

REPORT ON MACHINERY.

No. 28259

Received at London Office

Date of writing Report 19 _____ When handed in at Local Office 23 JAN 1922 Port of SUNDERLAND.
 No. in Survey held at SUNDERLAND. Date, First Survey Feb 23 '21 Last Survey Jan 20 1922
 Reg. Book. _____ (Number of Visits 26)

on the new steel S/S "ANDELLE". Tons { Gross 1832
 Net 992
 Master _____ Built at Sunderland By whom built S.P. Austin & Son Ltd (S/P N° 298) When built 1922
 Engines made at Sunderland By whom made Richardson Westgarth & Co Ltd (N° 2166) when made 1922
 Boilers made at Sunderland By whom made Richardson Westgarth & Co Ltd (N° 2166) when made 1922
 Registered Horse Power _____ Owners Nammandy, Stephens & Co. (S/P) Port belonging to London
 Nom. Horse Power as per Section 28 205 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 20 1/2" 33" 54" Length of Stroke 39" Revs. per minute 70 Dia. of Screw shaft as per rule 11 1/2" Material of screw shaft Steel
 Is the 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
 in the propeller boss yes If the liner is in more than one length are the joints burned no 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 no If two
 liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 4 1/2"

Dia. of Tunnel shaft as per rule 10 3/32" Dia. of Crank shaft journals as per rule 10 85/100" Dia. of Crank pin 11 3/4" Size of Crank webs 22x7" Dia. of thrust shaft under
 collars 11" Dia. of screw 14 1/2" Pitch of Screw 15 1/2" No. of Blades 4 State whether moceable no Total surface 620 sq ft
 No. of Feed pumps 2 Diameter of ditto 2 3/4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 Diameter of ditto 3 1/4" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Donkey Engines 2 Sizes of Pumps 9 1/2 x 10" 5 1/2 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 2 @ 3" In Holds, &c. Forehold - 2 @ 3", Main hold - 2 @ 3"

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump B.P. Is a separate Donkey Suction fitted in Engine room & size yes. 3 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 no
 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 none How are they protected no
 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 no Is it fitted with a watertight door no worked from _____

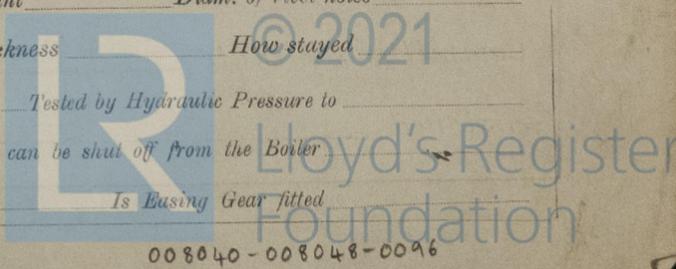
BOILERS, &c.—(Letter for record (S) ✓) Manufacturers of Steel John Spooner & Sons Limited.
 Total Heating Surface of Boilers 3268 sq ft Is Forced Draft fitted no No. and Description of Boilers Two single ended marine
 Working Pressure 180 lbs Tested by hydraulic pressure to 320 Date of test 1-11-21 No. of Certificate 3781

Can each boiler be worked separately yes Area of fire grate in each boiler 43.75 sq ft No. and Description of Safety Valves to
 each boiler two spring loaded Area of each valve 82 sq in Pressure to which they are adjusted 185 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 2'-6" Mean dia. of boilers 13'-3" Length 10'-6" Material of shell plates steel
 Thickness 1 3/32" Range of tensile strength 28-32 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR
 long. seams DBS. TR 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"
 Per centages of strength of longitudinal joint rivets 88.8 Working pressure of shell by rules 181 Size of manhole in steel 16" x 12"
 plate 85.7

Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 plain Material steel Outside diameter 36 1/2"
 Length of plain part top 74 1/2" Thickness of plates crown 7 23/32" Description of longitudinal joint welded No. of strengthening rings none
 bottom 7 3/32" Working pressure of furnace by the rules 194 Combustion chamber plates: Material steel Thickness: Sides 1 1/16" Back 3/16" Top 1 1/16" Bottom 1 3/16"
 Pitch of stays to ditto: Sides 9 5/8" x 8 1/8" Back 9 3/8" x 8" Top 9 5/8" x 9 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 1.73 sq ft Area supported by each stay 75 sq ft Working pressure by rules 202 End plates in steam space:
 Material steel Thickness 1 5/16" Pitch of stays 18 1/2" How are stays secured DN & W Working pressure by rules 182 Material of stays steel
 Area at smallest part 6.10 sq ft Area supported by each stay 342.20 sq ft Working pressure by rules 196 Material of Front plates at bottom steel
 Thickness 7/8" Material of Lower back plate steel Thickness 1 3/16" Greatest pitch of stays 13 1/2" Working pressure of plate by rules 198
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates steel Thickness: Front 7/8" Back 1 3/16" Mean pitch of stays 11"
 Pitch across wide water spaces 14 1/4" Working pressures by rules 185 Girders to Chamber tops: Material steel Depth and
 thickness of girder at centre 9" x 1 1/4" Length as per rule 30.56" Distance apart 9 1/2" Number and pitch of stays in each 2-9 5/8"
 Working pressure by rules 198 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? no

If so, is a report now forwarded? -

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

The foregoing is a correct description,
FOR RICHARDSONS, WESTGARTH & CO., LTD.

Richard Russell

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1921. Feb. 23 June 2. 15. 17 July 12. 20. 27. Sep. 1. Oct 7. 25 Nov. 1. 24. 22. 25 Dec. 6. 12. 13. 21. 22.
{ During erection on board vessel - - - } 1922. Jan. 4. 17. 18. 19. 20.
Total No. of visits 26

Is the approved plan of main boiler forwarded herewith yes
" " " donkey " " " -

Dates of Examination of principal parts—Cylinders 7-10-21 Slides 1-11-21 Covers 25-10-21 Pistons 25-10-21 Rods 7-10-21
Connecting rods 1-11-21 Crank shaft W.H.pl Thrust shaft 14-11-21 Tunnel shafts none Screw shaft 14-11-21 Propeller 18-11-21
Stern tube 8-11-21 Steam pipes tested 25-11-21 Engine and boiler seatings 22-11-21 Engines holding down bolts 13-12-21
Completion of pumping arrangements 20-1-22 Boilers fixed 13-12-21 Engines tried under steam 22-12-21
Completion of fitting sea connections 22-11-21 Stern tube 22-11-21 Screw shaft and propeller 6-12-21
Main boiler safety valves adjusted 17-1-22 Thickness of adjusting washers Port boiler: P 3/8" S 7/16" Starboard boiler: P 7/16" S 3/8"
Material of Crank shaft I. steel Identification Mark on Do. 6017 RPS Material of Thrust shaft I. steel Identification Mark on Do. LLOYD'S NO 2166 14-11-21 L.S.D.
Material of Tunnel shafts none Identification Marks on Do. - Material of Screw shafts dup iron Identification Marks on Do. -
Material of Steam Pipes solid drawn copper Test pressure 400 lbs per square inch

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.)

The materials and workmanship are good.
The machinery has been constructed under special survey and is eligible in my opinion for classification and the record + L M C 1, 2 2

It is submitted that
this vessel is eligible for
THE RECORD. + L. M. C. - 122 C.L.

30/1/22.

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 ... £ 4 : - :
Special ... £ 51 : 5 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 24 JAN 1922
When received, 21. 2. 22

S.C. Davis.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI FEB 3 1922

Assigned

+ L.M.C. 1.22
C.L.

CERTIFICATE WRITTEN



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