

## REPORT ON MACHINERY.

No. 35246

Received at London Office

13 SEP 1924

Date of writing Report

19

When handed in at Local Office

19

Port of

HULL.

No. in Survey held at  
Reg. Book.

Hull.

Date, First Survey April 24<sup>th</sup>Last Survey Sept 4<sup>th</sup> 1924

(Number of Visits)

Master

Built at *Beverly*By whom built *Cook, Belmont & Co Ltd*Tons { Gross  
Net  
When built 1924.

Engines made at

*Hull*

By whom made

*Castrolmes & Co Ltd*

when made 1924

Boilers made at

*Hull*

By whom made

*Castrolmes & Co Ltd*

when made 1924

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

96

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes.

ENGINES, &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

Dia. of Screw shaft

7.96

as fitted

8.21

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

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 7.04

Dia. of Crank shaft journals

as per rule 7.39

Dia. of Crank pin

7.5

Size of Crank webs

4.5

Dia. of thrust shaft under

collars

Y. 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

2.78

Stroke

14.4

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

one

Diameter of ditto

2.78

Stroke

14.4

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

1 1/2

Gallons

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

In Engine Room 2 @ 2" and 1 @ 3"

Gallons

In Holds, &amp;c. one @ 2" in each compartment.

No. of Bilge Injections

one

sizes

3 1/2"

Connected to condenser for circulating pump

Yes

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

Low pressure

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

Is it fitted with a watertight door

worked from

BOILERS, &amp;c.—(Letter for record

S. 1)

Manufacturers of Steel

Port Talbot Steel Co.

Total Heating Surface of Boilers

1698 sq ft.

Is Forced Draft fitted

no

No. and Description of Boilers

one

Single ended

Working Pressure

200 lbs.

Tested by hydraulic pressure to

350 lbs.

Date of test

28/7/24

No. of Certificate

3524

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 lifting loaded

Area of each valve

4.9

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

24"

Mean dia. of boilers

14.0"

Length

10'-8"

Material of shell plates

Steel

Thickness

1/32

Range of tensile strength

24/32 tons

Are the shell plates welded or flanged

Yes

Descrip. of riveting: cir. seams

BR.

long. seams

TR. BR.

Diameter of rivet holes in long. seams

1/32

Pitch of rivets

8 7/16

Length of plates or width of butt straps

18 3/16

Per centages of strength of longitudinal joint

rivets 96.8%

plate 85.63%

Working pressure of shell by rules

201

Size of manhole in shell

16 x 12"

Size of compensating ring

34 x 27 x 1 3/32

No. and Description of Furnaces in each boiler

3 Plain

Material

Steel

Outside diameter

41"

Length of plain part

top 76

bottom 69

Thickness of plates

crown 13

bottom 7 1/16

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

2 3/32

Top

3/4

Bottom

3/4

Pitch of stays to ditto: Sides

7 x 8 3/4

Back

7 x 8 3/4

Top

7 x 8 3/4

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

230

Material of stays

Steel

Area at smallest part

2.07

Area supported by each stay

78 3/4

Working pressure by rules

230

End plates in steam space:

Material

Steel

Thickness

1 1/16

Pitch of stays

18"

How are stays secured

SW. &amp; W.

Working pressure by rules

220

Material of stays

Steel

Area at smallest part

7.5

Area supported by each stay

32.4

Working pressure by rules

275

Material of Front plates at bottom

Steel

Thickness

15/16

Material of Lower back plate

Steel

Thickness

2 7/32

Greatest pitch of stays

4 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

Steel

Thickness: Front

15/16

Back

7/8

Mean pitch of stays

9 3/4

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 2/32

Distance apart

7 + 10

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

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

2021

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

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

Is Easing Gear fitted

Diameter of Safety Valve

Pressure to which each is adjusted

Lloyd's Register

Foundation

W 1136-0109

2m. 1.1.19. T

IS A DONKEY BOILER FITTED?

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 feed & bilge pumps. main & donkey check valves. Spare valves for donkey pump. Spare impeller & shaft. Feed pump plunger. Safety valve spring.

The foregoing is a correct description,

FOR CHARLES D. HOLMES & CO. LTD.

J. C. Godwin

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1924. Apr 24. May 2. 13, 23, 24, Jun 6. 10. 13. 16. 20. 30. July 10. 13. 18. 21. 28  
During erection on board vessel -- Aug 1, 8. 14. 19. 23. 26. 29. 30 Sept 2  
Total No. of visits 28

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 18.7.24 Slides 1.8.24 Covers 18.7.24 Pistons 1.8.24 Rods 28.7.24  
Connecting rods 28.7.24 Crank shaft 21.7.24 Thrust shaft 4.7.24 Tunnel shafts ✓ Screw shaft 16.6.24 Propeller 16.6.24  
Stern tube 16.6.24 Steam pipes tested 23.8.24 Engine and boiler seatings 20.6.24 Engines holding down bolts 19.8.24.  
Completion of pumping arrangements 4.9.24 Boilers fixed 19.8.24 Engines tried under steam 4.9.24.  
Completion of fitting sea connections 20.6.24 Stern tube 20.6.24 Screw shaft and propeller 20.6.24  
Main boiler safety valves adjusted 30.8.24 Thickness of adjusting washers F 3/8 A 5/16.  
Material of Crank shaft Steel Identification Mark on Do. //3 J.H.M. Material of Thrust shaft Steel Identification Mark on Do. //3 J.H.M.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. do.  
Material of Steam Pipes S.D. Copper. 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 Lord Halfon of Kewlough

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 Rule requirements & the approved plans. They were satisfactorily fitted on board, tried under working conditions, & found in order. Safety valves adjusted and pumping arrangements found good. The machinery is eligible in our opinion to have records of LMC 9.24 & C.L.

Please return the enclosed plan of boiler, for dealing with sister vessel.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.24. CL.

J. D. P. S. 16/9/24

The amount of Entry Fee ... £ 2 : 0 :  
Special ... £ 24 : 0 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 12.9.24  
When received, 12.9.24

John Mackenzie & P. Fitzgerald.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute 3 OCT 1924

Assigned + LMC 9.24 C.L.

CERTIFICATE WRITTEN.



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