

REPORT ON MACHINERY.

No. 11488

Received at London Office

SAT. FEB. 24 1923

Date of writing Report February 19th 1923 When handed in at Local Office 22. 2. 1923 Port of MIDDLESBROUGH

No. in Survey held at MIDDLESBROUGH Date, First Survey 21st. Nov. 1922 Last Survey 15th. Feb. 1923

Reg. Book. on the Steel Screw Trawler "Yogi" (Number of Visits 14)

Master ✓ Built at Middlesbrough By whom built Smith's Dock Co. Ltd [S.S. N° 775] When built 1923

Engines made at Middlesbrough By whom made Smith's Dock Co. Ltd [N° 231] when made 1923

Boilers made at Hebburn By whom made Palmers S.B. & Eng. Co. Ltd. when made 1923

Registered Horse Power ✓ Owners Neale & West Port belonging to Cardiff

Nom. Horse Power as per Section 28 99.4 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 13 $\frac{1}{4}$ " ; 23" ; 37" Length of Stroke 27" Revs. per minute 104 Dia. of Screw shaft as per rule 7.91" Material of S.M.I. 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 ✓ 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 3'-0 $\frac{1}{2}$ "

Dia. of Tunnel shaft as per rule 7" 6.95" Dia. of Crank shaft journals as per rule 7.85" Dia. of Crank pin 7 $\frac{3}{8}$ " Size of Crank webs 14 $\frac{1}{2}$ " x 4 $\frac{5}{8}$ " Dia. of thrust shaft under

collars 7 $\frac{3}{8}$ " Dia. of screw 9'-9" Pitch of Screw 11'-3" No. of Blades 4 State whether moveable No Total surface 34 f

No. of Feed pumps 2 Diameter of ditto 2 $\frac{3}{4}$ " Stroke 1'-1 $\frac{1}{2}$ " Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 2 $\frac{3}{4}$ " Stroke 1'-1 $\frac{1}{2}$ " Can one be overhauled while the other is at work Yes

No. of Donkey Engines 3 Sizes of Pumps CIRCUL. 6" CENTRFL. PUMP. BANAST. 6" x 6" x 6" V.D. FEED DKY. 6" x 4" x 6" V.D. No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 2-2" from E.B. Bilges In Holds, &c. 1-2" from Slush Well; 1-2" from Fore Peak Tank

No. of Bilge Injections 1 size 4" Connected to condenser, or to circulating pump Yes 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 Wash Steam & Exhaust How are they protected Wooden Trunks

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

Dates of examination of completion of fitting of Sea Connections 18/1/23 of Stern Tube 18/1/23 Screw shaft and Propeller 18/1/23

Is the Screw Shaft Tunnel watertight Mach. Off Is it fitted with a watertight door ✓ worked from ✓

(SEE NEWCASTLE REPORT N° 76348)

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel J. Spence

Total Heating Surface of Boilers 1830 f Is Forced Draft fitted No No. and Description of Boilers One Cylindrical Multitubular

Working Pressure 180 lbs/in² Tested by hydraulic pressure to 320 lbs/in² Date of test 15/1/23 No. of Certificate 9715

Can each boiler be worked separately ✓ Area of fire grate in each boiler 55.5 f No. and Description of Safety Valves to

each boiler 2 - Direct Spring Area of each valve 5.95 in² Pressure to which they are adjusted 185 lbs/in² Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 14'-0" Length 10'-9" Material of shell plates Steel

Thickness 1 $\frac{5}{32}$ " Range of tensile strength 28-32 tons/in² Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R.L.

long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1 $\frac{3}{16}$ " Pitch of rivets 8 $\frac{1}{2}$ " Lap of plates or width of butt straps 1'-6 $\frac{1}{8}$ "

Per centages of strength of longitudinal joint 86% Working pressure of shell by rules 182.4 lbs/in² Size of manhole in shell 16" x 12"

Size of compensating ring 2'-4" x 2'-8" x 1 $\frac{5}{32}$ " No. and Description of Furnaces in each boiler 3 Plain Material Steel Outside diameter 3'-5 $\frac{3}{4}$ "

Length of plain part top 6'-3 $\frac{15}{16}$ " bottom 6'-0" Thickness of plates crown 3 $\frac{1}{4}$ " bottom 3" Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 182 lbs/in² Combustion chamber plates: Material Steel Thickness: Sides 2 $\frac{1}{32}$ " Back 2 $\frac{1}{32}$ " Top 2 $\frac{1}{32}$ " Bottom 1"

Pitch of stays to ditto: Sides 8" x 9 $\frac{3}{4}$ " Back 9" x 9" Top 12" x 9 $\frac{1}{2}$ " If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 184 lbs/in²

Material of stays Steel Diameter at smallest part 1 $\frac{3}{4}$ " Area supported by each stay 81 in² Working pressure by rules 223 lbs/in² End plates in steam space:

Material Steel Thickness 1 $\frac{1}{16}$ " Pitch of stays 17 $\frac{1}{2}$ " x 18" How are stays secured D.R. & W. Working pressure by rules 186 lbs/in² Material of stays Steel

Diameter at smallest part 3" Area supported by each stay 312.5 in² Working pressure by rules 212 lbs/in² Material of Front plates at bottom Steel

Thickness 1 $\frac{1}{16}$ " Material of Lower back plate Steel Thickness 7 $\frac{1}{8}$ " Greatest pitch of stays 14" x 9" Working pressure of plate by rules 226 lbs/in²

Diameter of tubes 3 $\frac{1}{2}$ " Pitch of tubes 4 $\frac{1}{4}$ " x 4 $\frac{1}{16}$ " Material of tube plates Steel Thickness: Front 1 $\frac{1}{16}$ " Back 3 $\frac{1}{4}$ " Mean pitch of stays 9 $\frac{1}{16}$ "

Pitch across wide water spaces 14 $\frac{1}{2}$ " Working pressures by rules 188 lbs/in² Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 9" x 1 $\frac{1}{2}$ " Length as per rule 2'-9 $\frac{3}{32}$ " Distance apart 8 $\frac{1}{2}$ " Number and pitch of stays in each 2 @ 9 $\frac{1}{2}$ "

Working pressure by rules 211 lbs/in² 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

holes ✓ Pitch of rivets ✓ Working pressure of shell by rules ✓ Diameter of flue ✓ Material of flue plates ✓ Thickness ✓

If stiffened 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 ✓

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

1 Solid Cast Iron Propeller; 2 main Bearing Bolts & Nuts; 2 Top End Bolts & Nuts; 2 Bottom End Bolts & Nuts; 1 Set Coupling Bolts; 24 Bolts & Nuts assorted; 20 Brass Condenser Ferrules; 1 Set Feed and Bilge Pump Valves and Seats, each; 6 Piston Bolts & Nuts; 3 Boiler tubes; 1/2 Set Firebars; 12 Boiler Water Gauge glasses; 2m of assorted Pipes.

The foregoing is a correct description.

Mr. Smith Dock Co. Ltd.
J.B. Scott

Manufacturer.

Dates of Survey while building: During progress of work in shops - 1922 Nov 21, Dec 15, 18, 27. (1923) Jan 3, 8, 11, 12, 17, 18, Feb 2, 6, 8, 15.
During erection on board vessel -
Total No. of visits 14

Is the approved plan of main boiler forwarded herewith

Yes.

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 12/1/23 Slides 18/1/23 Covers 18/1/23 Pistons 18/1/23 Rods 18/1/23

Connecting rods 18/1/23 Crank shaft 17/1/23 Thrust shaft Dundee Tunnel shafts None Screw shaft Dundee Propeller 18/1/23

Stern tube 18/1/23 Steam pipes tested 2/2/23 Engine and boiler seatings 18/1/23 Engines holding down bolts 2/2/23.

Completion of pumping arrangements 8/2/23 Boilers fixed 6/2/23 Engines tried under steam 8/2/23.

Main boiler safety valves adjusted 8/2/23 Thickness of adjusting washers Port = 17/32"; Stacks 5/8"

Material of Crank shaft S.M. Steel Identification Mark on Do. 4121D-M.R. Material of Thrust shaft S.M. Steel Identification Mark on Do. 930 B.-J.E.S.

Material of Tunnel shafts None Identification Marks on Do. ✓ Material of Screw shaft S.M. Steel Identification Marks on Do. 930 A. J.E.S.

Material of Steam Pipes Copper ✓ Test pressure 360 lbs/in².

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 Machinery of this vessel has been built under special survey: The materials and workmanship throughout are sound and good. The boiler was tested by hydraulic pressure and the engines and boilers were examined under steam and all found satisfactory. The machinery is now in a good and safe working condition and renders the vessel eligible, in my opinion, to have the notation of * L.M.C. 2-23 in the Register Book (subject to the completion of the electric light).
No. 1st will be received later.

Note:

When the vessel left this port the electric light installation was only partially completed. The Builders have arranged to advise us when and where the survey will be completed. The vessel is also fitted with Wireless.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 2.23. CL.

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for.
Special ... m. 12 11 0 23-2-19-23.
Donkey Boiler Fee ... 12 4 0
Travelling Expenses (if any) £

D. S. Whiteford
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

Assigned

TUE 27 FEB 1923

L.M.C. 2.23
C.L.

CERTIFICATE WRITTEN



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