

REPORT ON MACHINERY

No. 70407

MON. 5-NOV. 1917

Received at London Office

of writing Report 27th Oct 1917 When handed in at Local Office 10 Port of Newcastle-on-Tyne
 in Survey held at Newcastle Date, First Survey 18 Sept 1917 Last Survey 26th Oct 1917
 g. Book. on the "Hallsend" (Number of Vents 77)
 ater Built at Newcastle By whom built Wood Skinner & Co Tons { Gross 2687
 gines made at Newcastle By whom made H. E. Marine Eng Co No. 2275 when made 1917
 ilers made at do By whom made do when made 1917
 gistered Horse Power 295 Owners Burnett Steamship Co Ltd Port belonging to Newcastle
 m. Horse Power as per Section 28 295 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no
 GINES, &c. — Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3
 s. of Cylinders 22 1/2" - 37" - 61" Length of Stroke 42" Revs. per minute 74 Dia. of Screw shaft as per rule 12.28" Material of Iron
 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
 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
 open 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 5'-0"
 a. of Tunnel shaft as per rule 11.31" Dia. of Crank shaft journals as per rule 11.87" Dia. of Crank pin 12" Size of Crank webs 19 x 7 1/2" Dia. of thrust shaft under
 ars 12" Dia. of screw 15'-9" Pitch of Screw 15'-9" No. of Blades 4 State whether moveable no Total surface 74 sq
 of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 21" Can one be overhauled while the other is at work yes
 of Donkey Engines 3 Sizes of Pumps 8" x 10" x 10", 8" x 10" x 10", 7 1/2" x 5" x 1" No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room Two - 3" In Holds, &c. fore hold 2.3" after hold 2.3"
 Hold well 1-3" Lateral well 1-2 1/2"
 of Bilge Injections 7 sizes 7" Connected to condenser or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 2.3"
 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
 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
 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
 at pipes are carried through the bunkers Suctions to fore hold How are they protected Wood casing
 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
 s. of examination of completion of fitting of Sea Connections 27.7.17 of Stern Tube 8.8.17 Screw shaft and Propeller 13.9.17
 the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Lap platform
 LERS, &c. — (Letter for record S) Manufacturers of Steel Spencer & Sons
 al Heating Surface of Boilers 5016 sq 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 17.10.17 No. of Certificates 1-8955-17
 each boiler be worked separately yes Area of fire grate in each boiler 71.5 sq No. and Description of Safety Valves to
 boiler Two, Spring Area of each valve 8.29 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes
 smallest distance between boilers or uptakes and bunkers or woodwork 5'-0" Mean dia. of boilers 16'-0 1/4" Length 11'-0" Material of shell plates Steel
 thickness 1 1/32" Range of tensile strength 29 3/4 - 33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 8. Lap
 seams ABS & Riv Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 8 15/16" Lap of plates or width of butt straps 19"
 percentages of strength of longitudinal joint 88 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 of compensating ring McNeil's No. and Description of Furnaces in each boiler 4 - Light's Material Steel Outside diameter 43"
 th of plain part top 17 1/32" Thickness of plates bottom 17 1/32" Description of longitudinal joint Welded No. of strengthening rings no
 Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 23 1/32" Back 23 1/32" Top 23 1/32" Bottom 15 1/16"
 h 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
 erial of stays Steel Diameter at smallest part 2.03" Area supported by each stay 98 sq Working pressure by rules 185 lbs End plates in steam space:
 erial Steel Thickness 1 1/16" Pitch of stays 26 3/8" x 24" How are stays secured 3. N. W. Working pressure by rules 181 lbs Material of stays Steel
 eter at smallest part 11.04" Area supported by each stay 633 sq Working pressure by rules 181 lbs Material of Front plates at bottom Steel
 tness 1" Material of Lower back plate Steel Thickness 29 1/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 190 lbs
 eter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 1" Back 13 1/16" Mean pitch of stays 8 7/8"
 across wide water spaces 14 1/2" Working pressures by rules 190 lbs Girders to Chamber tops: Material Steel Depth and
 cess of girder at centre 9" x 1 1/2" 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 186 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked
 tely yes Diameter yes Length yes Thickness of shell plates yes Material yes Description of longitudinal joint yes Diam. of rivet
 Pitch of rivets yes Working pressure of shell by rules yes Diameter of flue yes Material of flue plates yes Thickness yes
 fened 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

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, a set of coupling bolts, a set of feed & bilge pump valves, a set of springs for L.P. piston, one H.P. piston spring, a quantity of assorted bolts nuts & rivets, a propeller, five condenser tubes.

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 -- 1916
During erection on board vessel --- 1917
Total No. of visits 79

Dates of Examination of principal parts—Cylinders 5.3.17 Slides 5.3.17 Covers 7.3.17 Pistons 3.3.17 Rods 7.6.17
Connecting rods 7.6.17 Crank shaft 14.3.17 Thrust shaft 26.11.16 Tunnel shafts 29.3.17 Screw shaft 20.12.16 Propeller 21.2.17
Stern tube 19.1.17 Steam pipes tested 24.9.17 Engine and boiler seatings 13.9.17 Engines holding down bolts 25.9.17
Completion of pumping arrangements 27.9.17 Boilers fixed 25.9.17 Engines tried under steam 27.9.17
Main boiler safety valves adjusted 27.9.17 Thickness of adjusting washers P.B. $P\frac{7}{16}$ $S\frac{7}{16}$ S.B. $P\frac{7}{16}$ $S\frac{7}{16}$ H.B. $P\frac{7}{16}$ $S\frac{7}{16}$
Material of Crank shaft *Steel* Identification Mark on Do. *Y.Y.* 3.17 Material of Thrust shaft *Steel* Identification Mark on Do. *Y.Y.*
Material of Tunnel shafts *Iron* Identification Marks on Do. *Y.Y.* 3.17 Material of Screw shafts *Iron* Identification Marks on Do. *Y.Y.*
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. "Buenhope"*

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 and 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 10.17

It is submitted that
this vessel is eligible for
THE RECORD + LMC 10.17

The amount of Entry Fee ... £ 2 0 0

Special ... £ 34 15 0

Donkey Boiler Fee ... £ 1 0 0

Travelling Expenses (if any) £

When applied for.

3 NOV 1917

When received.

6 NOV 1917

Committee's Minute

Assigned

TUE 6 NOV 1917

+ LMC 10.17

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

Survey Fee

Travelling Expenses (if any)

Committee's Minute

Signed

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Foundation