

Rpt. 4.

REPORT ON MACHINERY.

No. 67897
MON. AUG. 30. 1915

Date of writing Report 17th August 1915 When handed in at Local Office

AUG 28 1915

Received at London Office

No. in Survey held at S. Shields
Reg. Book.

Port of NEWCASTLE-ON-TYNE

on the S. S. "Steelville"

Date, First Survey 7th Oct. 1914 Last Survey 17th August 1915
(Number of Visits 50)

Master Built at S. Shields By whom built John Readhead & Sons Ltd. Tons Gross 3649 Net 2342
 Engines made at S. Shields By whom made John Readhead & Sons Ltd. When built 1915
 Boilers made at S. By whom made John Readhead & Sons Ltd. when made 1915
 Registered Horse Power 332 Owners Balls & Stansfield when made 1915
 Nom. Horse Power as per Section 28 324 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No
 Port belonging to N. Shields

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 24 1/2" - 41" - 66" Length of Stroke 45" Revs. per minute 62 Dia. of Screw shaft as per rule 13.67" Material of screw shaft as fitted 13 3/4" Material of propeller 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 Yes Is 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 Yes Length of stern bush 4'-7"
 Dia. of Tunnel shaft as per rule 12.28" Dia. of Crank shaft journals as per rule 12.9" Dia. of Crank pin 13" Size of Crank webs 17 1/2" x 9" Dia. of thrust shaft under collars 13" Dia. of screw 16'-6" Pitch of Screw 16'-0" No. of Blades 4 State whether moveable No Total surface 78.5 sq ft
 No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4 3/8" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 8" x 8" x 8", 6" x 4" x 6", 4 1/2" x 2 1/2" x 4 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Three 3 1/2" In Holds, &c. Two in each hold 3 1/2", one in tunnel well 2 1/2"
 No. of Bilge Injections 1 sizes 5 1/2" Connected to condenser or to circulating pump Yes 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 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 Yes
 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
 Dates of examination of completion of fitting of Sea Connections 28-6-15 of Stern Tube 28-6-15 Screw shaft and Propeller 8-7-15
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record R.) Manufacturers of Steel J. Spence & Sons
 Total Heating Surface of Boilers 5100 sq ft Is Forced Draft fitted No No. and Description of Boilers Two, single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 17-8-15 No. of Certificate 8789
 Can each boiler be worked separately Yes Area of fire grate in each boiler 60 sq ft No. and Description of Safety Valves to each boiler Two, Spring Area of each valve 7.07 sq in Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes
 Smallest distance between boilers or plates and bunkers or woodwork 2'-6" Mean dia. of boilers 16'-4 1/2" Length 10'-9" Material of shell plates Steel
 Thickness 1 5/16" Range of tensile strength 28-30 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams S. Lap long. seams B.B.S. 7 Rivet Diameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 5/8" Lap of plates or width of butt straps 1'-9 3/4"
 Per centages of strength of longitudinal joint rivets 87.4 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring 7" x 1 5/16" No. and Description of Furnaces in each boiler 3- Brightens Material Steel Outside diameter 4'-0"
 Length of plain part top 5 1/8" Thickness of plates crown 5 1/8" Description of longitudinal joint Welded No. of strengthening rings 1
 Working pressure of furnace by the rules 209 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/16" Back 1/16" Top 1/16" Bottom 1"
 Pitch of stays to ditto: Sides 10" x 9" Back 9 1/2" x 9 1/4" Top 10" x 9" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181 lbs
 Material of stays Iron Area at smallest part 2.31 sq in Area supported by each stay 90 sq in Working pressure by rules 192 lbs End plates in steam space: Material Steel Thickness 1 7/16" Pitch of stays 27" x 19 1/4" How are stays secured S. N. & W. Working pressure by rules 191 lbs Material of stays Steel
 Area at smallest part 9.82 sq in Area supported by each stay 519 sq in Working pressure by rules 196 lbs Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 13" Working pressure of plate by rules 203 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 11 1/2"
 Pitch across wide water spaces 14" Working pressures by rules 187 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/2" x 1 3/4" Length as per rule 27 7/16" Distance apart 10" Number and pitch of stays in each 2-9"
 Working pressure by rules 180 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivets Yes
 Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
 Stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes



Rpt. 5a.

Date of writing

No. in S Reg. Book.

Master

Engines made by

Boilers made by

Registered E

MULTIT

(Letter for

Boilers

No. of Certs

safety valves

Are they fitte

Smallest dis

Material of

Descrip. of

Lap of plat

rules 96

boiler 2

Description of

plates: Mat

Top 10" x 10

smallest par

Pitch of stag

Area suppor

Lower back

Pitch of tub

water spaces

girder at ce

Working pre

separately

holes

If stiffened u

Working pre

Dates of Survey while building

GENER.

conste

four

Survey

Travell

Commit

Assigne

IS A DONKEY BOILER FITTED? *Yes* If so, is a report now forwarded? *Yes*

SPARE GEAR. State the articles supplied:— *Two top-end, two bottom-end & two main-bearing bolts & nuts, one set of coupling bolts, one set of feed & bilge pump valves, a quantity of assorted bolts nuts & iron, a screw shaft & a propeller.*

The foregoing is a correct description,
 For JOHN READHEAD & SONS, LIMITED.

John Readhead Manufacturer.
 DIRECTOR

Dates of Survey while building

1914	During progress of work in shops - - -	Oct 7-13-17, Nov 30, Dec 2-7-18, Jan 5-18-22, Feb 2-8-10-15-17-23, Mar 4-5-16-23-25-26-31
		Apr 12-13-23-28, May 3-10-11-13-14-18-20-28, Jun 4-8-15-17-28-29, Jul 2-8-12-16-20-27, Aug 4-12-16-27
	During erection on board vessel - - -	4-12-16-27
	Total No. of visits	50

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " " *Yes*

Dates of Examination of principal parts—Cylinders 6-1-15 Slides 23-4-15 Covers 12-4-15 Pistons 12-4-15 Rods 13-4-15
 Connecting rods 13-4-15 Crank shaft 17-3-15 Thrust shaft 16-7-15 Tunnel shafts 23-3-15 Screw shaft 28-6-15 Propeller 30-6-15
 Stern tube 18-6-15 Steam pipes tested 16-7-15 Engine and boiler seatings 16-7-15 Engines holding down bolts 20-7-15
 Completion of pumping arrangements 27-7-15 Boilers fixed 4-8-15 Engines tried under steam 27-7-15
 Main boiler safety valves adjusted 27-7-15 Thickness of adjusting washers PB. P 1/4" S 5/16" SB. P 3/8" S 5/16" AB F 3/8" A 3/8"
 Material of Crank shaft *Steel* Identification Mark on Do. *J. A. H. 3-15* Material of Thrust shaft *Steel* Identification Mark on Do. *J. 7-15*
 Material of Tunnel shafts *Seapine* Identification Marks on Do. *J. 3-15* Material of Screw shafts *Seapine* Identification Marks on Do. *J. 8-15*
 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. *Yes*
 Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *S. S. "Headcliffe"*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the safety valves of main & donkey boilers adjusted. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of + LMC 8-15*

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 8. 15.

JWR
 31/8/15
JWR

The amount of Entry Fee ... £ 3 : 0 : 0 When applied for,
 Special ... £ 36 : 4 : 0 AUG 27 1915
 Donkey Boiler Fee ... £ 2 : 2 : 0 When received,
 Travelling Expenses (if any) £ : : 31/8/15 1915 4/9/15

Thomas Field
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. AUG. 31. 1915

Assigned *+ LMC 8. 15*

MAINTAINED CERTIFICATE WRITTEN



Newcastle on Tyne

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