

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 Subn the Machinery of the S.S. Aberedon (Number of Visits 43 Gross 4372 Net 2692)
 Master W. Shephard Built at Sunderland By whom built Sunderland S.B. 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 Adams S.S. Co. Ltd. Port belonging to Aberedon
 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

TripleNo. of Cylinders 3No. of Cranks 3

Dia. of Cylinders 25", 42", 69" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft as per rule 14.35 Material of steel
 as fitted 14.12 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 4'-10 1/2"

Dia. of Tunnel shaft as per rule 12.75 Dia. of Crank shaft journals as per rule 13.39 Dia. of Crank pin 13 1/2" Size of Crank webs 20" x 8 1/4" Dia. of thrust shaft under

collars 13 1/2" Dia. of screw 17'-6" Pitch of Screw 17'-6" No. of Blades 4 State whether moveable 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

4 of 3 1/2" in tunnel well.

No. of Bilge Injections 1 sizes 6 1/2" Connected to condenser, or to circulating pump pump 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. & S. 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 7.06 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.B. 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 85-86 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 Doughtons Material Steel Outside diameter 50 1/2"

Length of plain part top Thickness of plates 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 25 1/2" How are stays secured D.N. & W. Working pressure by rules 180 lbs Material of stays Steel

Diameter at smallest part 10.32 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 180.4 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

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 21 Dec 11 Jan 4 9 24 25 Feb 2 Mar 17 19 22 23 28 Apr 3 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 19 26 29 July 6
Total No. of visits (43)

Is the approved plan of main boiler forwarded herewith

Yes

" " " Donkey " " " " " " " "

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

Charles Cooper

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

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

Committee's Minute FRI 13 JUL 1917

Assigned L.M.C. 7. 17

MACHINERY CERTIFICATE WRITTEN



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