

REPORT ON MACHINERY.

No. 5335

24 JUL. 1922

Received at London Office

Hong Kong

Date of writing Report June 3rd. 1922 When handed in at Local Office

10 Port of

No. in Survey held at Hong Kong

Date, First Survey 10-1-21

Last Survey May 31st. 1922

Reg. Book. on the Steel Screw Steamer "PLEIODON"

(Number of Visits 139)

Tons { Gross 5818.86

Net 3491.36

Master Built at Hong Kong

By whom built Hong Kong & Whampoa Dock Co. Ltd. When built 1922

Engines made at Hong Kong

By whom made Hong Kong & Whampoa Dock Co. Ltd. when made 1922

Boilers made at Hong Kong

By whom made Hong Kong & Whampoa Dock Co. Ltd. when made 1922

Registered Horse Power

Owners Anglo-Saxon Petroleum Co. Ltd. Port belonging to Hong Kong

Nom. Horse Power as per Section 28 517

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

MACHINES, &c.—Description of Engines Triple Surface Condensing No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 27", 44", 73" Length of Stroke 48" Revs. per minute 78 Dia. of Screw shaft 14" as per rule 14" as fitted 16" 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

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

screws are fitted, is the shaft lapped or protected between the liners - Length of stern bush 5'-3"

Dia. of Tunnel shaft 13.32" as per rule Dia. of Crank shaft journals 13.99" as per rule Dia. of Crank pin 14" as fitted Size of Crank webs 28"x9" Dia. of thrust shaft under

bars 14" as fitted Dia. of screw 17'-9" Pitch of Screw 16'-9" No. of Blades 4 State whether moveable Fixed Total surface 96 sq. ft.

No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 15 Sizes of Pumps See Note No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2-3 1/2" in well; 2-3 1/2" in Stokehold; 1-3 1/2" in Holds, &c. Aft Cofferdam two 3 1/2"; Main Pump Room

Forward Pump Room one 2"; Hold two 2"; Chain locker one 2" all connected to donkey. (Two 2 1/2"; Forward cofferdam two 3 1/2";

No. of Bilge Injections 1 sizes 10" Connected to condenser, or to circulating pump Cir. Pp. Is a separate Donkey Suction fitted in Engine room & size Yes, 3 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 -

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 below

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 Aft cofferdam Bilge Suction How are they protected Steel Plates

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 -

MILLERS, &c.—(Letter for record 225/8/20) Manufacturers of Steel Wm. Beardmore & Co. 358

Total Heating Surface of Boilers 7662 Is Forced Draft fitted Yes No. and Description of Boilers Three Cylindrical Multitubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 320 lbs. Date of test 1-4-22 No. of Certificate 129,130,131

Can each boiler be worked separately Yes Area of fire grate in each boiler 63.6 sq. ft. No. and Description of Safety Valves to

h boiler Two double spring loaded 3 1/2" Area of each valve 9.6 sq. in. Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-5" Mean dia. of boilers 15'-6" Length 11'-7" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double lap

g. seams Triple But Diameter of rivet holes in long. seams 1.5/16" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 19 1/2"

Percentages of strength of longitudinal joint rivets 88.3% plate 85.6% Working pressure of shell by rules 182 lbs. Size of manhole in shell 16" x 12"

Size of compensating ring 34"x38"x1 1/4" No. and Description of Furnaces in each boiler Three Deighton Material Steel Outside diameter 48 1/2"

Length of plain part top - bottom - Thickness of plates crown 9/16" Description of longitudinal joint Welded No. of strengthening rings -

Working pressure of furnace by the rules 180.7 lbs. Combustion chamber plates: Material Steel Thickness: Sides 25/32" Back 3/4" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 9"x9" Back 9x9 1/2" Top 9x9 1/2" If stays are fitted with nuts or riveted heads riveted Working pressure by rules 182 lbs.

Material of stays Steel Area at smallest part 2.03 sq. in. Area supported by each stay 446.6 sq. in. Working pressure by rules 181 lbs. Material of stays Steel

Material Steel Thickness 1.11/32" Pitch of stays 20 1/2"x21 1/2" How are stays secured Nuts Working pressure of plate by rules 186 lbs.

Area at smallest part 8.29 sq. in. Area supported by each stay 446.6 sq. in. Working pressure by rules 181 lbs. Material of Front plates at bottom Steel

Thickness 31/32" Material of Lower back plate Steel Thickness 3/8" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 186 lbs.

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 31/32" Back 13/16" Mean pitch of stays 13 1/2"x9"

Pitch across wide water spaces 14 1/2" Working pressures by rules 189 lbs. Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 10 1/4"x1 1/2" (2 off) Length as per rule 2'-9 1/2" Distance apart 9 1/2" Number and pitch of stays in each Three 9"

Working pressure by rules 214 lbs. 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 -

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 -

W1337-0189

Lloyd's Register
Foundation

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

SPARE GEAR. State the articles supplied:— See List attached.

HONGKONG & WHAMPOA DOCK CO., LD.
The foregoing is a correct description,

R.M. Dyer.

Manufacturer.

1921 Jan. 10, 26 Feb. 1. Mar. 1, 2, 4, 7, 10, 16, 24, 29, Apr. 3, 19, 25, 28. May, 2, 4, 6, 11, 15, 18, 20, 25, 31, Jun. 2, 6, 11, 15, 16, 23, Jul. 1, 6, 7, 8, 11, 12, 13, 20, 23, 25, 27, 29. Jul. 2, 3, 5, 8, 12, 15, 18, 20, 25, 31, Sept. 1, 2, 5, 7, 8, 10, 14, 22, 23, 29 Oct. 3, 5, 7, 10, 11, 12, 13, 14, 19, 22, 26, 28, 31, Nov. 2, 4, 5, 7, 10, 14, 16, 17, 22, 24, 25, 25, 28, 30 Dec. 5, 7, 8, 10, 12, 21, 23, 27, 1922 Jan. 4, 9, 11, 13, 16, 21, 31 Feb. 6, 14, 21, 22, 25, 27, 28, Mar. 2, 13, 14, 15, 20, 21, 25, 31 Apr. 3, 11, 14, 15, 17, 18, 21, 22, 25, May. 3, 4, 9, 16, 20, 22, 26, 28, 29, 31.
Is the approved plan of main boiler forwarded herewith No
(139) " " " donkey " " " No

Dates of Examination of principal parts—Cylinders 22/9/21 Slides 2/11/21 Covers 2/11/21 Pistons 2/11/21 Rods 14/3/22

Connecting rods 21/2/22 Crank shaft 8/9/21 Thrust shaft 7/11/21 Tunnel shafts None Screw shaft 27/12/21 Propeller 5/12/21

Stern tube 27/12/21 Steam pipes tested 20/5/22 Engine and boiler seatings 3/5/22 Engines holding down bolts 3/5/22

Completion of pumping arrangements 22/5/22 Boilers fixed 16/5/22 Engines tried under steam 22/5/22

Completion of fitting sea connections 18/4/22 Stern tube 18/4/22 Screw shaft and propeller 21/4/22

Main boiler safety valves adjusted 29/5/22 Thickness of adjusting washers Ford. S. 7/16" Port. S. 7/16" Starb. P. 7/16"

Donkey Boiler " " 26/5/22 LLOYD'S Material of Thrust shaft Steel Identification Mark on Do. 241 HKg

Material of Crank shaft Steel Identification Mark on Do. 6599 A.P. Material of Tunnel shafts None Identification Marks on Do. -

Material of Steam Pipes Solid Drawn Steel Spare " Steel Identification Marks on Do. 243 HKg

" Dead " Solid Drawn Copper Test pressure 540 lbs. 450 lbs.

Is an installation fitted for burning oil fuel Yes 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 Yes S. S. PALUDINA Rpt. 5242

Is this machinery duplicate of a previous case Yes If so, state name of vessel S. S. PETRICOLA Rpt. 5284

S. S. PLANORBIS Rpt. 5311

General Remarks (State quality of workmanship, opinions as to class, &c. The workmanship is good and it is recommended that the vessel be classed with Lloyd's Machinery Certificate and the record of L.M.C. 5,1922 be made in the Register Book. Fitted for oil fuel 5,1922 F.P. above 150°F.

IDENTIFICATION MARKS ON BOILERS:-
No. 129 HKg. LLOYD'S TEST 320 lbs. W.P. 180 lbs. 15-3-22 T.S.M.
No. 130 HKg. LLOYD'S TEST 320 lbs. W.P. 180 lbs. 11-4-22 T.S.M.
No. 131 HKg. LLOYD'S TEST 320 lbs. W.P. 180 lbs. 22-4-22 T.S.M.

NOTE:- SIZES OF DONKEY PUMPS:-

ENGINE ROOM:- Two Weir's feed 8" x 10½" x 21"; General Service 5½" x 7½" x 15"; Centrifugal Circulating 14"; Ballast 8" x 9" x 10" Horiz. Duplex.; Donkey Boiler Feed 6"x4"
Two Fan Engines 7" x 5".

FORWARD PUMP ROOM:- Ballast 8" x 6" x 10"; Transfer 8" x 6" x 10".

MAIN PUMP ROOM:- Two cargo 14" x 12" x 14" duplex. Drain Pump 6" x 4½" x 6".

STOKEHOLD:- Transfer pump in stokehold 6" x 4½" x 6"; Oil fuel pumps for main boilers 4"x6"
(two off) with heaters; One oil fuel pump with heater for donkey boiler 2½"x3½".

It is submitted that this vessel is eligible for

The amount of Entry Fee ... \$ 95.00 : When applied for, THE RECORD + L.M.C. 5.22. FD. CL.

Special ... \$ 1587.00 : 31/5 1922 Fitted for oil fuel 5.22.

Donkey Boiler Fee ... \$ 66.00 : When received, F.P. above 150°F.

Travelling Expenses (if any) \$ 220.00 : 16/6/22

Electric Light \$ 252.00 : 25/7/22

Sunday fee 28/5 \$ 20.00 : 25/7/22

Committee's Minute FR JUL 28 1922

Assigned + L.M.C. 5.22. F.D. CL.

Fitted for oil fuel 5.22. F.P. above 150°F.

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