

Rpt. 4.

REPORT ON MACHINERY.

No. 81767.

Date of writing Report

19

When handed in at Local Office

21 JAN 1921

Port of

Received at London Office

SAT. 22 JAN. 1921

No. in Survey held at
Reg. Book.

82450 on the Screw Steamer "Deerside".

Date, First Survey July 25th 1919 Last Survey Jan 12th 1921

(Number of Visits 23.)

Master

Built at Bonmahs Quay By whom built J. Crichton & Co. Ltd.

Engines made at Saltney, Chester. By whom made J. Crichton & Co. Ltd. (see over)

Boilers made at Birkenhead By whom made Hammell Laird & Co. Ltd.

Registered Horse Power

Owners West Steam Shipping Co. (1917) Ltd.

Port belonging to Sunderland.

Nom. Horse Power as per Section 28

77.

Is Refrigerating Machinery fitted for cargo purposes

no.

Is Electric Light fitted

no.

ENGINES, &c.—Description of Engines

Compound.

No. of Cylinders 2

No. of Cranks 2

Dia. of Cylinders 17" 3/8"

Length of Stroke 24"

Revs. per minute 105

Dia. of Screw shaft as per rule 7 1/2"

Material of screw shaft as fitted 8" steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liners.

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 3'-3"

Dia. of Tunnel shaft as per rule 6.96"

Dia. of Crank shaft journals as per rule 7 1/2"

Dia. of Crank pin 7 1/2"

Size of Crank webs 13' x 5 1/2"

Dia. of thrust shaft under

collars 7 1/2" Dia. of screw 8'-6" Pitch of Screw 10'-9"

No. of Blades 4

State whether moveable no

Total surface 24 sq ft

No. of Feed pumps 2

Diameter of ditto 3 1/2"

Stroke 12"

Can one be overhauled while the other is at work

yes.

No. of Bilge pumps 1

Diameter of ditto 3 1/2"

Stroke 12"

Can one be overhauled while the other is at work

yes.

No. of Donkey Engines two

Sizes of Pumps 6.8"

5 1/2, 3 1/2"

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

In Engine Room one - 2"

In Holds, &c. 3 - 2" 7 P.S. 1 - 3" A.P. 1 - 3"

No. of Bilge Injections 1 sizes 3"

Connected to condenser, or to circulating pump Cripps

Is a separate Donkey Suction fitted in Engine room & size 1 - 2"

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 bilge & 2 P.S. suction pipes.

How are they protected Wood 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 none.

Is it fitted with a watertight door —

worked from —

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers 1490 sq ft

Is Forced Draft fitted no

No. and Description of Boilers 1 S.E. Multitubular

Working Pressure 130 lbs

Tested by hydraulic pressure to 260 lbs

Date of test 7.5.20.

No. of Certificate 2123.

Can each boiler be worked separately

yes.

Area of fire grate in each boiler 48 sq ft

No. and Description of Safety Valves to

each boiler 2 Direct Spring

Area of each valve 7.07 sq in

Pressure to which they are adjusted 135 lbs

Are they fitted with easing gear yes.

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-0"

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

Per centages of strength of longitudinal joint

rivets.

Working pressure of shell by rules

Size of manhole in shell

No. of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

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

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

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

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

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

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

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

No. of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

No. of rivets

Working pressure of shell by rules

Crown plates

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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 & 2 bottom end bolts. 2 main bearing bolts. 1 set of coupling bolts, one set of bilge & feed pump valves. 1 set of piston rings. 1 pair of top & bottom end brasses. link brasses. studs. 6 condensed tubes ferrules & packing. 6 boiler tubes. 2 boiler stay tubes. 1 set of firebars. iron of various sizes. bolts & nuts &c.

The foregoing is a correct description,

C. J. H. Erickson, Ltd.
24/6 Henderson

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1919 July 28. Aug 27. Nov 4. 18. Dec 22. 1920 Jan 5. Mar 11. 12. Apr 19. May 17. 26. June 8. 25. July 2. 12. 30. Sept 7. 8. 20. Oct 5. During erection on board vessel - Nov 9. 24. Jan 6. 12. Total No. of visits 25. Is the approved plan of main boiler forwarded herewith ☒ " " " donkey " " " ☒

Dates of Examination of principal parts - Cylinders 27/8/19. 4/11/19 Slides 27/8/19. 4/11/19 Covers 27/8/19. 4/11/19 Pistons 27/8/19. 4/11/19 Rods 27/8/19. 4/11/19 Connecting rods 7/9/20 Crank shaft 15/11/16 Thrust shaft 11/3/20 Tunnel shafts none Screw shaft 11/3/20 Propeller 2/7/20. Stern tube 17/5/20 Steam pipes tested *Chaffield* Engine and boiler seatings 5/10/20 Engines holding down bolts 9/11/20. Completion of pumping arrangements 12/1/21. Boilers fixed 6/1/21. Engines tried under steam 12/1/21. Completion of fitting sea connections 5/10/20. Stern tube 5/10/20. Screw shaft and propeller 5/10/20. Main boiler safety valves adjusted 6/1/21. Thickness of adjusting washers $P \frac{3}{8}$. $S - \frac{5}{16}$.

Material of Crank shaft *steel* Identification Mark on Do. *LLOYDS 1363 G. B. H.* Material of Thrust shaft *steel* Identification Mark on Do. *LLOYDS 1363 J. H. S.* Material of Tunnel shafts — Identification Marks on Do. — Material of Screw shafts *steel* Identification Marks on Do. — Material of Steam Pipes *copper* Test pressure *30 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. This machinery has been constructed in accordance with the Rules & approved plans the materials & workmanship is good. (Boiler - Liverpool Report herewith.) on completion it was securely fitted on board and tried at sea with satisfactory results. In my opinion this machinery is eligible to be classed with this Society with record of \boxplus Club 1. 21.

It is submitted that this vessel is eligible for THE RECORD. + LMC. 1. 21.

Roll
26/1/21
A.R.S.

MACHINERY CERT.
WRITTEN 23. 2. 21
dated 22. 1. 21

The amount of Entry Fee ... £ 2 : 0 : When applied for, 21 JAN 1921 Special ... $\frac{3}{16}$ £ 11 : 11 : When received, 16. 2. 21 Donkey Boiler Fee ... £ : Travelling Expenses (if any) £ 4 : 7/7. 41 JAN 1921 Committee's Minute Assigned \boxplus L M C 1 : 21.