

REPORT ON MACHINERY

No. 31478

Received at London Office

to writing Report

19

When handed in at Local Office

28/11/19 Port of Hull

Date, First Survey

30/12/18

Last Survey

7/11/1919

o. in Survey held at Hull

sg. Book.

on the

S. T. GENERAL BIRDWOOD (EX JAMES McLAUGHLIN)

(Number of Visits)

31

Gross 324

Net 148

aster

Built at

Hull

By whom built

Belmane Iron Ltd

When built

1919

engines made at

Hull

By whom made

Thos J. Holmes & Co Ltd

when made

1919

oilers made at

Hull

By whom made

do

when made

1919

Registered Horse Power

Owners

Hellier Bros Ltd

Port belonging to

Hull.

om. Horse Power as per Section 28

87

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No.

GINES, &c.—Description of Engines

Triple expansion

No. of Cylinders

3

No. of Cranks

3

dia. of Cylinders

13-23-37

Length of Stroke

36

Revs. per minute

115

Dia. of Screw shaft

as per rule 8.29

Material of

Steel

the 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

the propeller boss

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

If the liner does not fit tightly at the part

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

If two

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

No liner lapped

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 1/2

Size of Crank webs

48x11

Dia. of thrust shaft under

llars

7 1/2

Dia. of screw

9 7/8

Pitch of Screw

11-0

No. of Blades

4

State whether moveable

No

Total surface

33 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

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

No. of Donkey Engines

one

Sizes of Pumps

6x4 1/2 x 6

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

Engine Room

two 2" dia

In Holds, &c.

one 2" dia in each compartment

all motions also connected to ejector

No. of Bilge Injections

one

sizes

3 1/2

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

3 1/2

Are the roses in Engine room always accessible

Yes

Are all the bilge suction pipes fitted with roses

Yes

Are the sluices on Engine room bulkheads always accessible

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

Exhaust pipes from which steam

How are they protected

Flange 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, &c.—(Letter for record

3)

Manufacturers of Steel

Port Talbot & J. Spencer & Son

Total Heating Surface of Boilers

1440 sq

Is Forced Draft fitted

No

No. and Description of Boilers

one triple ended multi

Working Pressure

200 lbs

Tested by hydraulic pressure to

400 lbs

Date of test

29/10/19

No. of Certificate

3386

Can each boiler be worked separately

No

Area of fire grate in each boiler

48 sq

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

4.9 sq

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

8" clear

dia. of boilers

16 1/2

Length

10-8

Material of shell plates

Steel

Thickness

1 1/4

Range of tensile strength

28 to 32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

double

Long. seams

TR 505

Diameter of rivet holes in long. seams

1 1/4

Pitch of rivets

8 5/8

Lap of plates or width of butt straps

18

Per centages of strength of longitudinal joint

85.9%

Working pressure of shell by rules

202 lbs

Size of manhole in shell

16 x 12

Size of compensating ring

7 x 1 1/4

No. and Description of Furnaces in each boiler

Three plain

Material

Steel

Outside diameter

40"

Length of plain part

top 7 1/2

bottom 7 1/2

Thickness of plates

3 1/2

Description of longitudinal joint

welded

No. of strengthening rings

—

Working pressure of furnace by the rules

206

Combustion chamber plates: Material

Steel

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10 x 8

Back

9 1/2 x 8 1/2

Top

11 x 8

If stays are fitted with nuts or riveted heads

No

Working pressure by rules

208 1/2

Material of stays

Steel

Area at smallest part

2.07 sq

Area supported by each stay

88 sq

Working pressure by rules

211

End plates in steam space:

Material

Steel

Thickness

1 1/2

Pitch of stays

19 x 17 1/2

How are stays secured

TR & W.

Working pressure by rules

210

Material of stays

Steel

Area at smallest part

7.5 sq

Area supported by each stay

335 sq

Working pressure by rules

233

Material of Front plates at bottom

Steel

Thickness

5/8

Material of Lower back plate

Steel

Thickness

5/8

Greatest pitch of stays

13 1/2 x 9 1/2

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:— Two top and 2 bottom end of 2 main bearing both of nuts, one set coupling both of nuts, one set air feed & bilge pump valves, 6 pump ring studs & nuts, one set air feed & bilge pump valves, 6 pump ring studs & nuts, one main & one donkey check valve, two valves for donkey pump, one safety valve spring, three condenser tubes, one set firebars, a quantity of bolts & nuts, & iron of various sizes.

The foregoing is a correct description,
for CHARLES D. HOLMES & CO. LTD.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918. Dec 30-31. Jan 1. Apr. 23-24. 29 Jun. 3. 12. 26. 28. 8. 15. 17. 24 Aug. 1-15.
During erection on board vessel -- 19-21-29. 30 Sep 2. 5-10-11-17. Oct 10-23-28. Nov 2-4.
Total No. of visits 31.

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 26/6/19 Slides 10/9/19 Covers 4/7/19 Pistons 10/9/19 Rods 25/8/19
Connecting rods 10/9/19 Crank shaft 2/9/19 Thrust shaft 2/9/19 Tunnel shafts Screw shaft 23/4/19 Propeller 24/4/19
Stern tube 24/4/19 Steam pipes tested 28/10/19 Engine and boiler seatings 23/10/19 Engines holding down bolts 23/10/19
Completion of pumping arrangements 7/11/19 Boilers fixed 4/11/19 Engines tried under steam 7/11/19
Completion of fitting sea connections 29/4/19 Stern tube 29/4/19 Screw shaft and propeller 29/4/19
Main boiler safety valves adjusted 4/11/19 Thickness of adjusting washers 5 1/8" 9 3/8"
Material of Crank shaft Steel Identification Mark on Do. 2374 Material of Thrust shaft Steel Identification Mark on Do. 2375
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 2320
Material of Steam Pipes Copper Test pressure 400 lbs. per sq. in.

Is an installation fitted for burning oil fuel

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

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 built under special survey, & the materials & workmanship are good. On completion they were examined while running full power trials in the Harbour & found satisfactory.

The machinery throughout is now in good & efficient condition & eligible in our opinion to have the second LMC-11-19 marked in Red in the British Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 11-19.

JWD. 219
4/12/19
JMR

The amount of Entry Fee ... £ 2-0-0
Special ... £ 26-2-0
Donkey Boiler Fee ... £ :
Travelling Expenses (if any) £ :
When applied for, 2/12/19
When received, 30/12/19

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

ASSIGNED CERTIFICATE
ENTERED

+ LMC 11-19



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Foundation