

REPORT ON MACHINERY.

No. 27083

Date of writing Report

10

When handed in at Local Office

12-1-14 Port of Hull.

Received at London Office

TUE. JAN. 13. 1914

No. in Survey held at Hull.

Reg. Book.

Date, First Survey

Sep. 30th

Last Survey

Jan. 5th 1914

26 sub on the Steel S.S. K. "ONYX".

(Number of Visits 23)

Master

Built at

Skelley

By whom built

Lockhart & Sons Ltd.

Tons

Gross 248

Net

98

When built

1913

Engines made at

By whom made

when made

1913

Boilers made at

Hull.

By whom made

Messrs. Charles D. Holmes & Co. Ltd.

when made

1913

Registered Horse Power

Owners

Templeton Steam Traction Co. Ltd.

Port belonging to

Hull.

Nom. Horse Power as per Section 28

45

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expanding

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders 13"-2 1/2"-35"

Length of Stroke

24"

Revs. per minute

Dia. of Screw shaft

as per rule 2 1/2"

Material of

Iron

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

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

Yes

If the liner does not fit tightly at the part

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

Dia. of Tunnel shaft

as per rule 6 1/4"

Dia. of Crank shaft journals

as per rule 4 1/8"

Dia. of Crank pin

4 1/2"

Size of Crank webs

4 1/2" x 14"

Dia. of thrust shaft under

collars

Dia. of screw

9-0"

Pitch of Screw

10-6"

No. of Blades

4

State whether moveable

4

Total surface

31 1/2

No. of Feed pumps

1

Diameter of ditto

2 1/2"

Stroke

14 1/2"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

1

Diameter of ditto

2 1/2"

Stroke

14 1/2"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

1

Sizes of Pumps

6" x 4 1/2" x 6"

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

In Engine Room

Two 2 1/2"

One forward & one aft

In Holds, &c

One 2 1/2" to fore hold, one 2 1/2" to fish room,

one 2 1/2" to fore hold, one 2 1/2" to aft hold, one 2 1/2" to fish room,

one 2 1/2" to fore hold, one 2 1/2" to aft hold, one 2 1/2" to fish room,

one 2 1/2" to fore hold, one 2 1/2" to aft hold, one 2 1/2" to fish room,

one 2 1/2" to fore hold, one 2 1/2" to aft hold, one 2 1/2" to fish room,

one 2 1/2" to fore hold, one 2 1/2" to aft hold, one 2 1/2" to fish room,

No. of Bilge Injections

1

Connected to condenser, or to circulating pump

3 1/2"

Is a separate Donkey Suction fitted in Engine room

Yes

Size

3"

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 the Discharge Pipes above or below the deep water line

Above

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

Hold suction

How are they protected

Wood casing

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

29.10.13

of Stern Tube

29.10.13

Screw shaft and Propeller

29.10.13

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

Phoenix & Co. Ltd.

Holders of

Holders of

Holders of

Holders of

Holders of

Total Heating Surface of Boilers

1250 sq. ft.

Is Forced Draft fitted

No

No. and Description of Boilers

One up. mult. on fl. indid.

Working Pressure

200 lbs.

Tested by hydraulic pressure to

400 lbs.

Date of test

24.11.13

No. of Certificate

2034.

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

43 sq. ft.

No. and Description of Safety Valves to

each boiler

Two Spring

Area of each valve

4 1/2"

Pressure to which they are adjusted

205 lbs.

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

6"

Mean dia. of boilers

17-6"

Length

10-3"

Material of shell plates

S

Thickness

1/8"

Range of tensile strength

29 tons

Are the shell plates welded or flanged

Yes

Descrip. of riveting: cir. seams

20.8.2.

long. seams

20.8.2.

Diameter of rivet holes in long. seams

1/8"

Pitch of rivets

4 1/2"

Lap of plates or width of butt straps

14"

Per centages of strength of longitudinal joint

rivets 86.16

plate 85.24

Working pressure of shell by rules

204 lbs.

Size of manhole in shell

16" x 12"

Size of compensating ring

7" x 1 1/2"

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

36"

Length of plain part

top 6-4 1/2"

bottom 6-4 1/2"

Thickness of plates

crown 13"

bottom 16"

Description of longitudinal joint

Weld

No. of strengthening rings

0

Working pressure of furnace by the rules

232 lbs.

Combustion chamber plates: Material

S

Thickness: Sides

11"

Back

11"

Top

11"

Bottom

11"

Pitch of stays to ditto: Sides

9 1/2" x 8"

Back

8" x 10"

Top

8" x 8 1/2"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

220 lbs.

Material of stays

S

Diameter at smallest part

2 1/4"

Area supported by each stay

92 sq. in.

Working pressure by rules

234 lbs.

End plates in steam space:

Material

S

Thickness

1 1/2"

Pitch of stays

16 1/2" x 14"

How are stays secured

R. 3. 5. 2. 4.

Working pressure by rules

226 lbs.

Material of stays

S

Diameter at smallest part

6 1/2"

Area supported by each stay

280 sq. in.

Working pressure by rules

236 lbs.

Material of Front plates at bottom

S

Thickness

1"

Material of Lower back plate

S

Thickness

13"

Greatest pitch of stays

13" x 8"

Working pressure of plate by rules

200 lbs.

Diameter of tubes

2 1/2"

Pitch of tubes

4 1/2" x 5"

Material of tube plates

S

Thickness: Front

1"

Back

3/8"

Mean pitch of stays

9 1/2"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

202 lbs.

Girders to Chamber tops: Material

S

Depth and

Thickness of girder at centre

10" - 1 1/2"

Length as per rule

2: 9 3/8"

Distance apart

8 1/2"

Number and pitch of stays in each

3 - 8" x 10"

Working pressure by rules

220 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

Pitch of rivets

Working pressure of shell by rules

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

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

The foregoing is a correct description,

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

Harold Sheardson DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1913:— Sep 30, Oct 2, 13, 15, 18, 22, 24, 28, 29, 31 Nov 6, 11, 14, 20, 24, 26, 27 Dec 4
During erection on board vessel -- Dec. 11, 12, 16, 22 1914: Jan 5
Total No. of visits 23.

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 14.11.13 Slides 4.12.13 Covers 4.12.13 Pistons 20.11.13 Rods 26.11.13
Connecting rods 26.11.13 Crank shaft 26.11.13 Thrust shaft 20.11.13 Tunnel shafts ✓ Screw shaft 18.10.13 Propeller 18.10.13
Stern tube 18.10.13 Steam pipes tested 12.12.13 Engine and boiler seatings 29.10.13 Engines holding down bolts 11.12.13
Completion of pumping arrangements 22.12.13 Boilers fixed 18.12.13 Engines tried under steam 18.12.13
Main boiler safety valves adjusted 18.12.13 Thickness of adjusting washers Forward 8" aft 8"

Material of Crank shaft Iron Identification Mark on Do. 49274D Material of Thrust shaft Steel Identification Mark on Do. 49274D.

Material of Tunnel shafts Y Identification Marks on Do. ✓ Material of Screw shafts Iron Identification Marks on Do. 49274D.

Material of Steam Pipes Solid drawn copper. Test pressure 400 lbs. per sq. inch hydraulic.

Is an installation fitted for burning oil fuel No. 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 No. If so, state name of vessel.

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 complete & 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. 1.14 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 1.14.

JWD 15/1/14 JRS

The amount of Entry Fee ... £ 1 : 0 :
Special ... £ 11 : 5 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ 4/1 :
When applied for, 12/1/14
When received, 30/1/14

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

Committee's Minute FRI. JAN. 16. 1914

Assigned

+ L.M.C. 1.14

MACHINERY CERTIFICATE WRITTEN



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