Glasgow
 m. Horse Power as per Section 28 120 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

GINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 15" 25 1/2 41" Length of Stroke 30" Revs. per minute 100 Dia. of Screw shaft as per rule 8 1/2" Material of screw shaft Steel
 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 on 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' 2 1/2"
 Dia. of Tunnel shaft as per rule 2 1/4" Dia. of Crank shaft journals as per rule 8 1/2" Dia. of Crank pin 9" Size of Crank webs 12 1/2 x 6" Dia. of thrust shaft under
 collars 8 3/4" Dia. of screw 10' 0" Pitch of Screw 11' 6" No. of Blades 4 State whether moveable No Total surface 36.240 sq. ft.
 No. of Feed pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3" Stroke 15" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps Feed 6 1/2 x 4 1/2 x 6" Wallact 4 1/2 x 8 x 8" No. and size of Suctions connected to both Bilge and Donkey pumps
 in Engine Room 2 @ 2 1/2" In Holds, &c. 2 @ 2 1/2"

No. of Bilge Injections 1 sizes 4 1/2" Connected to condenser, or to circulating pump Cir. pp. Is a separate Donkey Suction fitted in Engine room & size Yes 1 @ 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 Yes Is it fitted with a watertight door Yes worked from Yes

OILERS, &c.—(Letter for record 5) Manufacturers of Steel Glasgow J. & C. Spencer, Beadmore Rd. C. of Scotland
 Total Heating Surface of Boilers 2140 sq. ft. Is Forced Draft fitted No No. and Description of Boilers 2 Single Ended Horizontal
 Working Pressure 180 lbs. Tested by hydraulic pressure to 360 lbs./sq. in. Date of test 16/3/21 No. of Certificate 15748
 Can each boiler be worked separately Yes Area of fire grate in each boiler 33 1/4 sq. ft. No. and Description of Safety Valves to
 each boiler 2 Spring loaded Area of each valve 3.976 sq. in. Pressure to which they are adjusted 185 lbs./sq. in. Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 4' 0" Int. dia. of boilers 11' 0" Length 10' 0" Material of shell plates
 Thickness Range of tensile strength Are the shell plates welded or flanged Yes Descrip. of riveting: cir. seams
 long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps
 Per centages of strength of longitudinal joint Working pressure of shell by rules Size of manhole in shell
 Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter
 Length of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings
 Working pressure of furnace by the rules Combustion chamber plates Material Thickness: Sides Back Top Bottom
 Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules End plates in steam space:
 Material of stays Area at smallest part Area supported by each stay Working pressure by rules Material of stays
 Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of Front plates at bottom
 Area at smallest part Area supported by each stay Working pressure by rules Working pressure of plate by rules
 Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules
 Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays
 Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and
 thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each
 Working pressure by rules 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 Lloyd's Register
 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 W 55-0077

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded? ☒

SPARE GEAR.

State the articles supplied:—

2 Top end bolts and nuts, 2 main bearing bolts
2 bottom end bolts and nuts, 1 set of coupling bolts, 1 set of feed and bilge
pump valves, quantity assorted bolts and nuts, iron of various sizes.

The foregoing is a correct description,

For Master James & Co. Ld. Charles C. C. Cotton Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1920 Feb 13 Mar 8 Apr 14 22 27 May 3 5 10 11 17 24 28 Jun 3 9 14 21 Jul 13 20 Aug 4 Sep 1 16 Oct 14 Nov 3 20 Dec 16 (1921)
During erection on board vessel - - Jan 12 31 Feb 8 18 23 28 Mar 24 30 Apr 22 29 Jun 3 Jul 5 Oct 1 11 24 25 27 Nov 10 16 17
Total No. of visits 46

Is the approved plan of main boiler forwarded herewith

No

" " " donkey " " "

☒

Dates of Examination of principal parts—Cylinders 21'6"20 Slides 21'6"20 Covers 21'6"20 Pistons 21'6"20 Rods 13'4"20

Connecting rods 13'4"20 Crank shaft 30'3"21 Thrust shaft 4'8"20 Tunnel shafts None Screw shaft 4'8"20 Propeller 18'2"21

Stern tube 22'4"21 Steam pipes tested 25/10/21 Engine and boiler seatings 1-10-21 Engines holding down bolts 24-10-21

Completion of pumping arrangements 10-11-21 Boilers fixed 24-10-21 Engines tried under steam 16-11-21

Completion of fitting sea connections 22-9-21 Stern tube 22-9-21 Screw shaft and propeller 22-9-21

Main boiler safety valves adjusted 10-11-21 Thickness of adjusting washers 1st 1/4" 2nd 1/4" 3rd 1/4" 4th 1/4" 5th 1/4" 6th 1/4" 7th 1/4" 8th 1/4" 9th 1/4" 10th 1/4"

Material of Crank shaft Steel Identification Mark on Do. LLOYDS 1460 Material of Thrust shaft Steel Identification Mark on Do. LLOYDS 1460

Material of Tunnel shafts None Identification Marks on Do. L Material of Screw shafts Steel Identification Marks on Do. LLOYDS 1460

Material of Steam Pipes S.D. steel Test pressure 540 lbs/sq. in.

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, opinion as to class, &c.)

The engines and boilers of this vessel have been built under special survey. The workmanship and materials are good; they have been well fitted on board, tried under steam and found to work satisfactorily.

The machinery of this vessel is eligible in our opinion for the record of L.M.C. 11.21 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD.

L.M.C. - 11.21. C.L.

MACHINERY CERT
WRITTEN 30.11.21
(dated 23/4/21)

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for.

Special ... £ 18 : 0 : 0

Donkey Boiler Fee ... £ : : : When received.

Travelling Expenses (if any) £ : : : 24.11.19

Committee's Minute

GLASGOW

22 NOV 1921

Assigned + L.M.C. 11.21.



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