

REPORT ON MACHINERY.

No. 67318
SAT. MAR. 27. 1915

Date of writing Report 22nd March 1915 When handed in at Local Office MAR 25 1915 Port of NEWCASTLE-ON-TYNE
Received at London Office

No. in Survey held at Newcastle Date, First Survey May 29. 1914 Last Survey Mar 11. 1915
Reg. Bogn.

Sup on the Machinery of S.S. "Bronze Wings" (Number of Vessels 1)
Master J. Rose Built at Newcastle By whom built Northumberland S.S. Co. When built 1914
Gross Tons 3862
Net Tons 2412

Engines made at Newcastle By whom made North Eastern Marine Eng. when made 1915
Boilers made at " By whom made " when made 1915

Registered Horse Power " Owners Wing S.S. Co. Ltd. Port belonging to London

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" 41" 69" Length of Stroke 48" Revs. per minute 62 Dia. of Screw shaft as per rule 14.21" as fitted 14.58" Material of 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 Yes
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 Yes
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If two Yes
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 12.9" as fitted 13" Dia. of Crank shaft journals as per rule 13.33" as fitted 13.98" Dia. of Crank pin 13.58" Size of Crank webs 2 1/4" X 8 1/4" Dia. of thrust shaft under collars 13.58" Dia. of screw 17'-3" Pitch of Screw 18'-3" No. of Blades 4 State whether moveable no Total surface 92.5

No. of Feed pumps 2 Diameter of ditto 3 3/4" 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 9" X 12" X 10" & 2 of 7 1/2" X 4 1/2" X 6" No. and size of Suctions connected to both Bilge and Donkey pumps 2 of 3 1/2" in each hold
In Engine Room 4 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each hold

No. of Bilge Injections 1 size 7" Connected to condenser, or to circulating pump no 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 no
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
That 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 12/11/14 of Stern Tube 12/11/14 Screw shaft and Propeller 26/1/15
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. & S. Spencer & Sons
Total Heating Surface of Boilers 5895 Is Forced Draft fitted no No. and Description of Boilers 3 Single-ended
Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 27/11/14 No. of Certificate 8733
Can each boiler be worked separately Yes Area of fire grate in each boiler 53.33 No. and Description of Safety Valves to each boiler 2 direct spring Area of each valve 5.94 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 4'-3" Mean dia. of boilers 13'-9 1/2" Length 10'-9" Material of shell plates Steel
Thickness 1 3/32" Range of tensile strength 28 3/4" - 32" Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. laps
eg. seams 7 r. d. butts Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 3/4" Lap of plates or width of butt straps 17 3/4"
Percentages of strength of longitudinal joint rivets 86.7 plate 86.4 Working pressure of shell by rules 182 lbs Size of manhole in shell 16" X 12"
Use of compensating ring flanged No. and Description of Furnaces in each boiler 3 Morison's Material Steel Outside diameter 41 1/2"
Length of plain part top bottom Thickness of plates top bottom 1/2" Description of longitudinal joint welded No. of strengthening rings Yes
Working pressure of furnace by the rules 182 lbs Combustion chamber plates: Material Steel Thickness: Sides 2 3/32" Back 2 3/32" Top 2 3/32" Bottom 2 9/32"
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 180.5 lbs
Material of stays Steel Diameter at smallest part 2.03 Area supported by each stay 98.3 Working pressure by rules 185 lbs End plates in steam space: Are
Material Steel Thickness 1 3/8" Pitch of stays 24" X 19 3/4" How are stays secured d. n. g. w. Working pressure by rules 185 lbs Material of stays Steel
Diameter at smallest part 8.29 Area supported by each stay 474 Working pressure by rules 182 lbs Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 2 9/32" Greatest pitch of stays 14 1/2" X 9 3/8" Working pressure of plate by rules 190 lbs
Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 8 3/4"
Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and Are
Thickness of girder at centre 9 3/8" X 1 1/2" Length as per rule 31" Distance apart 10 1/2" Number and pitch of stays in each 2 of 9 3/8"
Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked Are
separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet Yes
Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes
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? *No*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied

Two top end & 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, 1 piston rod, 1 pair top end & 1 pair bottom end bearings, eccentric sheave & strap, 2 valve spindles, air & circulating pump rods & minor details.

The foregoing is a correct description,

NORTH EASTERN MARINE ENGINEERING Co., LTD.

J. J. Jamison Manufacturer.
Secretary.

Dates of Survey while building: During progress of work in shops - - *1914 May 24 July 24, 30 Aug 5, 7, 11, 14, 17, 19, 20, 21. Sep 1, 2, 4, 17, 24 Oct 13, 16, 19, 22, 26*
During erection on board vessel - - - *Nov. 2, 5, 6, 9, 10, 11, 12, 18, 23, 25, 27. Dec 2, 9, 11, 23. 1915 Jan 26, 29 Feb 7, 11*
Total No. of visits *41* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts - Cylinders *23/11/14* Slides *2/11/14* Covers *1/9/14* Pistons *29/10/14* Rods *29/5/14*
Connecting rods *29/5/14* Crank shaft *25/9/14* Thrust shaft *29/7/14* Tunnel shafts *29/7/14* Screw shaft *19/9/14* Propeller *6/11/14*
Stern tube *22/10/14* Steam pipes tested *19/8/14* Engine and boiler seatings *12/11/14* Engines holding down bolts *11/2/15*
Completion of pumping arrangements *17/2/15* Boilers fixed *11/2/15* Engines tried under steam *17/2/15*
Main boiler safety valves adjusted *17/2/15* Thickness of adjusting washers *PP 7/16" S 7/16" CP 1/2" S 1/4" S P 9/16" S 9/16"*
Material of Crank shaft *steel* Identification Mark on Do. *8/11/14* Material of Thrust shaft *steel* Identification Mark on Do. *30/7/14*
Material of Tunnel shafts *steel* Identification Marks on Do. *29/9/14* Material of Screw shafts *steel* Identification Marks on Do. *26/10/14*
Material of Steam Pipes *lap welded iron* 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 *Yes* If so, state name of vessel *P.S. "Elfland"*

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 the vessel is eligible for the record of LMC 3.15

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.15

M. J. J. Jamison
30.3.15

The amount of Entry Fee *W* £ *3.0*
Special £ *38.11*
Donkey Boiler Fee £
Travelling Expenses (if any) £
When applied for, **MAR 25 1915**
When received, *6 Apr 1915 6/4/15*

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

Committee's Minute *TUE. MAR. 30. 1915*
Assigned *+ LMC 3.15*



NEWCASTLE-ON-TYNE

Vertical text on the left margin: The Surveys are compulsory and not to be written on or below the space for Committee's Minute.