

REPORT ON MACHINERY.

No. 11910
SAT. APR. 26 1924

Received at London Office

Survey Report 19 When handed in at Local Office 22.4.24 Port of MIDDLESBRO
Survey held at Glasgow & Middleburgh Date, First Survey 13.2.24 Last Survey 12.4.1924
on the S.S. MARTINHOE (Number of Visits 1)

Built at Haverton Hill By whom built James S. B. Co. L. N° 59 When built 1924
made at Glasgow By whom made Ross & Duncan N° 1131 when made 1924
made at Glasgow By whom made Ross & Duncan N° 1695-6 when made 1924
Horse Power Owners Port belonging to

Horse Power as per Section 28 156 ✓ Is Refrigerating Machinery fitted for cargo purposes no ✓ Is Electric Light fitted no ✓

VES, &c.—Description of Engines Triple expansion ✓ No. of Cylinders 3 ✓ No. of Cranks 3 ✓
Cylinders 17-27½-45 ✓ Length of Stroke 33 ✓ Revs. per minute Dia. of Screw shaft 9.84 ✓ Material of screw shaft steel ✓
as per rule 8.62 as fitted 8¾ ✓ Dia. of Crank pin 9½ ✓ Size of Crank web 17½ x 6 ✓ Dia. of thrust shaft under

crew shaft fitted with a continuous liner the whole length of the stern tube yes ✓ Is the after end of the liner made water tight
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

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive yes ✓ If two
are fitted, is the shaft lapped or protected between the liners— Length of stern bush 40½ ✓

Tunnel shaft as per rule 8.62 as fitted 8¾ ✓ Dia. of Crank shaft journals as per rule 9 as fitted 9½ ✓ Dia. of Crank pin 9½ ✓ Size of Crank web 17½ x 6 ✓ Dia. of thrust shaft under
9½ ✓ Dia. of screw 12-3 ✓ Pitch of Screw 12-6 ✓ No. of Blades 4 ✓ State whether moveable no ✓ Total surface 50 ✓

Feed pumps 2 ✓ Diameter of ditto 2¾ ✓ Stroke 16½ ✓ Can one be overhauled while the other is at work yes ✓
Bilge pumps 2 ✓ Diameter of ditto 3 ✓ Stroke 16½ ✓ Can one be overhauled while the other is at work yes ✓

Donkey Engines 2 ✓ Sizes of Pumps Bellair-Pud 6x8x8 : 6x4½x6 ✓ No. and size of Suctions connected to both Bilge and Donkey pumps
Engine Room 3 @ 2½ ✓ In Holds, &c. Fore hold 2 @ 3; aft hold 3 @ 3"

Tunnel Well 1 @ 2½ ✓
Bilge Injections 1 sizes 4 ✓ Connected to condenser or to circulating pump yes ✓ Is a separate Donkey Suction fitted in Engine room & size yes - 3½
Mud-boxes ✓ H. Box ✓

Are the bilge suction pipes fitted with valves yes ✓ Are the valves in Engine room always accessible yes ✓ Are the sluices on Engine room bulkheads always accessible none
connections with the sea direct on the skin of the ship yes ✓ Are they Valves or Cocks both ✓

Are they sized 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
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 ✓

Pipes are carried through the bunkers none ✓ How are they protected ✓
Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes ✓

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes ✓
Examination of completion of fitting of Sea Connections 20.2.24 ✓ of Stern Tube 25.2.24 ✓ Screw shaft and Propeller 25.2.24 ✓

Screw Shaft Tunnel watertight yes ✓ Is it fitted with a watertight door yes ✓ worked from top platform ✓
VES, &c.—(Letter for record S) Manufacturers of Steel D. Bellair & Sons

Heating Surface of Boilers 2806 ✓ Is Forced Draft fitted no ✓ No. and Description of Boilers 2 Single ended 2SB
Working Pressure 180 ✓ Tested by hydraulic pressure to 320 ✓ Date of test 22.1.24 ✓ No. of Certificate 16407 ✓

Can each boiler be worked separately yes ✓ Area of fire grate in each boiler 39.5 ✓ No. and Description of Safety Valves to
boiler 2 spring loaded Area of each valve 4.90 ✓ Pressure to which they are adjusted 185 ✓ Are they fitted with easing gear yes ✓

Distance between boilers or uptakes and bunkers or woodwork 2-0 ✓ Mean dia. of boilers 12-0 ✓ Length 10-6 ✓ Material of shell plates steel
Range of tensile strength 28-32 ✓ Are the shell plates welded or flanged no ✓ Descrip. of riveting: cir. seams D.R ✓

Diagrams T.R. D.B.S. Diameter of rivet holes in long. seams 1" ✓ Pitch of rivets 7" ✓ Lap of plates or width of butt straps 14½ ✓
Stages of strength of longitudinal joint rivets 86.4 Working pressure of shell by rules 182 Size of manhole in shell 16" x 12" ✓
plate 85.7

Compensating ring 30½ x 26½ ✓ No. and Description of Furnaces in each boiler 2 Morrison 2C.F. ✓ Material S ✓ Outside diameter 3-7½ ✓
of plain part top ✓ Thickness of plates crown 9/16 ✓ Description of longitudinal joint Weld ✓ No. of strengthening rings ✓
bottom ✓

Working pressure of furnace by the rules 189 Combustion chamber plates: Material S ✓ Thickness: Sides 1/16 ✓ Back 1/8 ✓ Top 1/16 ✓ Bottom 1/16 ✓
of stays to ditto: Sides 9½ x 9 ✓ Back 8½ x 8½ ✓ Top 9½ x 9 ✓ If stays are fitted with nuts or riveted heads nuts ✓ Working pressure by rules 187

Area of stays S ✓ Diameter at smallest part 2.07 Area supported by each stay 85.5 ✓ Working pressure by rules 195 End plates in steam space
al S ✓ Thickness 1" ✓ Pitch of stays 16" x 17" ✓ How are stays secured DN-4W ✓ Working pressure by rules 197 Material of stays S ✓

Area at smallest part 4.57 Area supported by each stay 272 ✓ Working pressure by rules 182 Material of Front plates at bottom S ✓
Material of Lower back plate S ✓ Thickness 3/32 ✓ Greatest pitch of stays 14" x 8½ ✓ Working pressure of plate by rules 216

Area of tubes 3½ Pitch of tubes 4½ x 4½ ✓ Material of tube plates S ✓ Thickness: Front 7/8 ✓ Back 3/4 ✓ Mean pitch of stays 10" ✓
across wide water spaces 14" ✓ Working pressures by rules 183 Girders to Chamber tops: Material S ✓ Depth and
Area of girder at centre 7 x 1¾ ✓ Length as per rule 30 5/8 ✓ Distance apart 9" ✓ Number and pitch of stays in each 2 @ 9½

Working pressure by rules 214 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked
separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet
Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

Are they stayed with rings ✓ Distance between rings ✓ Working pressure by rules ✓ End plates: Thickness ✓ How stayed ✓
Working pressure of end plates ✓ Area of safety valves to superheater ✓ Are they fitted with easing gear ✓



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IS A DONKEY BOILER FITTED? no ✓ If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two each of connecting rod top-end, bottom-end and main bearing bolts and nuts; One set of coupling bolts and nuts; One set of feed & bridge valves; Assorted bolts & nuts, iron of various sizes; One main & one donkey feed check; One safety valve spring ✓

The foregoing is a correct description,

(Signed) Ross & Duncan

Manufacturer. See Gls Rpt. No. 43364

Dates of Survey while building { During progress of work in shops - - - 1924 / Feb 13, 20, 24, Mar 4, 10, 14, 19, 26, 24, 27, 31, Apr 3, 7, 10, 11, 12. During erection on board vessel - - - Total No. of visits 16 /

Is the approved plan of main boiler forwarded herewith? ✓ " " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 28.11.23 Slides 23.1.24 Covers 23.1.24 Pistons 23.1.24 Rods 23.1.24 Connecting rods 28.1.24 Crank shaft 4.12.23 Thrust shaft 23.1.24 Tunnel shafts 23.1.24 Screw shaft 15.2.24 Propeller 29.1.24 Stern tube 29.1.24 Steam pipes tested 19.3.24 Engine and boiler seatings 25.2.24 Engines holding down bolts 24.3.24 Completion of pumping arrangements 11.4.24 Boilers fixed 11.4.24 Engines tried under steam 11.4.24 Main boiler safety valves adjusted 11.4.24 Thickness of adjusting washers Port Bk S-3/8; Star Bk S-3/8 Material of Crank shaft S Identification Mark on Do 1131 J.S.C. Material of Thrust shaft S Identification Mark on Do 1131 Material of Tunnel shafts S Identification Marks on Do 1131 J.S.C. Material of Screw shafts S Identification Marks on Do 1121 Material of Steam Pipes Solid drawn copper (4" x N:7) Test pressure 360 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 S.S. Bishopston; Gls Rpt. 116

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel was built under Special Survey, see Glasgow Report No. 43364, has now been satisfactorily secured on board, in accordance with the Rules, and the Engines, Boilers & Auxiliaries examined under steam and all found satisfactory.

The machinery is in a good and safe working condition and under the non-eligible in my opinion to have the notation of LMC-4.24 in the Register B

It is submitted that this vessel is eligible for THE RECORD + LMC 4.24. CL.

W. Morrison 29/4/24

The amount of Entry Fee ... £ ✓ : : When applied for, Special ... 1/3 ... £ 7-16-0 ✓ : : 25.4.1924 Donkey Boiler Fee ... £ ✓ : : When received, Travelling Expenses (if any) £ ✓ : : 5/5 ✓ : : 1924

Committee's Minute

TUE. APR. 29 1924

Assigned

+LMB 4.24 C.L.



The Surveyors are requested not to write on or below the space for Committee's Minute.