

REPORT ON MACHINERY

No. 73325

WED. JUL. 27 1920

Received at London Office

Main Boiler

Date of writing Report 19 When handed in at Local Office 19.7.1920 Port of NEWCASTLE ON TYNE

No. in Survey held at Reg. Book. Date, First Survey 24th Jan 1919 Last Survey 13th May 1920 (Number of Visits 12)

Master Built at By whom built Tons Gross Net When built

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

Boilers made at Hebburn By whom made Palmers Coy Ltd, Boiler 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

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Material of 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 as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under

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 130lb Tested by hydraulic pressure to 260lb Date of test 2.3.20 No. of Certificate 9368

Can each boiler be worked separately Area of fire grate in each boiler 36 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 Steel

Thickness 25/32 Range of tensile strength 28/32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams SRA

long. seams T R SRA 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 131.5lb Size of manhole in shell 16 x 12

Size of compensating ring 7" x 25/32 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 21/32 Description of longitudinal joint weld No. of strengthening rings

Working pressure of furnace by the rules 139lb 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 149lb

Material of stays Steel Area at smallest part 1-45 Area supported by each stay 85-5 Working pressure by rules 135lb 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 133lb Material of stays Steel

Area at smallest part 4-11 Area supported by each stay 272-25 Working pressure by rules 156lb Material of Front plates at bottom Steel

Thickness 27/32 Material of Lower back plate Steel Thickness 25/32 Greatest pitch of stays 13 x 9 Working pressure of plate by rules 130lb

Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 x 4 3/4 Material of tube plates Steel Thickness: Front 27/32 Back 3/4 Mean pitch of stays 14 1/2 x 9 1/2

Pitch across wide water spaces 14 Working pressures by rules 130lb 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 40 x 9 1/2 pitch

Working pressure by rules 182lb 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

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 21 Feb 20 Mar 21 Sep 24 Dec 16	1920	Feb 26 Mar 2 May 12
		During erection on board vessel - - -			
			Total No. of visits		12

Is the approved plan of main boiler forwarded herewith yes

Is the approved plan of main boiler forwarded herewith yes

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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 Boiler duplicate 955-954-953-830

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

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

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

Certificate (if required) to be sent to The Surveyors are requested not to write on or below the space for Committee's Minute.

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

Leonard Shallowes

Engineer Surveyor to Lloyd's Register of Shipping.

FRI. NOV. 18 1921

Committee's Minute

TUE. JUL. 5 1921

Assigned



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