

Received at London Office

Date of writing Report 3rd July 1917 When handed in at Local Office 4th July 1917 Port of Sunderland
 No. in Survey held at Sunderland Date First Survey 22nd Apr '15 Last Survey 6th July 1917
 Reg. Book 145 (Number of Visits 43)
 Master W. Shephard Built at Sunderland By whom built Sunderland S.S. Co. Ltd. When built 1917
 Engines made at Sunderland By whom made North Eastern Marine Eng. Co. Ltd. When made 1917
 Boilers made at " By whom made " when made 1917
 Registered Horse Power " Owners Admiral S.S. Co. Ltd. Port belonging to Aberdeen
 Nom. Horse Power as per Section 28 371 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 25" 42" 69" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft 1 1/2" Material of screw shaft Steel
 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 4'-10 1/2"
 Dia. of Tunnel shaft 12.75" Dia. of Crank shaft journals 13.39" Dia. of Crank pin 1 3/4" Size of Crank webs 20 x 8 1/4" Dia. of thrust shaft under collars 1 3/4" Dia. of screw 1 1/2" Pitch of Screw 17'-6" No. of Blades 4 State whether moceable no Total surface 94.5
 No. of Feed pumps 2 Diameter of ditto 3 3/4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines 2 Sizes of Pumps 7' x 9' x 9' 2' x 4' x 6' No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room 3 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each hold
 No. of Bilge Injections 1 sizes 6 1/2" Connected to condenser, or to circulating pump pumps 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 8/5/17 of Stern Tube 21/5/17 Screw shaft and Propeller 21/5/17
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from top platform

BOILERS, &c.—(Letter for record 18) Manufacturers of Steel J. Spencer & Sons
 Total Heating Surface of Boilers 5892 Is Forced Draft fitted No No. and Description of Boilers 2 Single-ended
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 2/2/17 No. of Certificate 3381
 Can each boiler be worked separately Yes Area of fire grate in each boiler 70.5 No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 4.06 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 20" Mean dia. of boilers 16'-9 1/2" Length 11'-6" Material of shell plates Steel
 Thickness 1 1/4" Range of tensile strength 2978-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.L. long. seams T.R.D.Bs Diameter of rivet holes in long. seams 1 5/16" Pitch of rivets 9 3/8" Lap of plates or width of butt straps 19 1/2"
 Per centages of strength of longitudinal joint rivets 85.86 plate 86.0 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring flanges No. and Description of Furnaces in each boiler 3 Dightons Material Steel Outside diameter 50 1/2"
 Length of plain part top 3 1/4" Thickness of plates crown 3 1/4" bottom 3 1/4" Description of longitudinal joint welded No. of strengthening rings Yes
 Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 1 3/16" Back 2 5/32" Top 1 3/16" Bottom 1"
 Pitch of stays to ditto: Sides 1 3/4" x 8 3/4" Back 1 1/4" x 11 1/4" Top 1 3/4" x 8 3/4" stays are fitted with nuts or riveted heads nuts Working pressure by rules 180 lbs
 Material of stays Steel Diameter at smallest part 2.79 Area supported by each stay 139 Working pressure by rules 180 lbs End plates in steam space: Material Steel Thickness 1 1/2" Pitch of stays 25' x 23 5/8" How are stays secured DN & W. Working pressure by rules 180 lbs Material of stays Steel
 Diameter at smallest part 1.32 Area supported by each stay 590 Working pressure by rules 182 lbs Material of Front plates at bottom Steel
 Thickness 3/4" Material of Lower back plate Steel Thickness 1 5/16" Greatest pitch of stays 14 1/2" x 11 1/4" Working pressure of plate by rules 180 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/8" x 4 1/8" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 10.44"
 Pitch across wide water spaces 14 1/2" Working pressures by rules 185 lbs Girders, to Chamber tops: Material Steel Depth and thickness of girder at centre 8 5/8" x 2 1/4" Length as per rule 32" Distance apart 13 1/4" Number and pitch of stays in each 2 of 8 3/4"
 Working pressure by rules 180.5 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

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IS A DONKEY BOILER FITTED? Yes

If so, is a report now forwarded? Yes

SPARE GEAR. State the articles supplied:—

Two top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, a quantity of assorted bolts nuts & iron, propeller, propeller shaft & minor parts

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

Geo D Weir

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1915 Apr 22 1916 Mar 20 Apr 11 Sep 25 Oct 12 20 Dec 11 Jan 4 9 24 25 Feb 2 Mar 17 19 22 23 28 Apr 2 5 12
During erection on board vessel - - - 18 17 18 19 20 24 27 28 30 May 1 2 4 7 8 9 15 21 June 12 14 26 29 July 6
Total No. of visits (43) Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 2/5/17 Slides 19/4/17 Covers 22/3/17 Pistons 9/5/17 Rods 24/4/17
Connecting rods 19/3/17 Crank shaft 30/4/17 Thrust shaft 5/4/17 Tunnel shafts 15/5/17 Screw shaft 18/4/17 Propeller 7/5/17
Stern tube 9/5/17 Steam pipes tested 4/5, 12/6/17 Engine and boiler seatings 8/5/17 Engines holding down bolts 12/6/17
Completion of pumping arrangements 29/6/17 Boilers fixed 12/6/17 Engines tried under steam 19/6/17
Main boiler safety valves adjusted 19/6/17 Thickness of adjusting washers P. A 3/8" F. 1/2" S. A 3/8" F. 3/8"

Material of Crank shaft Steel Identification Mark on Do. 1/5/17 Material of Thrust shaft Steel Identification Mark on Do. 1/5/17
Material of Tunnel shafts Steel Identification Marks on Do. 15/5/17 Material of Screw shafts Steel Identification Marks on Do. 1/5/17
Material of Steam Pipes Lap welded steel Test pressure 540 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 No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been built under special survey, the materials used are good, and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under full power. In my opinion this vessel is eligible for the record of L.M.C. 7, 17.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 7. 17.

GRK

JWD
12/7/17

The amount of Entry Fee ... £ 3 : :
Special ... £ 38 : 11 :
Donkey Boiler Fee ... £ : :
Traveling Expenses (if any) £ : :
When applied for: 9 JUL 1917
When received: 26 7/17

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

Committee's Minute FRI. 13 JUL. 1917

Assigned L.M.C. 7. 17

MACHINERY CERTIFICATE
WRITTEN.



SUNDERLAND.

The Surveyors are requested not to write on or below the space for Committee's Minutes.

Rpt. 5a.
Date of writing
No. in Reg. Book.
Master
Engines made
Donkey Boilers made
Registered
MULTI
Letter for
Boilers
No. of Cert
Safety valve
Are they fit
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