

REPORT ON MACHINERY

No. 73325

Main Boiler

Received at London Office

WED. JUL. 21 1920

Date of writing Report

19

When handed in at Local Office

1920

Port of

No. in Survey held at
Reg. Book.

NEWCASTLE-ON-TYNE

Date, First Survey

24th Jan 1919

Last Survey

13th May

1920

on the

(Number of Visits)

Tons
Gross
Net
When built

Master Built at By whom built

Engines made at South Shields By whom made G T Grey & Co Ltd Eng. No 605 when made 1920

Boilers made at Hebburn By whom made Palmers Coy Ltd, Bolton No 954 when made 1920

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Dia. of Cylinders

Length of Stroke

Revs. per minute

Dia. of Screw shaft

as per rule

Material of

as fitted

screw shaft

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made water tight

in 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

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

Dia. of Tunnel shaft

as per rule

Dia. of Crank shaft journals

as per rule

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

as fitted

as fitted

collars

Dia. of screw

Pitch of Screw

No. of Blades

State whether moveable

Total surface

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

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

In Engine Room

In Holds, &c.

No. of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Spencers & Sons Ltd

Total Heating Surface of Boilers

1180

Is Forced Draft fitted

No

No. and Description of Boilers

One S. E. Cyl multi

Working Pressure

130 lb

Tested by hydraulic pressure to

260 lb

Date of test

2-3-20

No. of Certificate

9368

Can each boiler be worked separately

Area of fire grate in each boiler

36 sq ft

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

11-10 1/2

Length

10'-0"

Material of shell plates

Thickness

25"

Range of tensile strength

28/32 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

SXX

long. seams

T R S B S H P

Diameter of rivet holes in long. seams

1"

Pitch of rivets

5/4"

Lap of plates or width of butt straps

1'-3 1/2"

Per centages of strength of longitudinal joint

rivets 85.42

Working pressure of shell by rules

131.5 lb

Size of manhole in shell

16 x 12

Size of compensating ring

7" x 25"

No. and Description of Furnaces in each boiler

two plain

Material

steel

Outside diameter

3'-6"

Length of plain part

top 6'-0"

bottom 6'-8"

Thickness of plates

crown 21"

bottom 32"

Description of longitudinal joint

weld

No. of strengthening rings

✓

Working pressure of furnace by the rules

139 lb

Combustion chamber plates: Material

steel

Thickness: Sides

7/8"

Back

9/16"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

9 1/2 x 9

Back

9 x 9

Top

9 x 8 1/2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

149 lb

Material of stays

steel

Area at smallest part

1'-45"

Area supported by each stay

85-5"

Working pressure by rules

135 lb

End plates in steam space:

Material

steel

Thickness

7/8"

Pitch of stays

16 1/2 x 16 1/2"

How are stays secured

8 1/2 row

Working pressure by rules

133 lb

Material of stays

steel

Area at smallest part

4'-11"

Area supported by each stay

272-25"

Working pressure by rules

156 lb

Material of Front plates at bottom

steel

Thickness

27"

Material of Lower back plate

steel

Thickness

25"

Greatest pitch of stays

13 x 9"

Working pressure of plate by rules

130 lb

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4 x 4 3/4"

Material of tube plates

steel

Thickness: Front

3/4"

Back

3/4"

Mean pitch of stays

14 1/2 x 9 1/2"

Pitch across wide water spaces

14"

Working pressures by rules

130 lb

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

8 1/2 x 1 3/8"

Length as per rule

2'-7"

Distance apart

8 1/2"

Number and pitch of stays in each

10 x 9"

pitch

Working pressure by rules

182 lb

Steam dome: description of joint to shell

none % 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

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

002674-00681-0085.1

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
Palmer's Shipbuilding & Iron Co., Ltd.

J. Cameron

Manufacturer for Boiler only.

Manager, Boiler Shop Dept.

Dates of Survey while building { During progress of work in shops - - - } 1919 Jan 24 Feb 20 Mar 31 Apr 24 Dec 16
{ During erection on board vessel - - - } Feb 26 Mar 2 May 12
Total No. of visits 12

Is the approved plan of main boiler forwarded herewith *Forwarded with 953 Boilers report* **yes**

" " " donkey " " "

Dates of Examination of principal parts—Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft
Stern tube	Steam pipes tested	Engine and boiler seatings	Engines holding down bolts	Propeller
Completion of pumping arrangements	Boilers fixed	Engines tried under steam		
Completion of fitting sea connections	Stern tube	Screw shaft and propeller		
Main boiler safety valves adjusted	Thickness of adjusting washers			
Material of Crank shaft	Identification Mark on Do.	Material of Thrust shaft	Identification Mark on Do.	
Material of Tunnel shafts	Identification Marks on Do.	Material of Screw shafts	Identification Marks on Do.	
Material of Steam Pipes	Test pressure			

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 *Boilers duplicate 955-954-953-830*

General Remarks (State quality of workmanship, opinions as to class, &c.)

The Boilers built under Special Survey. The material and workmanship found good and efficient.

The boiler was tested at Messrs Palmer's works under hydraulic pressure 260 lb and found satisfactory. The boiler is intended for a vessel to be built for Clompeation

Fee for Survey of Boilers, etc.
The amount of Entry Fee ... £ 3 : 19 :
Special ... £ : : 20 7 19 20
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : 26 8 19 20
When applied for,
When received,
26/8/1920

Leonard Shalloo

Engineer Surveyor to Lloyd's Register of Shipping.

FRI NOV 18 1921

Committee's Minute

TUE JUL 5 1921

Assigned



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Lloyd's Register
Foundation