

REPORT ON MACHINERY.

No. 45170.

Received at London Office

25 NOV 1925

Date of writing Report 19-11-1925 When handed in at Local Office 23-11-1925 Port of GLASGOW.
No. in Survey held at Paisley Date, First Survey 11. 6. 25 Last Survey 12th Nov. 1925
Reg. Book. on the Steel Twin Screw Ship "KERALA" (Number of Visits 28) Gross 78 Tons Net 11
Master Built at Paisley By whom built Messrs. MacLellan & Co. Ltd. (N^o. 3901-2) When built 1925-11.
Engines made at Paisley By whom made Messrs. MacLellan & Co. Ltd. (N^o. 3901-2) when made 1925-11.
Boilers made at do. By whom made do. (N^o. 1152) when made 1925.
Registered Horse Power Owners India Stores Department (Hqn. India Office) Port belonging to Glasgow.
Nom. Horse Power as per Section 28 38. Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Twin — Compound, Surface condensing. No. of Cylinders 4 No. of Cranks 4
Dia. of Cylinders 8 1/2" x 17" (Twin) Length of Stroke 14" Revs. per minute 220 Dia. of Screw shaft as per rules 3.86" Material of screw shaft steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes: no: no: 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 4 1/4"
Dia. of Tunnel shaft as per rule 3.46" Dia. of Crank shaft journals as per rule 3.63" Dia. of Crank pin 3 3/4" Size of Crank webs 7 x 2 1/2" Dia. of thrust shaft under
collars 3 3/4" Dia. of screw 4.9" Pitch of Screw 5.0" No. of Blades 3 State whether moveable no Total surface 8.5 ft.²
No. of Feed pumps 2 Diameter of ditto 1 1/4" Stroke 5 1/4" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 1 1/4" Stroke 5 1/4" Can one be overhauled while the other is at work yes
No. of Donkey Engines 1 Sizes of Pumps 3" x 7" No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 1 @ 2" In Holds, &c. 2 @ 2" Inc. peak 1 @ 2"
No. of Bilge Injections 1 sizes 3/4" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes: 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 oil Forward bilge suction. How are they protected Pipes are of solid drawn steel.
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 none Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel W. Beardmore & Co. Ltd.
Total Heating Surface of Boilers 877 ft.² Is Forced Draft fitted no No. and Description of Boilers 1—Cylindrical, 18" Return Tube
Working Pressure 130 lbs./in.² Tested by hydraulic pressure to 245 lbs./in.² Date of test 8th Oct. 1925 No. of Certificate 16945
Can each boiler be worked separately Area of fire grate in each boiler 60 sq. ft. No. and Description of Safety Valves to
each boiler 2: Direct spring Area of each valve 4.9 ins.² Pressure to which they are adjusted 130 lbs./in.² Are they fitted with easing gear yes
Smallest distance between boilers or uptakes and bunkers or woodwork 2 ft. Mean dia. of boilers 10' 3" Length 8' 9" Material of shell plates steel
Thickness 1 1/16" Range of tensile strength 28-32 tons/in.² Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. Lap
long. seams D.R.D.B.S. Diameter of rivet holes in long. seams 7/8" Pitch of rivets 4 25/32" Lap of plates or width of butt straps 9 3/8"
Per centages of strength of longitudinal joint (rivets 84.3, seam 91.7, plate 81.3) Working pressure of shell by rules 135 lbs./in.² Size of manhole in shell 16" x 12"
Size of compensating ring 7" x 1 1/16" No. and Description of Furnaces in each boiler 2 Corrugated (Depth) Material steel Outside diameter 2' 10 1/2"
Length of plain part top 1 1/2" bottom 1 1/2" Thickness of plates crown 1 1/32" Description of longitudinal joint weld No. of strengthening rings
Working pressure of furnace by the rules 138 lbs./in.² Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 9/16"
Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 9" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 134 lbs./in.²
Material of stays steel Area at smallest part 1 1/2" Area supported by each stay 99 ins.² Working pressure by rules 154 lbs./in.² End plates in steam space:
Material steel Thickness 1 1/16" Pitch of stays P.C.S. = 19.5 How are stays secured 2 nuts Working pressure by rules 133 lbs./in.² Material of stays steel
Area at smallest part 2 1/4" Area supported by each stay 208 ins.² Working pressure by rules 166 lbs./in.² Material of Front plates at bottom steel
Thickness 1 1/16" Material of Lower back plate steel Thickness 1 1/16" Greatest pitch of stays P.C.S. = 17" Working pressure of plate by rules 168 lbs./in.²
Diameter of tubes 3" Pitch of tubes 4" x 4" Material of tube plates steel Thickness: Front 1 1/16" Back 5/8" Mean pitch of stays 10"
Pitch across wide water spaces 13" x 8" Working pressures by rules 137 lbs./in.² Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 8" x 1 1/4" Length as per rule 2' 2 5/16" Distance apart 9" Number and pitch of stays in each 2 @ 9"
Working pressure by rules 230 lbs./in.² Steam dome: description of joint to shell None fitted % 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 None 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

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:-

2- connecting rod top and bolts + nuts.
2- connecting rod bottom end bolts + nuts.
2- main bearing bolts.
1 set - coupling bolts.
1 set - feed + bilge pump valves.
A quantity assorted bolts + nuts.
Iron of various sizes, Brasses for main bearings, top + bottom ends etc.

The foregoing is a correct description,

Manufacturer.

BOW, MACILLAN & CO., LTD

John Baxter

Director.

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

1925 June 11-29 July 3-6-15-22-24-28-31 Aug 19-31 Sept 3-8-17-22-25-30
Oct 8-13-16-21-22-29-30 Nov 2-10-11-12
28

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 28-7-25 Slides 28-7-25 Covers 28-7-25 Pistons 8-9-25 Rods 25-9-25
Connecting rods 3-9-25 Crank shafts 25-9-25 Thrust shafts 25-9-25 Tunnel shafts 25-9-25 Screw shafts 30-9-25 Propellers 17-9-25
Stern tubes 8-10-25 Steam pipes tested 22-10-25 Engine and boiler seatings 30-9-25 Engines holding down bolts 21-10-25

Completion of pumping arrangements 11-11-25 Boilers fixed 29-10-25 Engines tried under steam 12-11-25

Completion of fitting sea connections 13-10-25 Stern tubes 8-10-25 + 13-10-25 Screw shafts and propellers 13-10-25

Main boiler safety valves adjusted 10-11-25 Thickness of adjusting washers 1/2" P. 5/16" S.

Material of Crank shafts steel Identification Mark on Do. LLOYD'S NO 1167 J.D.B. 25-9-25

Material of Tunnel shafts steel Identification Marks on Do. LLOYD'S NO 1167 J.D.B. 25-9-25

Material of Steam Pipes solid drawn copper Identification Marks on Do. LLOYD'S NO 1167 J.D.B. 30-9-25

Is an installation fitted for burning oil fuel yes Test pressure 260 lb./in.²

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 no

If so, state name of vessel

General Remarks

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

These engines + the Boiler have been built under special survey in accordance with the approved plans and the Rules for Vessels trading in Estuaries, Rivers, Lakes + Lochs. The material + workmanship are good. The Machinery has been properly secured on board and tried under steam with satisfactory result.

This Machinery is eligible, in my opinion, to be classed in the Register Book and to have Protations L.M.C. - 11.25. C.L. (P. + S.): and fitted for oil fuel 11.25 F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD + LMC 11.25. CL.

Fitted for oil fuel 11.25 F.P. above 150°F.

The amount of Entry Fee ... £ 2 : -

Special ... £ 15 : -

Donkey Boiler Fee ... £ - : -

Travelling Expenses (if any) £ - : -

When applied for,

20/11/25

When received,

24 NOV 1925

Committee's Minute

GLASGOW

24 NOV 1925

Assigned + LMC 11.25

Fitted for oil fuel 11.25 F.P. above 150°F

Engineer Surveyor to Lloyd's Register of Shipping.



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