

REPORT ON MACHINERY.

No. 5311

Date of writing Report Apr. 29th. 1922 When handed in at Local Office

Received at London Office

Port of Hong Kong

No. in Survey held at Hong Kong
Reg. Book.

Date, First Survey Jan. 10th. 1921 Last Survey Apr. 28th. 1922

on the Steel Screw Steamer "PLANORBIS"

(Number of Visits 128)

Master	Built at	Hong Kong	By whom built	Hong Kong & Whampoa Dock Co. Ltd.	Tons	Gross	5818.86
					Net		3491.36
Engines made at	Hong Kong	By whom made	Hong Kong & Whampoa Dock Co. Ltd.	When built	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		

ENGINES, &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 as per rule 14½" Material of Steel
as fitted 16" screw shaft

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 5'-3"

Dia. of Tunnel shaft as per rule None Dia. of Crank shaft journals as per rule 13.99" Dia. of Crank pin 14½" Size of Crank webs 28"x9" Dia. of thrust shaft under

collars 14½" 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

In Engine Room 2-3½" in well; 2-3½" in Stokehold; 1-3½" in Holds, &c. (Aft Cofferdam two 3½"; Main Pump Room

Forward Pump room one 2"; Hold two 2"; Chain locker one 2" all connected to donkey. (two 2½"; Forward cofferdam two 3½";

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, 3½"

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 Suctions 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 -

BOILERS, &c.—(Letter for record E25/8/30 Manufacturers of Steel Wm. Beardmore & Co.

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 25-1-22 No. of Certificate 125, 126, 127

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

each boiler Two double spring loaded 3½" Area of each valve 9.6 sq. ft. 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 1½" Range of tensile strength 28-32 Tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Double lap

long. seams Triple Butt Diameter of rivet holes in long. seams 1.5/16" Pitch of rivets 9½" Lap of plates or width of butt straps 19½"

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

Size of compensating ring 34"x38"x1½" No. and Description of Furnaces in each boiler Three Deighton Material Steel Outside diameter 48½"

Length of plain part top - 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 Cr. ¼" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 9" x 9" Back 9x9½" Top 9x9½" If stays are fitted with nuts or riveted heads remainder riveted Working pressure by rules 182 lbs.

Material of stays Steel Area at smallest part 2.03 sq. ft. Area supported by each stay 85.625 Working pressure by rules 181 lbs. Material of stays Steel

Material Steel Thickness 1.11/32" Pitch of stays 20½"x21½" How are stays secured Nuts Working pressure by rules 181 lbs. Material of stays Steel

Area at smallest part 8.29 sq. ft. Area supported by each stay 446.6 sq. ft. Working pressure by rules 193 lbs. Material of Front plates at bottom Steel

Thickness 31/32" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 14½" Working pressure of plate by rules 186 lbs.

Diameter of tubes 3½" Pitch of tubes 4½" x 4½" Material of tube plates Steel Thickness: Front 31/32" Back 13/16" Mean pitch of stays 13½" x 9"

Pitch across wide water spaces 14½" Working pressures by rules 186 lbs. Space 189 Orders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10½"x3½" (20 off) Length as per rule 2'-9½" Distance apart 9½" 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 -

PERHEATER. 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 -

W557-0048

IS A DONKEY BOILER FITTED?

Yes

If so, is a report now forwarded?

Yes

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

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. 15, 19, 25, 28 May 2, 4, 6, 11, 13
Dates of Survey { During progress of work in shops -- 26 Jun. 2, 6, 11, 15, 16, 23, 24, Jul. 1, 6, 7, 8, 11, 12, 13, 20, 23, 25, 27, 29 Aug. 2, 3, 5, 8, 11
while building { During erection on board vessel -- 13, 15, 18, 20, 25, 31. Sept. 1, 2, 5, 7, 8, 9, 10, 14, 19, 23, 27, 29, 30 Oct. 3, 7, 10, 11, 12, 13
Total No. of visits 1922 Jan. 4, 9, 11, 13, 17, 21, 25 Feb. 6, 13, 14, 21, 22, 23, 25 Mar. 8, 9, 16, 25, 27, 30 Apr. 10, 14, 16, 18, 22, 23, 26 & 28th.

Dates of Examination of principal parts—Cylinders 8/9/21 Slides 12/10/21 Covers 12/10/21 Pistons 12/10/21 Rods 23/12/21
Connecting rods 12/10/21 Crank shaft 11/5/21 Thrust shaft 27/9/21 Tunnel shafts None Screw shaft 4/11/21 Propeller 6/7/21
Stern tube 29/12/21 Steam pipes tested 16/4/22 Engine and boiler seatings 13/2/22 Engines holding down bolts 30/3/22
Completion of pumping arrangements 22/4/22 Boilers fixed 10/4/22 Engines tried under steam 26/4/22
Completion of fitting sea connections 17/1/22 Stern tube 22/2/22 Screw shaft and propeller 25/2/22
Main boiler safety valves adjusted 18/4/22 Thickness of adjusting washers Ford. S. 3/8" Port S. 13/32" St. S. 1/4"
Material of Crank shaft Steel Identification Mark on Do. LLOYD'S 6598 A.P. Material of Thrust shaft Steel Identification Mark on Do. 235
Material of Tunnel shafts None Identification Marks on Do. " Spare " Steel Identification Marks on Do. 240
Material of Steam Pipes Solid Drawn Steel Test pressure 540 lbs.
" feed " Solid Drawn Copper 450 "
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
Is this machinery duplicate of a previous case Yes If so, state name of vessel S.S. "PALUDINA" Rpt. 5242 and S.S. "PETRICOLA" Rpt. 5284

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. 4,1922 be made in the Register Book. Fitted for oil fuel 4,1922 F.P. above 150°F.

IDENTIFICATION MARKS ON BOILERS:—

No. 125 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
16-1-22
T.S.M.

No. 126 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
25-1-22
T.S.M.

No. 127 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
9-3-22
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" x 4" x 5"
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" x 4" x 4" (two off) with heaters; One oil fuel pump with heater for donkey boiler 2½" x 4" x 4"

The amount of Entry Fee ... £ 96.00 : When applied for, 28/4 19 22
Special ... £ 1614.00 :
Donkey Boiler Fee ... £ 67.00 : When received, 17/5/22
Travelling Expenses (if any) £ 209.00 :
Electric Light £ 256.00 :
Sunday fees Apr. 16, 23 £ 40.00 :
Committee's Minute

Assigned

Engineer Surveyor to Lloyd's Register of Shipping.



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