

REPORT ON MACHINERY.

No. 32839

Received at London Office **WED. 24 AUG. 1921**

Date of writing Report 23/8 When handed in at Local Office 23/8 Port of Hull

No. in Survey held at Hull Date, First Survey 26/10/20 Last Survey Aug 18th 1921
Reg. Book. on the S.S. "MICKLETON" (Number of Voids 53)

Master Beverley Built at Beverley By whom built Robt Wether & Gemmill When built 1921
Engines made at Hull By whom made Chas J Holmes & Co when made 1921
Boilers made at do By whom made do when made 1921

Registered Horse Power W.C. Madley & Sons Owners Hull Port belonging to Hull

Nom. Horse Power as per Section 28 HO 109 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 14 1/2 - 24 - 40 Length of Stroke 27 Revs. per minute 112 Dia. of Screw shaft 8 1/4 as per rule 8 1/2 Material of screw shaft Steel

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 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 3-4

Dia. of Tunnel shaft 7-2 1/2 as per rule 7-2 1/2 Dia. of Crank shaft journals 7-6 as per rule 7-6 Dia. of Crank pin 8 1/4 Size of Crank webs 15 1/2 x 5 1/2 Dia. of thrust shaft under collars 8 1/4 Dia. of screw 10-9 Pitch of Screw 11-1 1/2 No. of Blades 4 State whether moveable no Total surface 38 1/2

No. of Feed pumps Two Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work yes

No. of Bilge pumps Two Diameter of ditto 2 1/2 Stroke 15 Can one be overhauled while the other is at work yes

No. of Donkey Engines Two Sizes of Pumps 6 x 4 1/2 x 6 & 6 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Four @ 2 1/2 In Holds, &c. Two @ 2 1/2

No. of Bilge Injections one sizes 4 Connected to condenser, or to circulating pump yes 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 yes

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 Bilge & Ballast suction How are they protected From collisions

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

BOILERS, &c.—(Letter for record S.) Manufacturers of Steel J. Spencer & Sons

Total Heating Surface of Boilers 1950 Is Forced Draft fitted no No. and Description of Boilers Two cyl mult S.E.

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 9-3-21 No. of Certificate 3476

Can each boiler be worked separately yes Area of fire grate in each boiler 32 1/2 No. and Description of Safety Valves to each boiler 2 spring loaded Area of each valve 3.98 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 yes Mean dia. of boilers 11-0 Length 10-0 Material of shell plates Steel

Thickness 5/16 Range of tensile strength 28 to 32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DRL

long. seams TR, DRS Diameter of rivet holes in long. seams 1 Pitch of rivets 7 Lap of plates or width of butt straps 15

Per centages of strength of longitudinal joint rivets 88 1/2% Working pressure of shell by rules 204 lbs Size of manhole in shell 16 x 12

Size of compensating ring 7/8 x 7 No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 3-4

Length of plain part 36-6 1/2 thickness of plates 3/8 Description of longitudinal joint Welded No. of strengthening rings yes

Working pressure of furnace by the rules 183 Combustion chamber plates: Material Steel Thickness: Sides 1/8 Back 1/8 Top 5/8 Bottom 1/8

Pitch of stays to ditto: Sides 9 1/4 x 9 Back 9 x 9 1/8 Top 7 1/2 x 9 If stays are fitted with nuts or riveted heads yes Working pressure by rules 183 lbs

Material of stays Steel Area at smallest part 2.07 Area supported by each stay 89 Working pressure by rules 208 End plates in steam space: Material Steel Thickness 3/8 Pitch of stays 15 x 14 How are stays secured DR & W. Working pressure by rules 186 lbs Material of stays Steel

Area at smallest part 3.85 Area supported by each stay 210 Working pressure by rules 190 Material of Front plates at bottom Steel

Thickness 3/8 Material of Lower back plate Steel Thickness 3/8 Greatest pitch of stays 14 x 9 1/8 Working pressure of plate by rules 193

Diameter of tubes 3 1/2 Pitch of tubes 4 1/8 x 4 1/8 Material of tube plates Steel Thickness: Front 3/8 Back 5/8 Mean pitch of stays 10.5

Pitch across wide water spaces 14 x 11 Working pressures by rules 258 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/2 x 1 1/2 Length as per rule 2-5 1/8 Distance apart 7 1/2 Number and pitch of stays in each 2 @ 9

Working pressure by rules 198 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

Material of Safety Valve yes Pressure to which each is adjusted yes Is Easing Gear fitted yes

In a Report also sent on the Hull of the ship

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *Two top end, two bottom end, two main bearing & one set of coupling bolts & nuts, one set air, feed, & bilge pump valves, one main & one donkey check valve, a quantity of assorted bolts & nuts of various sizes.*

The foregoing is a correct description,

For CHARLES D. HOLMES & CO. LTD.

J. R. Cooper

Manufacturer.

Dates of Survey while building: During progress of work in shops -- 1920 Oct 26, Nov 18, Dec 2, 10, 14, 16, 20, 31, 1921 Jan 3, 6, 10, 14, 20, 21, 24, 26, 31, Feb 2, 10
During erection on board vessel --- 11, 14, 16, 17, 18, 22, 24, then 1, 2, 8, 9, 14, 16, 21, 23, 30 Apr 1, 12, 14, 19, 20, 26, 27, 28 May 2
Total No. of visits 53. Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 10-1-21 Slides 12-2-21 Covers 21-1-21 Pistons 10-2-21 Rods 10-1-21
Connecting rods 21-1-21 Crank shaft 10-1-21 Thrust shaft 21-1-21 Tunnel shafts 21-1-21 Screw shaft 21-1-21 Propeller 9-11-20
Stern tube 9-11-20 Steam pipes tested 5, 16-4-21 Engine and boiler seatings 19-4-21 Engines holding down bolts 19-4-21
Completion of pumping arrangements 9-8-21 Boilers fixed 19-4-21 Engines tried under steam 9-8-21
Completion of fitting sea connections 6-12-20 Stern tube 9-11-20 Screw shaft and propeller 14-3-21
Main boiler safety valves adjusted 9-8-21 Thickness of adjusting washers Pt boiler $\frac{3}{16}$ $\frac{5}{16}$ Stl boiler $\frac{3}{16}$ $\frac{5}{16}$
Material of Crank shaft *Steel* Identification Mark on Do. *LLOYDS 2574 JH 10-1-21* Material of Thrust shaft *steel* Identification Mark on Do. *LLOYDS 2573 JH 21-1-21*
Material of Tunnel shafts *-* Identification Marks on Do. *-* Material of Screw shafts *steel* Identification Marks on Do. *LLOYDS 2576 JGM 9-11-20*
Material of Steam Pipes *Copper* Test pressure 400 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 *No* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been built under special survey & the materials & workmanship are good.*

On completion the machinery was tried under full working conditions while moored to the Quay Wall with satisfactory results.

The machinery of this vessel is now in a good & efficient condition & eligible in my opinion to have the record # LMC-8-21 marked in Red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 8.21 CL.

Reed 29/8/21 J.M.

Charlotte P. Riley
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 3 : 0 : 0
Special ... £ 27 : 10 : 0
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 19 21
When received, 31/8/19 21

Committee's Minute FRI. 25 SEP. 1921
Assigned + LMC 8.21
C.L.

MACHINERY CERT. WRITTEN

