

## REPORT ON MACHINERY.

No. 36953  
12 APR 1926

Received at London Office

Date of writing Report

19

When handed in at Local Office

10/4/1926 Port of

Hull

No. in Survey held at  
Reg. Book.

Hull

Date, First Survey

1-1-26

Last Survey

26-3-1926.

(Number of Visits 26)

on the steam trawler

"SARDIUS"

Master

Built at

Beverley.

By whom built

Cook, Wiltm &amp; Gemmell Ltd.

When built

1926-3

Engines made at

Hull

By whom made

Charles D Holmes &amp; Co. Ltd. (No 1298) when made 1926

Boilers made at

Hull

By whom made

Charles D Holmes &amp; Co. Ltd. (No 1298) when made 1926.

Registered Horse Power

Owners

Kingston Steam 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

13-23-37

Length of Stroke

26

Revs. per minute

110

Dia. of Screw shaft

as per rule 7.7

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

Length of stern bush

36"

Dia. of Tunnel shaft

as per rule 6.89

Dia. of Crank shaft journals

as per rule 7.24

Dia. of Crank pin

7 1/2

Size of Crank webs

14 1/4 x 4 3/8

Dia. of thrust shaft under

collars

7 1/2

Dia. of screw

9-9

Pitch of Screw

11-0"

No. of Blades

4

State whether moveable

no

Total surface

34 sq

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

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

No. of Donkey Engines

one

Sizes of Pumps

6 x 4 1/4 x 6 &amp; 1 ejector

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

In Engine Room 2 @ 2" dia, one for 1" &amp; one aft.

In Holds, &amp;c. One 2" from each compartment.

No. of Bilge Injections

1

sizes

3 1/2

Connected to condenser, or to circulating pump

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

yes

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

found

suctions

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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

BOILERS, &amp;c.—(Letter for record

S.)

Manufacturers of Steel

Mannesmannröhren Werke.

Huskingen.

Total Heating Surface of Boilers

1698 sq

Is Forced Draft fitted

no

No. and Description of Boilers

One S.E. main.

Working Pressure

200

Tested by hydraulic pressure to

350 lbs.

Date of test

4-3-26

No. of Certificate

3588.

Can each boiler be worked separately

yes

Area of fire grate in each boiler

49.2 sq

No. and Description of Safety Valves to

each boiler

2 spring loaded

Area of each valve

4.9 sq

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

7"

INT.

Mean dia. of boilers

14-0"

Length

10-8

Material of shell plates

S

Thickness

1 1/32

Range of tensile strength

28/32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

DR.

long. seams

T.R.D.S.

Diameter of rivet holes in long. seams

1 1/32

Pitch of rivets

8 1/16

Lap of plates or

width of butt straps

18 13/16

Per centages of strength of longitudinal joint

rivets 90.8

plate 85.0

Working pressure of shell by rules

201

Size of manhole in shell

16 x 12

Size of compensating ring

34 x 27 x 1 1/32

No. and Description of Furnaces in each boiler

3 plain

Material

S

Outside diameter

41"

Length of plain part

top 76

bottom 69

Thickness of plates

crown 13

bottom 16

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

219

Combustion chamber plates: Material

S

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 1/2

Top

9 x 8 3/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

230.

Material of stays

S

Area at smallest part

2.07 sq

Area supported by each stay

78.750

Working pressure by rules

230

End plates in steam space:

Material

S

Thickness

1 3/16

Pitch of stays

18"

How are stays secured

DN+W.

Working pressure by rules

220

Material of stays

S

Area at smallest part

7.50

Area supported by each stay

32.40

Working pressure by rules

275

Material of Front plates at bottom

S

Thickness

15

Material of Lower back plate

S

Thickness

29

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 3/8

Material of tube plates

S

Thickness: Front

15

Back

7

Mean pitch of stays

11.2"

Pitch across wide water spaces

13 3/4

Working pressures by rules

212 lb

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

10 1/2

x 1 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

yes

Date of Test

yes

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the boiler

yes

Diameter of Safety Valve

yes

Pressure to which each is adjusted

yes

Is Easing Gear fitted

yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts & nuts, Set of coupling bolts & nuts, valves for air, feed, bilge, & donkey pumps, main & donkey check valves, safety valve spring, circulating pump impeller & spindle. Feed pump ram.

The foregoing is a correct description,

For CHARLES D. HOLMES & Co. LTD

*Charles D. Holmes*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1926: Jan 1, 5, 12, 15, 20, 22, 26, 27, 28, Feb 2, 3, 9, 10, 11, 16, 17, 23, 24, 26  
During erection on board vessel -- Mar 4, 13, 14, 20, 24, 26.  
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 17-2-26 Slides 26-2-26 Covers 17-2-26 Pistons 26-2-26 Rods 23-2-26  
Connecting rods 23-2-26 Crank shaft 24-2-26 Thrust shaft 9-2-26 Tunnel shafts ✓ Screw shaft 26-1-26 Propeller 26-1-26  
Stern tube 26-1-26. Steam pipes tested 19-3-26 Engine and boiler seatings 2-2-26 Engines holding down bolts 13-3-26.  
Completion of pumping arrangements 26-3-26 Boilers fixed 13-3-26 Engines tried under steam 20-3-26.  
Completion of fitting sea connections 2-2-26 Stern tube 2-2-26 Screw shaft and propeller 2-2-26.  
Main boiler safety valves adjusted 20-3-26. Thickness of adjusting washers F  $\frac{3}{8}$  A  $\frac{11}{32}$

Material of Crank shaft Steel Identification Mark on Do. 210 P.F. Material of Thrust shaft Steel Identification Mark on Do. 210 P.F.

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts Steel Identification Marks on Do. 210 P.F.

Material of Steam Pipes S.D. Copper. 4" dia. 6 W.G. ✓ Test pressure 400 lb 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 Andradite.

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 eligible in my opinion to have the record + LMC 3.26, C.L. in the Register Book.

The steel invoices sent herewith relate also to duplicate boiler 1299.

It is submitted that this vessel is eligible for THE RECORD + LMC 3.26. CL.

The amount of Entry Fee ... £ 2 :-

Special ... £ 24 :-

Donkey Boiler Fee ... £ :

Travelling Expenses (if any) £ :

When applied for,

10/4/1926

When received,

30-4-1926

P. Fitzgerald

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUES. 13 APR 1926

+ LMC 3.26 C.L.



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