

Rpt. 4.

## REPORT ON MACHINERY.

No. 48500.

Received at London Office

TUE. SEP. 7 1920

Date of writing Report

When handed in at Local Office

Port of Newcastle-on-Tyne

No. in Survey held at Hallend-on-Tyne

Date, First Survey 12 Sept 19 Last Survey 16 Aug 1920

Reg. Book.

34733 on the Steel Se. GASLIGHT

(Number of Visits 5)

Tons { Gross 172 1696  
Net 1050 997

Master

Built at Newcastle

By whom built Widdowson &amp; Co. Ltd

When built 1920

Engines made at Newcastle

By whom made Nash &amp; Co. Ltd

when made 1920

Boilers made at Sunderland

By whom made Nash &amp; Co. Ltd

when made 1920

Registered Horse Power

Owners Gas Light &amp; Coke Co. Ltd. (Stephen Black &amp; Co. Ltd.) Port belonging to London

Nom. Horse Power as per Section 28 180

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes

ENGINES, &amp;c.—Description of Engines Inverted Triple Expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 19" 31" 51"

Length of Stroke 36"

Revs. per minute

Dia. of Screw shaft

as per rule 11.16" Material of screw shaft Low

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

If two

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

Length of stern bush 4'-5"

Dia. of Tunnel shaft as per rule 9.58" as fitted 9 7/8"

Dia. of Crank shaft journals as per rule 10.06" as fitted 10 7/8"

Dia. of Crank pin 10 7/8"

Size of Crank webs 21 1/2" x 6 1/2"

Dia. of thrust shaft under

collars 10 7/8"

Dia. of screw 14'-3"

Pitch of Screw 14'-3"

No. of Blades 4

State whether moveable No

Total surface 64 sq

No. of Feed pumps 2

Diameter of ditto 3"

Stroke 20"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 3 1/2"

Stroke 20"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2

Sizes of Pumps 2 1/2" x 3 1/2" x 5"

Ballcock 11" x 10"

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

In Engine Room 3"

In Holds, &amp;c. For Hold 2-3"

After Hold 3-3"

Tunnel well 1-2"

No. of Bilge Injections 1

sizes 4"

Connected to condenser, or to 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 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 None

How are they protected

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 Top Platform

BOILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel See Report Sunderland No. 27717

Total Heating Surface of Boilers 2918 sq

Is Forced Draft fitted No.

No. and Description of Boilers Two single ended multi-

Working Pressure 180

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately Yes

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler 2 Spring loaded

Area of each valve 4.91 sq

Pressure to which they are adjusted 180 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 18"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets plate

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part top bottom

Thickness of plates crown bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Area at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% 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

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

Pressure to which each is adjusted

Is Easing Gear fitted

Diameter of Safety Valve

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Diameter of Safety Valve

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Pressure to which each is adjusted

Is Easing Gear fitted

Diameter of Safety Valve

Is a Report also sent on the Hull of the Ship?

If not, state whether, and when, one will be sent?

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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  
One set coupling Bolts - one set of feed and bilge pump valves - a quantity of bolts nuts & iron

The foregoing is a correct description,

THE NORTH EASTERN MARINE ENGINEERING CO. LTD.

*J. J. Jamison*  
Secretary.

Manufacturer.

1919,  
Dates of Survey while building  
During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits 50.

Is the approved plan of main boiler forwarded herewith ☒

Dates of Examination of principal parts—Cylinders 11.5.20 Slides 12.7.20 Covers 9.7.20 Pistons 2.6.20 Rods 7.5.20  
Connecting rods 3.6.20 Crank shaft 25.3.20 Thrust shaft 6.10.20 Tunnel shafts 17.2.20 Screw shaft 31.3.20 Propeller 27.5.20  
Stern tube 12.4.20 Steam pipes tested 28.7.20 Engine and boiler seatings 1.6.20 Engines holding down bolts 26.7.20  
Completion of pumping arrangements 5.8.20 Boilers fixed 26.7.20 Engines tried under steam 5.8.20  
Completion of fitting sea connections 1.6.20 Stern tube 1.6.20 Screw shaft and propeller 26.7.20  
Main boiler safety valves adjusted 5.8.20 Thickness of adjusting washers Pat. Bal. P<sup>7</sup>/<sub>16</sub> S<sup>3</sup>/<sub>2</sub>" Sta. Bal. P<sup>7</sup>/<sub>16</sub> S<sup>3</sup>/<sub>2</sub>"  
Material of Crank shaft Steel Identification Mark on Do. T.F. 3.20 Material of Thrust shaft Steel Identification Mark on Do. T.F. 10.19  
Material of Tunnel shafts Iron Identification Marks on Do. T.F. 2.20 Material of Screw shafts Iron Identification Marks on Do. T.F. 3.20  
Material of Steam Pipes S. D. Copper 4" dia x No. 6 W.G. Test pressure 36 lbs.

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 machinery of this vessel has been built under special Survey. The workmanship and materials are sound and good. The main and auxiliary machinery have been tried under steam while vessel was at her moorings. The main Boiler safety valves were adjusted under steam to the working pressure. In my opinion this machinery is eligible for classification and to have the record -1-L.M.C. 8.20 in the Register Book.

THE RECORD + LMC 8.20

*R. H. 8/9/20*

*9/9/20*

The amount of Entry Fee £ 2 : - :  
Special £ 17 : 7 :  
Donkey Boiler Fee £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 6 SEP 1920  
When received, 9/9/20

*R. H. 8/9/20*

Engineer, Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE. SEP. 14 1920  
+ LMC 8.20

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Foundation