

REPORT ON MACHINERY.

No. 19969

Port of *Hull*Received at London Office **TUES 21 APR 1908**

Survey held at

Hull

Date, first Survey

Aug 23/07

Last Survey

15th Apr

1908

Book.

on the

Steel Se. St. Kirkham Abbey(Number of Visits *60*)

Built at

Hull

By whom built

Messrs Charles C. Ltd

Tons

Gross *1162*Net *509*

When built

1908

made at

By whom made

Messrs

when made

1908

made at

Hull

By whom made

Charles C. Ltd

when made

1908

Horse Power

Owners

Hull + Netherlands S. S. Co. Ltd

Port belonging to

Hull

Horse Power as per Section 28

499

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Cylinders

25 1/2 - 40 1/2 - 67

Length of Stroke

42

Revs. per minute

106

Dia. of Screw shaft

as per rule *13.79*

Material of

Steel

screw shaft fitted with a continuous liner the whole length of the stern tube

No

Is the after end of the liner made water tight

propeller boss

Yes

If the liner is in more than one length are the joints burned

No

If the liner does not fit tightly at the part

the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

—

If two

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

—

Length of stern bush

60 1/2

Tunnel shaft

as per rule *12.26*

Dia. of Crank shaft journals

as per rule *12.87*

Dia. of Crank pin

13 1/4

Size of Crank webs

19 1/2 x 8 1/2

Dia. of thrust shaft under

13

Dia. of screw

15 - 6

Pitch of Screw

17 - 3

No. of Blades

4

State whether moveable

No

Total surface

64 1/2

Feed pumps

2

Diameter of ditto

5 1/2

Stroke

14

Can one be overhauled while the other is at work

Yes

Bilge pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

Donkey Engines

3

Sizes of Pumps

10 1/2 x 6 1/2 x 10

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

Engine Room

Two 2", one 2 1/2", special bilge 4"

In Holds, &c.

Aft hold port 2" Star 2", Tunnel Well 2 1/2"

Bilge Injections

1

sizes

7"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

Yes 4"

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

connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

both

ey 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

above

ey 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

pipes are carried through the bunkers

hold suction

How are they protected

wood casing

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Yes

of examination of completion of fitting of Sea Connections

17.3.08

of Stern Tube

17.3.08

Screw shaft and Propeller

17.3.08

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

deck

ERS, &c.—(Letter for record

8)

Manufacturers of Steel

Steel Co. of Scotland

Heating Surface of Boilers

8,100 sq

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Cyl. Mult. Single Ended

ing Pressure

185 lbs

Tested by hydraulic pressure to

370 lbs

Date of test

5.2.08

No. of Certificate

1631

each boiler be worked separately

Yes

Area of fire grate in each boiler

60 1/2 sq

No. and Description of Safety Valves to

boiler

Two Spring

Area of each valve

8.29 sq

Pressure to which they are adjusted

189 lbs

Are they fitted with easing gear

Yes

st distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

15.0"

Length

12.0"

Material of shell plates

Steel

ess

1 3/8"

Range of tensile strength

29 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

L. D

seams

D. B. S. J. R.

Diameter of rivet holes in long. seams

1 7/16"

Pitch of rivets

9 1/16"

Lap of plates or width of butt straps

2 1/2"

ntages of strength of longitudinal joint

rivets *90.6*plate *85.1*

Working pressure of shell by rules

215 lbs

Size of manhole in shell

16" x 12"

compensating ring

40" x 30" x 1 1/2"

No. and Description of Furnaces in each boiler

3 Browns Imp.

Material

Steel

Outside diameter

45 1/4"

h of plain part

top

bottom

Thickness of plates

crown *5"*bottom *8"*

Description of longitudinal joint

Welded

No. of strengthening rings

1

ing pressure of furnace by the rules

205 lbs

Combustion chamber plates: Material

Steel

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

5/8"

of stays to ditto: Sides

8" x 8"

Back

8" x 8"

Top

8" x 7 1/2"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules

210 lbs

ial of stays

Steel

Diameter at smallest part

1 3/8"

Area supported by each stay

64 sq

Working pressure by rules

185 lbs

End plates in steam space:

ial

Steel

Thickness

1 5/32"

Pitch of stays

20" x 14"

How are stays secured

D. Nuts

washers outside

7" x 7"

Working pressure by rules

186 lbs

Material of stays

Steel

eter at smallest part

2 3/16"

Area supported by each stay

335 sq

Working pressure by rules

192 lbs

Material of Front plates at bottom

Steel

ness

32"

Material of Lower back plate

Steel

Thickness

37"

Greatest pitch of stays

13 1/4" x 8"

Working pressure of plate by rules

189 lbs

Material of tube plates

Steel

eter of tubes

2 1/2"

Pitch of tubes

3 3/4" x 3 3/4"

Material of tube plates

Steel

Thickness: Front

37"

Back

7/8"

Mean pitch of stays

7 1/2"

across wide water spaces

12 1/2"

Working pressures by rules

186 lbs

Girders to Chamber tops: Material

Steel

Depth and

—

Distance apart

7 3/8"

ess of girder at centre

9 1/2" x 13 1/4"

Length as per rule

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description	When made	Where fixed
Made at	By whom made	No. of Certificate	Fire grate area
Working pressure	tested by hydraulic pressure to	Date of test	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted
If fitted with easing gear	If steam from main boilers can enter the donkey boiler	Di. of donkey boiler	Length
Material of shell plates	Thickness	Range of tensile strength	Descrip. of riveting long. seams
Di. of rivet holes	Whether punched or drilled	Pitch of rivets	Lap of plating
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by	Dates of survey
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	

SPARE GEAR. State the articles supplied:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set each air circulating feet and bilge pump valves, and a quantity of assorted bolts nuts etc

The foregoing is a correct description,

Manufacturer.

SHIPBUILDING & ENGINEERING CO. LIMITED.

J. J. Palethorpe

Dates of Survey while building	During progress of work in shops	During erection on board vessel	Total No. of visits
1907: Aug 23, 30. Sep 4, 9, 12, 19, 24. Oct 10, 18, 28. Nov 1, 8, 14. Nov 18, 21, 26. Nov 27, Dec 2, 4, 13, 16, 20, 30.	1907: Aug 23, 30. Sep 4, 9, 12, 19, 24. Oct 10, 18, 28. Nov 1, 8, 14. Nov 18, 21, 26. Nov 27, Dec 2, 4, 13, 16, 20, 30.	1908: Jan 26, 27, 8, 9, 14, 15, 17, 21, 22, 24, 27, 28, 31. Feb 1, 3, 4, 5, 6, 7, 10, 13, 14, 19, 20, 25, 26, 28 Mar 2.	60

Is the approved plan of main boiler forwarded herewith No

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
14.1.08	14.2.08	14.1.08	14.1.08	14.1.08
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
14.1.08	21.1.08	21.1.08	21.1.08	21.1.08
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	
14.1.08	21.10.07	6.2.08	17.3.08	
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
13.4.08	17.3.08	18.3.08		
Main boiler safety valves adjusted	Thickness of adjusting washers			
13.4.08	For 3 1/2" 3/4" 1/2" Port 3 1/2" 3/8" 3/8" Star 3 1/2" 3/8" 3/8"			
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.	
Steel	160A FC	Steel	160A FC	
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.	
Steel	160A FC	Steel	160A FC	
Material of Steam Pipes	Test pressure			
Steel	600 lbs			

General Remarks (State quality of workmanship, opinions as to class, &c. The engines and boilers of this vessel have been constructed under special survey, the materials and workmanship are good. The boilers tested by hydraulic pressure, and with the engines placed on board and tested under steam, they are now in good order, and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of L.M.C. 4.08 in the Register Book

These Engines and Boilers are somewhat similar to those fitted on the Rivaulx Abbey. Hull Report 8° 19962

It is submitted that this vessel is eligible for THE RECORD. L.M.C. 4.08. ELEC. LIGHT F.D.

The amount of Entry Fee.	£ 3	When applied for.	6/4/1908
Special	£ 44	When received.	13/4/1908
Donkey Boiler Fee	£ -		
Travelling Expenses (if any)	£ -		

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

Committee's Minute

WEB 22 APL 1908

Assigned

MACHINE WRITTEN



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