

Rpt. 4.

## REPORT ON MACHINERY.

No. 37298.

Date of writing Report

When handed in at Local Office

Aug 7<sup>th</sup> 1926

Received at London Office

10 AUG 1926

No. in Survey held at

Hull

Date, First Survey

18 March

Last Survey

Aug 7<sup>th</sup> 1926

Reg. Book.

on the Steam Trawler "KINGSTON PEARL"

(Number of Visits)

14

Master

Built at

Beverly

By whom built

Cook &amp; Son &amp; Co Ltd

When built

1926

Engines made at

Hull

By whom made

Charles D Holmes &amp; Co Ltd (1302)

when made

1926

Boilers made at

Hull

By whom made

" " " " " " ( " )

when made

1926

Registered Horse Power

Owners

Kingston S. Trawling Co Ltd

Port belonging to

Hull

Nom. Horse Power as per Section 28

96

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &amp;c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

13 23 34

Length of Stroke

26

Revs. per minute

110

Dia. of Screw shaft

as per rule 4.7

Material of

Hull

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

Yes

Length of stern bush

36"

Dia. of Tunnel shaft

as per rule 6.89

Dia. of Crank shaft journals

as per rule 4.24

Dia. of Crank pin

4 1/2"

Size of Crank webs

44 x 47"

Dia. of thrust shaft under

collars

4 1/2"

Dia. of screw

9-9"

Pitch of Screw

11-0"

No. of Blades

4

State whether moveable

No

Total surface

34 sq. ft.

No. of Feed pumps

One

Diameter of ditto

2 5/8"

Stroke

14 3/4"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

One

Diameter of ditto

2 5/8"

Stroke

14 3/4"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

One

Sizes of Pumps

6 x 4 1/2 x 6"

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

1 1/2"

In Engine Room

2 @ 2" dia, one for

one aft.

In Holds, &amp;c.

one @ 2" dia,

each compartment.

No. of Bilge Injections

1

sizes

3 1/2"

Connected to condenser, or to circulating pump

CP

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes, 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

None

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

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

Forward Suctions

How are they protected

Wood casings

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

Yes

BOILERS, &amp;c.—(Letter for record)

S

Manufacturers of Steel

Hammann &amp; Co, Bremen, Germany

Total Heating Surface of Boilers

1698 sq. ft.

Is Forced Draft fitted

No

No. and Description of Boilers

One single ended

Working Pressure

200

Tested by hydraulic pressure to

350 lbs

Date of test

18.5.26

No. of Certificate

3595

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

49.2 sq. ft.

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

4.9 sq. in.

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

4"

Mean dia. of boilers

4'-0"

Length

10'-8"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

24,322 lbs

Are the shell plates welded or flanged

Yes

Descrip. of riveting: cir. seams

DR

long. seams

T.R. 545

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

8 3/4"

Lap of plates or width of butt straps

18 3/4"

Per centage of strength of longitudinal joint

90.8

Working pressure of shell by rules

201

Size of manhole in shell

16" x 12"

Size of compensating ring

3 1/2 x 27 x 1 1/2"

No. and Description of Furnaces in each boiler

3 Plain

Material

Steel

Outside diameter

41"

Length of plain part

top 46

bottom 69

Thickness of plates

crown 1 1/2"

bottom 1 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

219

Combustion chamber plates

Material

Steel

Thickness: Sides

3/4"

Back

23/32"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

9 x 8 3/4"

Back

9 x 8 3/4"

Top

9 x 8 3/4"

Are stays fitted with nuts or riveted heads

Yes

Working pressure by rules

230

Material of stays

Steel

Area at smallest part

2.07 sq. in.

Area supported by each stay

48.75

Working pressure by rules

230

End plates in steam space:

Material

Steel

Thickness

1 1/2"

Pitch of stays

18"

How are stays secured

DR. SW.

Working pressure by rules

220

Material of stays

Steel

Area at smallest part

7.5 sq. in.

Area supported by each stay

324 sq. in.

Working pressure by rules

275

Material of Front plates at bottom

Steel

Thickness

1 1/2"

Material of Lower back plate

Steel

Thickness

2 1/2"

Greatest pitch of stays

14 x 8 3/4"

Working pressure of plate by rules

228

Diameter of tubes

3 1/2"

Pitch of tubes

4 7/8"

Material of tube plates

Steel

Thickness: Front

1 1/2"

Back

7/8"

Mean pitch of stays

11.2"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

212

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10 1/2" x 13 1/4"

Length as per rule

36 3/16"

Distance apart

9

Number and pitch of stays in each

3 @ 8 3/4"

Working pressure by rules

210

Steam dome: description of joint to shell

Yes

% of strength of joint

Yes

Diameter

Yes

Thickness of shell plates

Yes

Material

Yes

Description of longitudinal joint

Yes

Diam. of rivet holes

Yes

Pitch of rivets

Yes

Working pressure of shell by rules

Yes

Crown plates

Yes

Thickness

Yes

How stayed

Yes

SUPERHEATER. Type

Yes

Date of Approval of Plan

Yes

Tested by Hydraulic Pressure to

Date of Test

Yes



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— 2 Top end bolts + nuts. 2 Bottom end bolts + nuts. 2 main bearing bolts + nuts. Set of coupling bolts + nuts. Spare valves for air, fuel, bilge + donkey pumps. Main + donkey check valves. Safety valve spring. Circulating pump impeller + spindle. Feed pump ram, gland + neck ring. ✓

The foregoing is a correct description,

CHARLES D. HOLMES & CO. LTD

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1916 March 18 22. 26. Apr 6. 14 15. 16. 21. 27. May 4. 7. 17. 18. 27. 29. June 9. Aug 4.  
During erection on board vessel ---  
Total No. of visits 17.

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " ✓

Dates of Examination of principal parts—Cylinders 14-4-26 Slides 27-4-26 Covers 14-4-26 Pistons 27-4-26 Rods 27-4-26

Connecting rods 27-4-26 Crank shaft 21-4-26 Thrust shaft 21-4-26 Tunnel shafts ✓ Screw shaft 6-4-26 Propeller 6-4-26

Stern tube 6-4-26 Steam pipes tested 29-5-26 Engine and boiler seatings 16-4-26 Engines holding down bolts 27-5-26

Completion of pumping arrangements 7. 8. 26 Boilers fixed 27-5-26 Engines tried under steam 7. 8. 26

Completion of fitting sea connections 16-4-26 Stern tube 16-4-26 Screw shaft and propeller 16-4-26.

Main boiler safety valves adjusted 7. 8. 26. Thickness of adjusting washers A  $\frac{11}{32}$  F.  $\frac{5}{16}$

Material of Crank shaft Steel Identification Mark on Do. 225 P.F. Material of Thrust shaft Steel Identification Mark on Do. 225 P.F.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 225 P.F.

Material of Steam Pipes S.S. Copper 4" dia x 6 W.G. ✓ Test pressure 400 Lbs per sq. in.

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 Yes If so, state name of vessel "TOURMALINE" (Hull Rpt. 37024)

General Remarks (State quality of workmanship, opinions as to class, &c. The engines + boiler of this vessel)

have been built under special survey & in accordance with the approved plans & the Rules of this Society. The materials & workmanship are good. The machinery has been satisfactorily fitted on board, tried under working conditions & found good. The steam & feed pipes have been tested by hydraulic pressure as required by the Rules. The safety valves have been adjusted under steam & tried for accumulation. The machinery is shiftable in my opinion for the record + LMC C.L. in the Register Book.

Forge marks on shafting:— Screw shaft.

Lloyd's No 876 J.L.

Crank shaft:

Lloyd's No 903 " 904 " 899 J.L.

Thrust shaft:—

Lloyd's No 898 J.L.

+ LMC 8.26 C.L.

The amount of Entry Fee ... £ 2 : -  
Special ... £ 24 : -  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :

When applied for,

8 AUG 1926

When received,

1.9.26

FRI. 18 AUG 1926

P. Fitzgibbon. J. H. Mackintosh  
Engineer Surveyor to Lloyd's Register of Shipping.

FRI. 27 AUG 1926

Committee's Minute

Assigned

+ LMC 8.26 C.L.

CERTIFICATE WRITTEN



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