

Received at London Office

Date of writing Report 2nd August 1917 When handed in at Local Office 8 AUG 1917 Port of Newcastle-on-TyneNo. in Survey held at Newcastle Date, First Survey 15th Aug 1916 Last Survey 1st August 1917
Reg. Book. (Number of Volls 74)on the S.S. "Burnhope" Tons Gross 2683 Net 1602
Master Built at Newcastle By whom built Wood Skinner & Co When built 1917

Engines made at Newcastle By whom made H. E. Molineux & Co No 2274 when made 1917

Boilers made at Newcastle By whom made H. E. Molineux & Co when made 1917

Registered Horse Power Owners Burnett Steamship Co Ltd Port belonging to Newcastle

Nom. Horse Power as per Section 28 295 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Simple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 22½" 37" 61" Length of Stroke 42" Revs. per minute 74 Dia. of Screw shaft as per rule 12.78" Material of screw shaft as fitted 13" 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'-0"
 Dia. 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 7½" Dia. of thrust shaft under collars 12" Dia. of screw 15'-9" Pitch of Screw 15'-9" No. of Blades 4 State whether moveable No Total surface 74 ft²
 No. of Feed pumps 2 Diameter of ditto 3½" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 3½" Stroke 21" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 3 Sizes of Pumps 8" x 10" x 10", 8" x 10" x 10", 7½" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room Two 3" In Holds, &c. Fore hold 2.3" After hold 2.3"
 Hold Well 1.3" Tunnel Well 1.2½"
 No. of Bilge Injections 1 sizes 7" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 2.3"
 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 Suctions to fore hold 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 4.5.17 of Stern Tube 14.6.17 Screw shaft and Propeller 14.6.17
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. Spence & Sons
 Total Heating Surface of Boilers 5016 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 26.2.17 No. of Certificate 8937
 Can each boiler be worked separately Yes Area of fire grate in each boiler 71.5 ft² No. and Description of Safety Valves to each boiler Two, spring Area of each valve 8.29 sq in 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" Length 11'-0" Material of shell plates Steel
 Thickness 17/32" Range of tensile strength 29¾ - 33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Lap long. seams H.S. & Rivet Diameter of rivet holes in long. seams 19/32" Pitch of rivets 8 15/16" Lap of plates or width of butt straps 19"
 Per centages of strength of longitudinal joint rivets 88 plate 85.6 Working pressure of shell by rules 181 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring M. hole No. and Description of Furnaces in each boiler 4 - Heighston Material Steel Outside diameter 43"
 Length of plain part top 17/32" Thickness of plates crown 17/32" Description of longitudinal joint Welded No. of strengthening rings
 bottom 17/32" Working pressure of furnace by the rules 185 lbs Combustion chamber plates: Material Steel Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 15/16"
 Pitch of stays to ditto: Sides 10½" x 9¾" Back 10½" x 9¾" Top 10½" x 9¾" 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 sq in Working pressure by rules 185 lbs End plates in steam space:
 Material Steel Thickness 19/16" Pitch of stays 26¾" x 24" How are stays secured M. & W. Working pressure by rules 181 lbs Material of stays Steel
 Diameter at smallest part 11.04" Area supported by each stay 633 sq in 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 14½" Working pressure of plate by rules 190 lbs
 Diameter of tubes 3¼" Pitch of tubes 4½" x 4¾" Material of tube plates Steel Thickness: Front 1" Back 13/16" Mean pitch of stays 8½"
 Pitch across wide water spaces 14½" Working pressures by rules 190 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 9" x 1½" Length as per rule 33 Distance apart 9¾" Number and pitch of stays in each 7-10½"
 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 separately
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

IS A DONKEY BOILER FITTED? *yes*

If so, is a report now forwarded? *yes*

Rpt. 5b.

SPARE GEAR. State the articles supplied:—

Two top end, two bottom end & two main beam bolts & nuts, one set of coupling bolts, one set of feed & bilge pump valves, a set of coach springs for L.P. piston, one H.P. piston spring, a quantity of assorted bolts nuts and washers, 5 condenser tubes & propeller.

The foregoing is a correct description,

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

J. J. Harrison

Manufacturer.

Dates of Survey while building

During progress of work in shops --
During erection on board vessel --
Total No. of visits

Aug 15, Sep 6, 19, 20, 25, 29, Oct 3, 4, 6, 10, 13, 16, 18, 19, 20, 23, 26, 27, 30, Nov 2, 9, 10, 13, 15, 16, 22, 24, 27, Dec 1, 7, 11, 12, 13, 18, 21, 22, 27, 1917 Jan 3, 4, 11, 12, 19, 25, 29, Feb 2, 5, 8, 13, 15, 19, 22, Mar 5, 7, 14, 15, 28, 29, Apr 26, 27, May 3, 4, 16, 22, 31, Jun 4, 13, 14, 16, Jul 3, 17, 27, Aug 1, 7, 1917

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

" " " donkey " " " *yes*

Dates of Examination of principal parts—Cylinders 2.2.17 Slides 2.2.17 Covers 6.10.16 Pistons 2.11.16 Rods 16.11.16
Connecting rods 16.11.16 Crank shaft 29.1.17 Thrust shaft 13.11.16 Tunnel shafts 29.3.17 Screw shaft 13.12.16 Propeller 26.1.17
Stern tube 7.3.17 Steam pipes tested 13.6.17 Engine and boiler seatings 4.5.17 Engines holding down bolts 16.6.17
Completion of pumping arrangements 16.6.17 Boilers fixed 16.6.17 Engines tried under steam 16.6.17
Main boiler safety valves adjusted 16.6.17 Thickness of adjusting washers P.B. $P\frac{7}{16}$ S $S\frac{7}{16}$ S.B. $P\frac{7}{16}$ S $S\frac{3}{8}$

Material of Crank shaft *Steel* Identification Mark on Do. *S X 1-17* Material of Thrust shaft *Steel* Identification Mark on Do. *S X 11-16*

Material of Tunnel shafts *Iron* Identification Marks on Do. *S X 3-17* Material of Screw shafts *Iron* Identification Marks on Do. *S X 12-16*

Material of Steam Pipes *Copper* Test pressure *360 lbs*

Is an installation fitted for burning oil fuel *not* 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 *no* If so, state name of vessel *yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers of this vessel have been constructed under special survey & the materials and 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 our opinion to have the notation of +LMC 8-17.*

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 8-17.

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,
8 - AUG 1917

When received,
11/8/17

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

Committee's Minute

Assigned

+ LMC 8-17

MACHINERY CERTIFICATE
WRITTEN



© 2020
Lloyd's Register
Foundation

Date of writing
No. in Survey
Reg. Book.
on the

Master
Boilers made at
Owners

VERTICAL

Made at

tested by hydraulic

No. of safety valves

enter the donkey boiler

strength *28*

Lap of plating *H*

Radius of do. *36*

Thickness of furnace

plates *1/2*

Thickness of water

Dates of Survey while building
work in shops
During board
Total

GENERAL

in good
See

Survey required

No. *C1460*

Survey Fee
Travelling Exp

Committee's
Assigned