

REPORT ON MACHINERY.

Received at London Office

FRI. APR. 23 1920

Date of writing Report 19 When handed in at Local Office 21 APR 1920 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 26 May 1919 Last Survey 14 April 1920
Reg. Book. on the new steel S/S "LOLWORTH" (Number of Visits 32)

Master W Brown Built at Sunderland By whom built Osborne Graham & Co. Ltd (S/S No. 220) When built 1920
Tons Gross 1969 Net 1154

Engines made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd (No. 2225) when made 1920

Boilers made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd (No. 2308) when made 1920

Registered Horse Power Owners John Hudson & Co. Ltd Port belonging to London

Nom. Horse Power as per Section 28 214 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 21. 34. 56 Length of Stroke 39 Revs. per minute 70 Dia. of Screw shaft as per rule 12" Material of screw shaft steel
as fitted 12 1/8" screw shaft

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 - 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 yes If two
liners are fitted, is the shaft lapped or protected between the liners - Length of stern bush "4'-0 1/2"

Dia. of Tunnel shaft as per rule 10 1/2" Dia. of Crank shaft journals as per rule 11.02" Dia. of Crank pin 11 1/8" Size of Crank webs 16 1/2" x 7" Dia. of thrust shaft under
collars 11 1/2" Dia. of screw 15.0" Pitch of Screw 15.9" No. of Blades 4 State whether moveable no Total surface 69 sq ft.

No. of Feed pumps 2 Diameter of ditto 3" Stroke 1.9" Can one be overhauled while the other is at work yes
No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 1.9" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 7 1/2" x 9 1/2" x 10 1/2", 5 1/2" x 8 1/2" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
in Engine Room 4 @ 3" In Holds, &c. Forward hold - 2 @ 3" After hold - 3 @ 3"

Tunnel well 1 @ 3"

No. of Bilge Injections 1 sizes 4" Connected to condenser, or to circulating pump b.p. Is a separate Donkey Suction fitted in Engine room & size yes 3"

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 none How are they protected -

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 yes Is it fitted with a watertight door yes worked from top platform

VALVES, &c.—(Letter for record S.V. Manufacturers of Steel John Spencer & Sons Ltd. 2.S.B.

Total Heating Surface of Boilers 3330 sq ft Is Forced Draft fitted no No. and Description of Boilers two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 6-10-19 No. of Certificate 3614

Can each boiler be worked separately yes Area of fire grate in each boiler 40 1/2 sq ft No. and Description of Safety Valves to
each boiler two direct spring Area of each valve 4.90" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-6" Mean dia. of boilers 13'-6" Length 10'-6" Material of shell plates steel

Thickness 1" Range of tensile strength 29 1/2" - 33 1/2" Are the shell plates welded or flanged no Descrip. of riveting: cir. seams WTR

Long. seams D.B.S. TR Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 19"

Percentages of strength of longitudinal joint rivets 87.86 plate 87.65 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"

Size of compensating ring flanged No. and Description of Furnaces in each boiler 2 Deighton Material steel Outside diameter 41 1/2"

Length of plain part top 3 1/2" bottom 3 1/2" Thickness of plates crown 3 9/16" Description of longitudinal joint welded No. of strengthening rings -

Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 3/4" Back 3/2" Top 3/4" Bottom 15/16"

Pitch of stays to ditto: Sides 11 1/8" x 8 1/2" Back 11" x 10 5/8" Top 11 1/8" x 8 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 2.10" Area supported by each stay 10.10" Working pressure by rules 187 End plates in steam space:

Material steel Thickness 1 3/32" Pitch of stays 23" x 18 1/8" How are stays secured D.N. & W. Working pressure by rules 181 Material of stays steel

Area at smallest part 7.360" Area supported by each stay 4.170" Working pressure by rules 183 Material of Front plates at bottom steel

Thickness 3/4" Material of Lower back plate steel Thickness 15/16" Greatest pitch of stays 14 1/8" x 10 5/8" Working pressure of plate by rules 181

Diameter of tubes 3 1/4" Pitch of tubes 4 3/4" x 4 1/2" Material of tube plates steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10.56

Pitch across wide water spaces 14 1/2" Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and
thickness of girder at centre 8" x 2 1/8" Length as per rule 30 1/2" Distance apart 8 1/2" Number and pitch of stays in each 2 @ 8 1/2"

Working pressure by rules 182 Steam dome: description of joint to shell none % of strength of joint

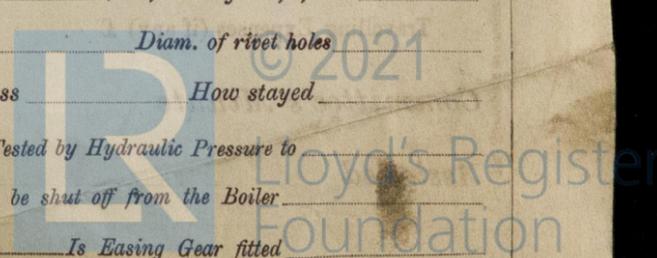
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Number 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 THE NORTH EASTERN MARINE ENGINEERING CO. LD

Geo. D. New Manufacturer.

Dates of Survey while building { During progress of work in shops -- } 1919 May 26, 27, July 7, Aug 12, 26, Sept 22, 24, 29, Oct 6, 12, 20, 21, 24, 28, 29, 30, Nov 12, Dec 2, 16
{ During erection on board vessel -- } Jan 24, Feb 12, 17, 18, 20, 27, Mar 2, 2, 8, 10, Apr 14
Total No. of visits 32 Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts: Cylinders 23-9-19 Slides 12-8-19 Covers 23-9-19 Pistons 26-8-19 Rods 29-9-19
Connecting rods 7-7-19 Crank shaft, NWC Thrust shaft 23-9-19 Tunnel shafts 12-11-19 Screw shaft 20-2-20 Propeller 28-10-19
Stern tube 18-2-20 Steam pipes tested 8-3-20 Engine and boiler seatings 12-2-20 Engines holding down bolts 8-3-20

Completion of pumping arrangements 14-4-20 Boilers fixed 2-3-20 Engines tried under steam 10-3-20
Completion of fitting sea connections 12-2-20 Stern tube 27-2-20 Screw shaft and propeller 27-2-20

Main boiler safety valves adjusted 10-3-20 Thickness of adjusting washers Port holes - both 7/16" steel holes - F 3/8" A 5/16"
Material of Crank shaft 1. steel Identification Mark on Do. 993N.W.C. Material of Thrust shaft 1. steel Identification Mark on Do. 2225 L.S.O.

Material of Tunnel shafts 1. steel Identification Marks on Do. 2225 L.S.O. Material of Screw shafts 1. steel Identification Marks on Do. 2225 L.S.O.
Material of Steam Pipes Lap welded wrought iron Test pressure 540 lbs per sq in

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. 4.20

It is submitted that this vessel is eligible for THE DONKEY + L.M.C. 4.20

well 24/4/20

Geo. D. New A.P.S.

Certificate (if required) to be sent to LLOYD'S REGISTER OF SHIPPING

The amount of Entry Fee ... £ 2 : - : When applied for, 21 APR 1920
Special ... £ 30 : 14 :
Donkey Boiler Fee ... £ : : When received, 20/5/1920
Travelling Expenses (if any) £ : :

S. C. Davis
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. APR. 30 1920
Assigned + L.M.C. 4.20



CERTIFICATE WRITTEN