

Rpt. 4.

REPORT ON MACHINERY.

No. 70513

Received at London Office SAT. 15 DEC. 1917

Date of writing Report 16th Nov 1917 When handed in at Local Office 19 Port of NEWCASTLE-ON-TYNE
No. in Survey held at Newcastle Date, First Survey 20th Dec 1916 Last Survey 22nd Nov 1917
Reg. Book. on the S.S. "Faithwaite" (Number of Visits 62)

Master Built at Newcastle By whom built W. Johnson & Co Tons { Gross 5659
Not 3609
When built 1917

Engines made at Newcastle By whom made H. E. Maine Eng Co 2284 when made 1917

Boilers made at do By whom made do when made 1917

Registered Horse Power Owners W. Faithwaite Port belonging to London

Nom. Horse Power as per Section 28 465 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Simple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 26" 43" 72" Length of Stroke 48 Revs. per minute 70 Dia. of Screw shaft as per rule 14.61" Material of Iron
as fitted 15" 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 yes 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 yes Length of stern bush 5' 6"

Dia. of Tunnel shaft as per rule 13.05" Dia. of Crank shaft journals as per rule 13.7" Dia. of Crank pin 13.7" Size of Crank webs 21" x 8 3/4" Dia. of thrust shaft under

collars 13 3/8" Dia. of screw 17' 9" Pitch of Screw 17' 9" No. of Blades 4 State whether moveable no Total surface 96 sq

No. of Feed pumps 2 Diameter of ditto 4" Stroke 26" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 26" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 6" x 8" x 8" + 7 1/2" x 5" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Three 3 1/2" In Holds, &c. No 1 hold 2-3 1/2" No 2 hold 2-3 1/2"

No. of Bilge Injections 1 sizes 8" 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 Both

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 Hold sections 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

Dates of examination of completion of fitting of Sea Connections 24.8.17 of Stern Tube 24.8.17 Screw shaft and Propeller 11.10.17

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Top platform

BOILERS, &c.—(Letter for record 5) Manufacturers of Steel John Spence & Sons

Total Heating Surface of Boilers 6551 sq Is Forced Draft fitted yes No. and Description of Boilers 3- Single-ended

Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 1.10.17 No. of Certificate 9005

Can each boiler be worked separately yes Area of fire grate in each boiler 49.5 sq No. and Description of Safety Valves to

each boiler Two, Spring Area of each valve 8.3 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers uptakes and bunkers or woodwork 8 ft Mean dia. of boilers 14' 0 1/2" Length 11' 6" Material of shell plates Steel

Thickness 1 3/32" Range of tensile strength 29 3/4 - 33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 8. Lap

long. seams 8.5. L. Riv Diameter of rivet holes in long. seams 1 3/4" Pitch of rivets 8 3/4" Lap of plates on width of butt straps 18"

Per-centages of strength of longitudinal joint rivets 86.7 Working pressure of shell by rules 185 lbs Size of manhole in shell 16" x 12"

Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3- Slightons Material Steel Outside diameter 40"

Length of plain part top 1" Thickness of plates crown 1 1/2" Description of longitudinal joint Welded No. of strengthening rings yes

Working pressure of furnace by the rules 185 Combustion chamber plates; Material Steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 7/8"

Pitch of stays to ditto: Sides 10 1/2" x 9 3/8" Back 10 1/2" x 9 3/8" Top 10 1/2" x 9 3/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs

Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 98.4 sq Working pressure by rules 185 lbs End plates in steam space:

Material Steel Thickness 1 3/8" Pitch of stays 24" x 19 3/4" How are stays secured on. w. Working pressure by rules 185 lbs Material of stays Steel

Diameter at smallest part 8.29" Area supported by each stay 474 sq Working pressure by rules 181 lbs Material of Front plates at bottom Steel

Thickness 1" Material of Lower back plate Steel Thickness 29/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 182 lbs

Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 7 1/2"

Pitch across wide water spaces 14 1/2" Working pressures by rules 180 lbs Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 8 3/4" x 1 3/4" Length as per rule 33" Distance apart 9 3/8" Number and pitch of stays in each 2-10 1/2"

Working pressure by rules 185 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 rivet

holes yes Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes

If 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

If not, state whether, and when, one will be sent?

In a Report also sent on the Hull of the Ship?

VERTICAL DONKEY BOILER— ~~Manufacturers of Steel~~ *Kone*

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

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

The foregoing is a correct description,
 FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD. Manufacturer.

Dates of Survey while building _____
 During progress of work in shops -- 31. Jan. 19. 22. 25. Feb. 2. 5. 6. 10. 12. 25. 31. Aug. 2. 3. 8. 9. 10. 15. 16. 20. 21. 23. 24. 28. 29. 30. Sep. 1. 4. 8. 11. 12.
 During erection on board vessel -- 13. 17. 20. 21. 25. 26. 28. Oct. 1. 5. 8. 10. 11. 17. 19. 30. Nov. 1. 6. 9. 22.
 Total No. of visits 62

Is the approved plan of main boiler forwarded herewith *yes*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 1-10-17 Slides 17-9-17 Covers 29-8-17 Pistons 28-8-17 Rods 28-8-17
 Connecting rods 28-8-17 Crank shaft 23-8-17 Thrust shaft 10-7-17 Tunnel shafts 7-9-17 Screw shaft 6-9-17 Propeller 21-9-17
 Stern tube 26-6-17 Steam pipes tested 20-4-17 Engine and boiler seatings 8-10-17 Engines holding down bolts 30-10-17
 Completion of pumping arrangements 9-11-17 Boilers fixed 30-10-17 Engines tried under steam 9-11-17
 Main boiler safety valves adjusted 9-11-17 Thickness of adjusting washers PB. $P \frac{5}{32} S \frac{1}{2}$. CB. $P \frac{3}{8} S \frac{11}{32}$. SB. $P \frac{3}{8} S \frac{3}{8}$
 Material of Crank shaft *Steel* Identification Mark on Do. *L.H. 8-17* Material of Thrust shaft *Steel* Identification Mark on Do. *L.H. 7-17*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *L.H. 9-17* Material of Screw shafts *Iron* Identification Marks on Do. *L.H. 9-17*
 Material of Steam Pipes *Iron* Test pressure 540 lbs

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 & good. The engines have been tried under steam and the boiler safety valves adjusted at the working pressure. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of +LMC 11-17*

A report on the electric installation will be forwarded when received from the Electricians.
The vessel has been fitted for carrying oil fuel in double bottom F.P. above 150° F.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 11.17. F.D.

The amount of Entry Fee .. £ 3 : 0 : 0 When applied for, 13 DEC 1917
 Special £ 43 : 5 : 0
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : : 19.3.1918 20.3.18

Committee's Minute

FRI. DEC. 21 1917.

Assigned

+ LMC 11.17

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



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 Foundation

MARINERY 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.)