

## REPORT ON MACHINERY.

No. 3795H.

Received at London Office

Writing Report

When handed in at Local Office 16 SEP 1918

Port of Glasgow

WED JUL 10 1918

Survey held at Glasgow

Date, First Survey 25/4/18

Last Survey 27/6/18

Book

on the Standard Vessel "WARACONITE"

(Number of Voids 93)

Gross 5329

Built at Sunderland

By whom built W. Wood &amp; Son Ltd No 529 When built 1918

Machinery made at Glasgow

By whom made Harland &amp; Wolff Ltd No 528 when made 1918

Machinery made at Sunderland

By whom made W. Wood &amp; Son Ltd (BC Survey) when made 1918

Rated Horse Power

Owners

Shipping Controller

Port belonging to

London

Horse Power as per Section 28

577

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted 410

INES, &amp; Co.—Description of Engines Triple Expansion

No. of Cylinders

No. of Cranks 3

of Cylinders 27-44-73 Length of Stroke 48 Revs. per minute

Dia. of Screw shaft

as per rule 14.7

Material of

Screw shaft

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

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

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

Yes

If two

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

Length of stern bush 60.5

of Tunnel shaft as per rule 12.33

Dia. of Crank shaft journals

as per rule 14

Dia. of Crank pin 14.5

Size of Crank webs 28 x 9

Dia. of thrust shaft under

Dia. of screw 14.5

Pitch of Screw

No. of Blades

State whether moveable

Total surface

of Feed pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work

of Bilge pumps 2

Diameter of ditto 4

Stroke 24

Can one be overhauled while the other is at work

of Donkey Engines 3

Sizes of Pumps 10, 14, 24

9 1/2, 7 1/2, 18

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

Engine Room

4 @ 3 1/2"

In Holds, &amp;c.

No. 1 2 @ 3 1/2"

No. 2 2 @ 3 1/2"

No. 3 2 @ 3 1/2"

Bilge Injections

1 size 9

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room &amp; size

410 3 1/2"

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

All connections with the sea direct on the skin of the ship

Yes

Are they Valves or Cocks

Both

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

Below

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

Pipes are carried through the bunkers

None

How are they protected

Yes

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

Yes

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

Yes

Date of examination of completion of fitting of Sea Connections 13/4/18

Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

No

worked from

mainly trunk

ERS, &amp; Co.—(Letter for record)

Manufacturers of Steel

Baker under BC Survey

Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Least distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Seams Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Intervals of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Diameter of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

Diameter of stays

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter of stays

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

Pitch of girders at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

fitted with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:— Two top end and two bottom end connecting rods and nuts, two main bearing bolts, one set connecting bolts, one set pin and little pump valves, assorted bolts and nuts 2000 of various sizes

The foregoing is a correct description,

FOR HARLAND & WOLFF, LTD.,

F. E. Colbeck

GENERAL MANAGER

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1918. May 12-24-25-30-31 June 7-12-19-23-24-27 July 2-10-12-26 Aug 2-9-20-29-30-31 Sep 8-12-18-21  
During erection on board vessel - 1918. May 12-24-25-30-31 June 7-12-19-23-24-27 Dec 4-5-8-11-13-18-21-24-26-29-1918 Jan 8-10-16-17-22-29  
Total No. of visits 93

Is the approved plan of main boiler forwarded herewith

See July 11-31 Aug 7-14-16 Sep 5-7-12-14

" donkey "

Dates of Examination of principal parts—Cylinders 18-3-18 Slides 18-3-18 Covers 18-3-18 Pistons 18-3-18 Rods 12-9-17

Connecting rods 18-3-18 Crank shaft 17-1-18 Thrust shaft 17-1-18 Tunnel shafts 17-1-18 Screw shaft 17-1-18 Propeller

Steam tube 8-1-18 Steam pipes tested 15-16-8-18 Engine and boiler seatings 14-8-18 Engines holding down bolts 14-8-18

Completion of pumping arrangements 14-9-18 Boilers fired 5-9-18 Engines tried under steam 14-9-18

Main boiler safety valves adjusted 14-9-18 Thickness of adjusting washers P134 P135 P136 P137 P138 P139 P140 P141 P142 P143 P144 P145 P146 P147 P148 P149 P150 P151 P152 P153 P154 P155 P156 P157 P158 P159 P160 P161 P162 P163 P164 P165 P166 P167 P168 P169 P170 P171 P172 P173 P174 P175 P176 P177 P178 P179 P180 P181 P182 P183 P184 P185 P186 P187 P188 P189 P190 P191 P192 P193 P194 P195 P196 P197 P198 P199 P200

Material of Crank shaft Steel Identification Mark on Do. 528 IE Material of Thrust shaft Steel Identification Mark on Do. 140 IE

Material of Tunnel shafts Identification Marks on Do. 1166 1165 JP 693 REM 117 1367 JP 528 Material of Screw shafts Identification Marks on Do. 113 REM

Material of Steam Pipes Copper Test pressure 360 lbs

Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 160°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 Standard Class A

General Remarks (State quality of workmanship, opinions as to class, etc.) The Engines have been built under Special Survey the materials and workmanship are good

The Engines have been forwarded to Messrs. Brown & Co. to be fitted in their No 529 Series

The engines for this vessel have been constructed under special survey and both engines and boiler have now been fitted on board the vessel in a satisfactory manner, and had the vessel and the boiler been built under special survey would have been eligible for class A + L.M.C. 7-18

As this vessel is not intended for classification it is submitted further action is unnecessary

The Endorsement on the survey dated 9/12/19

The amount of Entry Fee £ 59-4-2

Special £ 29-12-1

Donkey Boiler Fee £ 29-12-1

Travelling Expenses (if any) £

Committee's Minute GLASGOW 9 JUL 1918

Assigned Deferred

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