

Rpt. 4.

REPORT ON MACHINERY.

No. 25845

Received at London Office SAT. FEB. - 8. 1913

Date of writing Report

19

When handed in at Local Office

29. 1. 1913. Port of Hull.

Date, First Survey

Oct. 31 = Last Survey

Jan 24 - 1913

No. in Survey held at

Hull.

Reg. Book.

41 sup. on the

Still S. K. "NEPTUNIAN."

Master

Built at

Sully

By whom built

Cochran & Son Ltd.

when made

1913.

Engines made at

By whom made

Messrs Charles D. Holmes & Co. Ltd.

when made

1913.

Boilers made at

Hull.

By whom made

Messrs Charles D. Holmes & Co. Ltd.

Port belonging to

Hull.

Registered Horse Power

Owners

Tupling Steam Fitting Co. Ltd.

Is Electric Light fitted

No.

Nom. Horse Power as per Section 28

84.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

No.

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

15"-23"-34"

Length of Stroke

26"

Revs. per minute

292

Dia. of Screw shaft

as per rule 7.88

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

in the propeller boss

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

Length of stern bush

36"

liners are fitted, is the shaft lapped or protected between the liners

Dia. of Tunnel shaft

as per rule 7.88

Dia. of Crank shaft journals

as fitted 4 1/2"

Dia. of screw

9-4 1/2"

Pitch of Screw

11-6"

No. of Blades

4

State whether moveable

No

Total surface

33.45 sq ft

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

16"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

16"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

6" x 3 1/2" x 6"

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

In Engine Room

Two 2" on forward & one aft.

In Holds, &c.

One 2" on aft hold well, one 2" on fore hold well, one 2" on main hold & one 2" on fore hold.

Is a separate Donkey Suction fitted in Engine room & size

2 1/2" galton

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

Yes

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

Yes

Are all connections with the sea direct on the skin of the ship

Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Yes

What pipes are carried through the bunkers

Hold suction pipes

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

8.11.12

of Stern Tube

8.11.12

Screw shaft and Propeller

8.11.12

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Yes

BOILERS, &c.—(Letter for record

S.)

Manufacturers of Steel

Hydraulic Press & Steel Works

Mansfield

Total Heating Surface of Boilers

1350 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

One of multi-imp. m.d.d.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

400 lbs.

Date of test

24.12.12

No. of Certificate

1952

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

5.8 sq ft

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

4.9 sq ft

Pressure to which they are adjusted

200 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

8"

Mean dia. of boilers

14'-0"

Length

10'-8"

Material of shell plates

S.

Thickness

1/4"

Range of tensile strength

28 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

10.9 x 2.

long. seams

8.5 x 9.

Diameter of rivet holes in long. seams

1/4"

Pitch of rivets

8 1/16"

Lap of plates or width of butt straps

14 1/2"

Per centages of strength of longitudinal joint

rivets 90.99

plate 84.49

Working pressure of shell by rules

202 lbs.

Size of manhole in shell

16" x 12"

Material

S.

Outside diameter

40"

Size of compensating ring

4" x 1 1/4"

No. and Description of Furnaces in each boiler

3 plain

Length of plain part

top 6'-5"

bottom Y

Thickness of plates

crown 5 1/2"

bottom 6 1/4"

Description of longitudinal joint

Weld.

Thickness: Sides

13"

Back

23"

Top

32"

Bottom

33"

Working pressure by rules

205 lbs.

Pitch of stays to ditto: Sides

9" x 8 1/4"

Back

22 1/2" x 8"

Top

10 1/2" x 8 1/2"

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

214 lbs.

End plates in steam space:

Material of stays

S.

Diameter at smallest part

2 1/4"

Area supported by each stay

101 sq in

Working pressure by rules

203 lbs.

Material of stays

S.

Material

S.

Thickness

1 1/8"

Pitch of stays

20" x 20"

How are stays secured

20.7.2.6.

Working pressure by rules

228 lbs.

Material of Front plates at bottom

S.

Diameter at smallest part

7/16"

Area supported by each stay

400 sq in

Working pressure by rules

202 lbs.

Thickness

15"

Material of Lower back plate

S.

Thickness

22"

Greatest pitch of stays

4 3/4" x 8"

Working pressure of plate by rules

202 lbs.

Diameter of tubes

3 1/2"

Pitch of tubes

5" x 5 1/8"

Material of tube plates

S.

Thickness: Front

7/16"

Back

8"

Mean pitch of stays

10 1/8"

Pitch across wide water spaces

1 1/4" x 1 1/4"

Working pressures by rules

314 lbs.

Girders to Chamber tops: Material

S.

Depth and

thickness of girder at centre

1 1/4" - 1 3/4"

Length as per rule

3-1 1/8"

Distance apart

10 1/8"

Number and pitch of stays in each

3.8 1/4"

Working pressure by rules

204 lbs.

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

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

Are they fitted with easing gear

Working pressure of end plates

Area of safety valves to superheater

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description _____

Made at _____ By whom made _____ When made _____ Where fixed _____

Working pressure tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____

Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____

If fitted with casing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____

Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____

Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Plates _____

Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____

Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____

Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Two each top & bottom and connecting rod bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set each fuel & bilge pump valves, iron of various sizes, a quantity of assorted bolts, nuts etc.*

The foregoing is a correct description,

p. pro CHARLES D. HOLMES & CO. LTD. Manufacturer.

Charles Holmes DIRECTOR. 1912:— Oct. 31. Nov 8. 13. 15. 19. 21. 26. 28. Dec 2. 4. 6. 10. 17. 18. 24. 30— 1913:—

Dates of Survey while building { During progress of work in shops — Jan 7. 11. 13. 16. 20. 21. 24. During erection on board vessel — — — — — 23. Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *4.12.12* Slides *24.12.12* Covers *24.12.12* Pistons *14.12.12* Rods *14.12.12*

Connecting rods *20.12.12* Crank shaft *4.12.12* Thrust shaft *24.12.12* Tunnel shafts ✓ Screw shaft *3.10.12* Propeller *3.10.12*

Stern tube *3.10.12* Steam pipes tested *13.1.13* Engine and boiler seatings *8.11.12* Engines holding down bolts *7.1.13*

Completion of pumping arrangements *20.1.13* Boilers fixed *16.1.13* Engines tried under steam *16.1.13*

Main boiler safety valves adjusted *21.1.13* Thickness of adjusting washers *Forward $\frac{3}{16}$ aft $\frac{5}{16}$*

Material of Crank shaft *Iron* Identification Mark on Do. *Nº 9907.6.2* Material of Thrust shaft *Steel* Identification Mark on Do. *Nº 9907.6.2*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *Nº 9907.6.2*

Material of Steam Pipes *Solid drawn copper* ✓ Test pressure *400 lbs. per square inch pressure.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boiler of this vessel have been constructed under special survey in accordance with the Rules. The materials & workmanship are sound & good. The boiler tested by hydraulic pressure & with the engines secured on board & tested under steam they are now in good order & safe working condition & respectfully submitted as being eligible in my opinion to be classed with the notation of 'L.M.C. 1.13' in the Rules' Book.*

It is submitted that this vessel is eligible for THE RECORD + LMC 1.13.

J.W.D. 8/2/13

The amount of Entry Fee .. £ *1 0* : When applied for, *7.2.13*

Special .. £ *12 12* : When received, *28/2/13*

Donkey Boiler Fee .. £ : *8/2*

Travelling Expenses (if any) £ : *29*

Committee's Minute TUE. FEB. 11. 1913

Assigned *Home 113*

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



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