

REPORT ON MACHINERY.

No. 4859

Received at London Office TUE. 11 OCT. 1921

Date of writing Report

19

When handed in at Local Office

10-10-1021 Port of

MANCHESTER

No. in Survey held at
Reg. Book.

MANCHESTER

Date, First Survey 30 Sept.

Last Survey 10 Oct.

1921.

27611 on the

s/s "POLTOLIA"

ex GERMAN VESSEL

(Number of Visits)

Master

Built at Regisack

By whom built Bremer Vulkan

Tons Gross 1831

Net 1165

When built 1905

Engines made at

Regisack

By whom made

Bremer Vulkan

when made 1905

Boilers made at

do

By whom made

do

when made 1905

Registered Horse Power

243

Owners

Manchester Spanish Field

Port belonging to

Manchester.

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

Steam triple expansion inverted

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

19 3/8", 32 3/4", 53 3/8"

Length of Stroke 39 1/2"

Revs. per minute 66

Dia. of Screw shaft

as per rule

as fitted 13 5/8"

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

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

fits tightly

Length of stern bush 4'3"

Dia. of Tunnel shaft

as per rule

as fitted 10 5/8"

Dia. of Crank shaft journals

as per rule

as fitted 11 1/8"

Dia. of Crank pin 11 3/8"

Size of Crank webs 7 1/2" x 17 1/2"

Dia. of thrust shaft under

collars 11 3/8"

Dia. of screw 14'6"

Pitch of Screw 15'0"

No. of Blades 4

State whether moveable no

Total surface 66 sq ft

No. of Feed pumps 2

Diameter of ditto 3"

Stroke 20"

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps 2

Diameter of ditto 3 1/4"

Stroke 20"

Can one be overhauled while the other is at work

yes.

No. of Donkey Engines 2, duplex

Sizes of Pumps 9" x 5 1/4" x 5 1/4"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room five 7'3" and one 7'2 1/4" and one 7'3" In Holds, &c. light 3" six 4" one 2 1/2"

No. of Bilge Injections 1

size 7" dia.

Connected to condenser or to circulating pump

yes.

Is a separate Donkey Suction fitted in Engine room & size

no

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

none

Are all connections with the sea direct on the skin of the ship on C.I. Standard

Are they Valves or Cocks

valves and cocks.

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

on. wl.

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

none

How are they protected

yes.

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 top engine room grating.

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers 3360 sq ft

Is Forced Draft fitted

yes.

No. and Description of Boilers 2 cylindrical multibutular

Working Pressure 205 lbs.

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

yes.

Area of fire grate in each boiler 42 sq ft

No. and Description of Safety Valves to

each boiler 2. Spring loaded

Area of each valve 7.06 sq in

Pressure to which they are adjusted 205 lbs.

Are they fitted with easing gear

yes.

Smallest distance between boilers or uptakes and bunkers on woodwork 9"

Mean dia. of boilers 11'10"

Length 12'8"

Material of shell plates

steel

Thickness 1 1/32"

Range of tensile strength 28/32 tons

Are the shell plates welded or flanged

flanges

Descrip. of riveting: cir. seams

double

long. seams

Quadruple

Diameter of rivet holes in long. seams 1 3/8"

Pitch of rivets 18"

Lap of plates or width of butt straps 2'3"

Per centages of strength of longitudinal joint

rivets 114.2

plate 92.3

Working pressure of shell by rules 248 lbs.

Size of manhole in shell 16" x 12"

Size of compensating ring 8" x 1 1/8"

No. and Description of Furnaces in each boiler 2, Morrison

Material

steel

Outside diameter 3'5 3/4"

Length of plain part

top 7'11"

bottom 7'11"

Thickness of plates

crown 3/4"

Description of longitudinal joint

welded

No. of strengthening rings

yes.

Working pressure of furnace by the rules 260 lbs.

Combustion chamber plates: Material

steel

Thickness: Sides 1/16"

Back 5/8"

Top 1/16"

Bottom 5/16"

Pitch of stays to ditto: Sides 8 1/4" x 7"

Back 7 1/4" x 6 3/4"

Top 8" x 7"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules 260 lbs.

Material of stays

Area at smallest part 1.35 sq in

Area supported by each stay 49 sq in

Working pressure by rules 255 lbs.

End plates in steam space:

double nuts & washers riveted

How are stays secured 12 diam x 1"

Working pressure by rules 250 lbs.

Material of stays

steel

Area at smallest part 5.9 sq in

Area supported by each stay 270 sq in

Working pressure by rules 260 lbs.

Material of Front plates at bottom

steel

Thickness 1/16"

Material of Lower back plate

steel

Thickness 5/16" + 1/16" doubling

Greatest pitch of stays 18" square

Working pressure of plate by rules 260

Diameter of tubes 2 3/4"

Pitch of tubes 3 3/8" x 3 3/8"

Material of tube plates

steel

Thickness: Front 1/16"

Back 5/16"

Mean pitch of stays 11 1/2" x 7 3/4"

Pitch across wide water spaces 14"

Working pressures by rules

Girders to Chamber tops: Material

steel

thickness of girder at centre 10 9/8" x 1 3/8"

Length as per rule 35"

Distance apart 7"

Number and pitch of stays in each 3, 8"

Working pressure by rules 250 lbs.

Steam dome: description of joint to shell

%

of strength of joint

yes.

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

OF THE SURVEYORS ARE REQUIRED NOT TO WRITE ACROSS THE MARGIN.

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IS A DONKEY BOILER FITTED? *No.*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— *2 Connecting rod top end bolts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed & high pressure valves, bolts & nuts Assorted and iron of various sizes. One valve spindle, one tail shaft complete, one air pump rod, 2 eccentric straps, 2 pump links, several brake tubes.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey
During progress of work in shops --
During erection on board vessel --
Total No. of visits

30-9-21. 3-4-5-6-7-10-11-12-13-18-25-10-21.

Is the approved plan of main boiler forwarded herewith.

“ “ “ donkey “ “ “

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	Propeller
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
Completion of fitting sea connections	Stern tube	Screw shaft and propeller		
Main boiler safety valves adjusted	Thickness of adjusting washers			
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.	
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.	
Material of Steam Pipes	Test pressure			

Is an installation fitted for burning oil fuel

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

If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this vessel is stated to have been built under the Germanischer Lloyd Survey and so far as can be seen is in good working order.

The machinery is eligible in our opinion to be classed L.M.C. with this Society Subject to the completion of the L.M.C. Survey now being held.

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	:	:	19...
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19...

A. Campbell
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI. NOV. 4 1921



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