

# REPORT ON MACHINERY.

No. 27805

SAT. MAY 15 1920

Received at London Office

of writing Report 5-5-1920 When handed in at Local Office 5-5-1920 Port of Sunderland

Survey held at Sunderland Date, First Survey 1 April 19 Last Survey 3 May 1920

Book. Machinery of the new steel S.S. LYS. (Number of Visits 47)

ter C. H. Whinney Built at Sunderland By whom built S. P. Austin & Son, Ltd Tons { Gross 1880 Net 999

ines made at Sunderland By whom made Richardsons Westgarth & Co. Ltd. (No. 2125 when made 1920)

lers made at do By whom made do when made 1920

istered Horse Power 201 Owners (Stephenson Clarke & Co.) Port belonging to London

Horse Power as per Section 28 201 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

**FINES, &c.—Description of Engines** Triple expansion No. of Cylinders 3 No. of Cranks 3

of Cylinders 20 1/2 - 33 - 54 Length of Stroke 39" Revs. per minute 70 Dia. of Screw shaft 11 1/2" Material of screw shaft Scrap iron

he 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

he propeller boss Yes If the liner is in more than one length are the joints burned Yes If the liner does not fit tightly at the part

een the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two

rs are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 4-2"

of Tunnel shaft 10-32" Dia. of Crank shaft journals 10-83" Dia. of Crank pin 11 3/4" Size of Crank webs 7 x 22" Dia. of thrust shaft under

ars 11" Dia. of screw 14-3" Pitch of Screw 15-3" No. of Blades 4 State whether moveable No Total surface 62 sq ft

of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 21" Can one be overhauled while the other is at work Yes

of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 21" Can one be overhauled while the other is at work Yes

of Donkey Engines 2 Sizes of Pumps 9 x 11 x 10, 5 1/2 x 3 1/2 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 2 @ 3" In Holds, &c. Forehold - 2 @ 3", Main hold 2 @ 3"

of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size Yes, 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 Yes

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 Above

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

he Screw Shaft Tunnel watertight None Is it fitted with a watertight door Yes worked from Machinery aft.

**CLERS, &c.—(Letter for record S)** Manufacturers of Steel John Spencer & Sons, Ltd. 2.S.B.

al Heating Surface of Boilers 3160 sq ft Is Forced Draft fitted No No. and Description of Boilers Two Cylindrical S.E. Multitubular

orking Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 3-9-19 No. of Certificate 3604

each boiler be worked separately Yes Area of fire grate in each boiler 43.75 sq ft No. and Description of Safety Valves to

boiler Two spring loaded Area of each valve 5.94 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes

allest distance between boilers or uptakes and bunkers or woodwork 1'-8" Mean dia. of boilers 13-3" Length 10-6" Material of shell plates Steel

ickness 1 3/32" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No Descrip. of riveting: cir. seams D.R. lap

g. seams T.R. D.B. Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/8" Lap of plates or width of butt straps 15"

centages of strength of longitudinal joint rivets 85.8 Working pressure of shell by rules 183.8 Size of manhole in shell 16 x 12"

of compensating ring Yes No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 3-0 1/2"

ngth of plain part top 6-9" Thickness of plates crown 23" Description of longitudinal joint welded No. of strengthening rings Yes

orking pressure of furnace by the rules 184.4 Combustion chamber plates: Material Steel Thickness: Sides 11" Back 21" Top 11" Bottom 13"

teh of stays to ditto: Sides 10 3/8 x 8 1/2" Back 9 1/4 x 8 1/2" Top 10 3/8 x 8 1/2" If stays are fitted with nuts or riveted heads Nuts inside Working pressure by rules 181.5

aterial of stays Steel Area at smallest part 1.79 sq in Area supported by each stay 88.2 sq in Working pressure by rules 182.6 End plates in steam space:

aterial Steel Thickness 1 3/16" Pitch of stays 18 1/2 x 18 1/2" How are stays secured D.N. + W Working pressure by rules 184.6 Material of stays Steel

ea at smallest part 6.1 sq in Area supported by each stay 34.2 sq in Working pressure by rules 185.3 Material of Front plates at bottom Steel

ickness 25/32" Material of Lower back plate Steel Thickness 2 1/32" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 188.5

iameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 3/8" Material of tube plates Steel Thickness: Front 25/32" Back 25/32" Mean pitch of stays 10"

ch across wide water spaces 14 1/4" Working pressures by rules 191.4 Girders to Chamber tops: Material Steel Depth and

ckness of girder at centre 9" x 1 1/2" Length as per rule 30 9/16" Distance apart 10 3/8" Number and pitch of stays in each 2 @ 8 1/2"

orking pressure by rules 185.2 Steam dome: description of joint to shell None % of strength of joint Yes

iameter 10" Thickness of shell plates 1 1/2" Material Steel Description of longitudinal joint Welded Diam. of rivet holes 1 1/8"

ch of rivets Yes Working pressure of shell by rules 185.2 Crown plates Yes Thickness 1 1/2" How stayed Yes

**SUPERHEATER.** Type Horizontal Date of Approval of Plan 1919 Tested by Hydraulic Pressure to 180 lbs

ate of Test 1919 Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler Yes

iameter of Safety Valve 1 1/2" Pressure to which each is adjusted 180 lbs Is Easing Gear fitted Yes

IS A DONKEY BOILER FITTED? No.

If so, is a report now forwarded? ☒

SPARE GEAR. State the articles supplied:— Two Connecting rods top & bottom end bolts & nuts, two main bearing bolts, one set of coupling bolts, one set of feed & bilge pump valves, iron and bolts of various sizes, one Propeller.

The foregoing is a correct description,

FOR RICHARDSONS, WESTGARTH & CO., LTD

*Richard H. Russell*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1919 April May 2 7 14 23 30 June 11 16 29 July 3 10 18 25 Aug 1 7 11 21 22 31 Sep 3 10 18 25  
During erection on board vessel -- 1919 Jan 26 28 31 Feb 6 13 16 19 Mar 2 4 17 20 24 31 Apr 12 16 20 26 29 30 May 3  
Total No. of visits 47

Is the approved plan of main boiler forwarded herewith No (Judd Vaux)

" " " donkey " " " "

Dates of Examination of principal parts—Cylinders 1-8-19 Slides 18-8-19 Covers 1-8-19 Pistons 18-8-19 Rods 18-7-19

Connecting rods 30-8-19 Crank shaft 2-6-19 Thrust shaft 18-7-19 Tunnel shafts Nil Screw shaft 12-11-19 Propeller 28-1-20

Stern tube 18-2-20 Steam pipes tested 16-2-20, 8-3-20 Engine and boiler seatings 4-3-20 Engines holding down bolts 12-4-20

Completion of pumping arrangements 20-4-20 Boilers fixed 24-3-20 Engines tried under steam 16-4-20

Completion of fitting sea connections 4-3-20 Stern tube 2-3-20 Screw shaft and propeller 17-3-20

Main boiler safety valves adjusted 16-4-20 Thickness of adjusting washers Port boiler P 11, S 5, Star boiler P 9, S 9

Material of Crank shaft Inpt steel Identification Mark on Do. 6081AB Material of Thrust shaft Inpt steel Identification Mark on Do. 2125 E.W.R.

Material of Tunnel shafts None Identification Marks on Do. Material of Screw shafts Scrap iron Identification Marks on Do. 2125 E.W.R.

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 150°F.

Have the requirements of Section 49 of the Rules been complied with

Is this machinery duplicate of a previous case Yes. If so, state name of vessel S.S. Vaux. (Sld rpt N° 27758)

General Remarks (State quality of workmanship, opinions as to class, &c. The Workmanship and Materials

are good. The Machinery has been constructed under Special Survey and is eligible in my opinion for Classification and the record LMC 5, 20

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 5. 20

SUNDERLAND.

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

The amount of Entry Fee ... £ 2 : 0 : 0 When applied for,

Special ... £ 30 : 1 : 0 28.4.20

Donkey Boiler Fee ... £ : : When received,

Travelling Expenses (if any) £ : : 20/5/20

Committee's Minute

Assigned

+ LMC 5.20

CERTIFICATE WRITTEN

*Ed. H. Fuller*

Engineer, Surveyor to Lloyd's Register of Shipping.



© 2021

Lloyd's Register Foundation