

Rpt. 4.

REPORT ON MACHINERY

No. 5284

MON. 11 MAY. 1922

Received at London Office

Date of writing Report Mar. 11th, 22 When handed in at Local Office

Port of

Hong Kong

No. in Survey held at Hong KongDate, First Survey 10-1-21Last Survey Mar. 7th. 1922

Reg. Book.

on the Steel Screw Steamer "PETRICOLA"(Number of Visits 110)

Gross 5818.86

Net 3491.36

Master

Built at Hong KongBy whom built HongKong & Whampoa Dock Co. Ltd.When built 1922

Engines made at

Hong Kong

By whom made

HongKong & Whampoa Dock Co. Ltd.

when made

1922

Boilers made at

Hong Kong

By whom made

HongKong & 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

3No. of Cranks 3Dia. of Cylinders 27", 44", 73"Length of Stroke 48"

Revs. per minute

78

Dia. of Screw shaft

as per rule 14 1/2"

Material of

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

5'-3"

Dia. of Tunnel shaft

as per rule 13.32"

Dia. of Crank shaft journals

as per rule 13.99"

Dia. of Crank pin

14 1/2"

Size of Crank webs

28"x9"

Dia. of thrust shaft under

collars 14 1/2"

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

Aft cofferdam two 3 1/2"; Main Pumproom two 2 1/2"; Forward cofferdam two

In Engine Room

2-3 1/2" in well; 2-3 1/2" in Stokehold 1-3 1/2" in aft wall.

In Holds, &c.

3 1/2"; Forward Pump room one 2"; Hold two 2"; Chain locker one 2" all connected to donkey.

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 & sizeYes, 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 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 E25/8/20 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

25/10/21

No. of Certificate

121, 122, 123

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 boilerTwo double spring loaded 3 1/2"

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

long. seams

Triple Butt

Diameter of rivet holes in long. seams

1.5/16"

Pitch of rivets

9 1/8"

Gap of plates or width of butt straps

19 1/2"

Per centages 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 3/4"

Length of plain part

-

Thickness of plates

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. 1"

Top

25/32"

Bottom

25/32"

Pitch of stays to ditto: Sides

9" x 9"

Back

9x9 1/2"

Top

9x9 1/2"

If stays are fitted with nuts or riveted heads

remained

Working pressure by rules

B.W. 192 lbs.BC 187 lbs.

Material of stays

Steel

Area at smallest part

2.03

Area supported by each stay

81.0

Working pressure by rules

B.W. 228 lbs.

End plates in steam space:

T. 246 "

Material

Steel

Thickness

1.11/32"

Pitch of stays

20 1/2 x 21 1/2"

How are stays secured

Nuts

Working pressure by rules

181 lbs

Material of stays

Steel

Area at smallest part

8.29

Area supported by each stay

446.6

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

14 1/4"

Working pressure of plate by rules

186 lbs.

Diameter of tubes

3 1/2"

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" x 9"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

Back Nest 186 lbs.

W.W. Space

189 "

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre10 1/2 x 3" (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

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., Ltd.
The foregoing is a correct description,

R. N. Dyer.
Chief Manager.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 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, 18, 26 Jun. 2, 7, 11, 15, 16, 23, 28 Jul. 1, 6, 7, 8, 11, 12, 13, 18, 20, 23, 25, 27, 29 Aug. 1, 3, 5, 8, 12, 13, 15, 18, 20, 22, 26, 31 Sept. 1, 2, 5, 7, 10, 12, 14, 19, 20, 21, 22, 23, 27, 29, 30 Oct. 3, 5, 7, 10, 11, 13, 14, 15, 17, 19, 20, 22, 25, 28, 31 Nov. 2, 5, 8, 14, 15, 24, 30 Dec. 2, 3, 5, 7, Dec. 12, 21, 29, 1922 Jan. 4, 9, 17, 21, Feb. 1, 8, 13, 15, 25, 27, 28 Mar. 1, & 7.
Total No. of visits 110
Is the approved plan of main boiler forwarded herewith No
" " " donkey " " " No

Dates of Examination of principal parts—Cylinders 18/7/21 Slides 22/8/21 Covers 6/7/21 Pistons 1/9/21 Rods 19/9/21

Connecting rods 18/8/21 Crank shaft 6/4/21 Thrust shaft 6/7/21 Tunnel shafts None Screw shaft 15/10/21 Propeller 6/7/21

Stern tube 30/11/21 Steam pipes tested 1/2/22 Engine and boiler seatings 15/11/21 Engines holding down bolts 29/12/21
Feed & Blow off 25/1/22

Completion of pumping arrangements 25/2/22 Boilers fixed 29/12/21 Engines tried under steam 1/3/22

Completion of fitting sea connections 2/12/21 Stern tube 2/12/21 Screw shaft and propeller 3/12/21

Main boiler safety valves adjusted 28/2/22 Thickness of adjusting washers F. P. 5/16" P. 11/32" S. 5/16"
Donkey 27/2/22 Lloyd's S. 11/32" P. 17/64 S. 9/32

Material of Crank shaft Steel Identification Mark on Do. 6597 AP Material of Thrust shaft Steel Identification Mark on Do. 231 HKg.

Material of Tunnel shafts None Identification Marks on Do. - Material of Screw shafts Steel Identification Marks on Do. 237 HKg.
Spare " Steel 238 HKg.

Material of Steam Pipes Solid Drawn Steel Test pressure 540 lbs.

" feed Solid Drawn Copper 500 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

Is this machinery duplicate of a previous case Yes If so, state name of vessel S. S. "PALUDINA" Rpt. 5242

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 31. M. C. 3, 1922 be made in the Register Book. Fitted for oil fuel 3, 1922 F.P. above 150°F.

IDENTIFICATION MARKS ON BOILERS:—

No. 121 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
20-10-21
T. S.M.

No. 122 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
25-10-21
T. S.M.

No. 123 HKg.
LLOYD'S TEST
320 lbs.
W.P. 180 lbs.
8-11-21
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 6"; Two Fan engines 7" x 5".

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

MAIN PUMP ROOM 2 Cargo 14"x12" 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 6" x 8" (2 off) with heaters; One oil fuel pump with heater for donkey boiler 2½" x 3½" x 5".

The amount of Entry Fee ... £ 101.00

Special ... £ 1699.00

Donkey Boiler Fee ... £ 71.00

Travelling Expenses (if any) £ 200.00

Electric Light £ 269.00

When applied for,

7/3 1922

When received,

8/4 1922

Engine Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 31 MAR. 1922

Assigned

+ L. N. B. 3.22
F. D. C. L.

Lined for use fuel 3.22
to above 150°F.

CERTIFICATE WRITTEN



© 2020

Lloyd's Register
Foundation