

Rpt. 4.

REPORT ON MACHINERY

No. 25983

FRI. FEB. 13. 1914

Received at London Office

TUE. JAN. 20. 1914

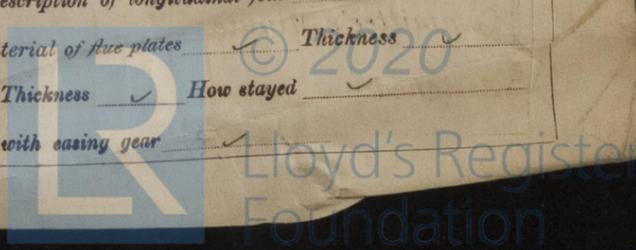
Date of writing Report Feb. 11 1914 When handed in at Local Office 19.1.14 Port of Sunderland
 No. in Survey held at Sunderland Date, First Survey 20 August Last Survey 2 Feb 1914
 Reg. Book. 522 of the New Steel S.S. Elsdon Tons Gross 1522 Net 805
 Master J.L. Kelly Built at Blyth By whom built Blyth S.S. Coy. Ltd. 1915 When built 1913-14
 Engines made at Sunderland By whom made North Eastern Marine Eng. Coy. Ltd. when made 1914
 Boilers made at Sunderland By whom made North Eastern Marine Eng. Coy. Ltd. when made 1914
 Registered Horse Power _____ Owners Sharp & Co. Ltd. Port belonging to Newcastle
 Nom. Horse Power as per Section 28 224 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion ✓ No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 20" x 30" x 54" Length of Stroke 36 Revs. per minute 75 Dia. of Screw shaft as per rule 11.9" Material of screw shaft Steel
 as fitted 12.1"
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no 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 ✓ 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 ✓
 If two liners are fitted, is the shaft lapped or protected between the liners _____ Length of stern bush 4'-5" (White metal)
 Dia. of Tunnel shaft as per rule 9.9" Dia. of Crank shaft journals as per rule 10.4" Dia. of Crank pin 10.2" Size of Crank webs 16" x 6.2" Dia. of thrust shaft under collars 10.7" Dia. of screw 14.3" Pitch of Screw 15'-6" No. of Blades 4 State whether moveable no Total surface 63 ft²
 No. of Feed pumps Two Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 3.5" Stroke 18" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Two Sizes of Pumps Ballast 9" x 11" x 10", Feed 5.5" x 3.5" x 5" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three @ 2.5" dia In Holds, &c. one @ 2.5" dia Tunnel well.
 No. of Bilge Injections two sizes 1" Connected to condenser, or to circulating pump Cir. P. Is a separate Donkey Suction fitted in Engine room & size yes 2.5"
 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 ✓
 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 hold suction How are they protected wood cased
 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 2-12-13 of Stern Tube 2-12-13 Screw shaft and Propeller 20-12-13
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform

BOILERS, &c.—(Letter for record) Manufacturers of Steel J. Spencer & Sons Ltd. Newcastle
 Total Heating Surface of Boilers 2918 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 24-11-13 No. of Certificate 3140
 Can each boiler be worked separately yes Area of fire grate in each boiler 50 ft² No. and Description of Safety Valves to each boiler Two spring loaded Area of each valve 4.91 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 18" Mean dia. of boilers 14'-9" Length 10'-6" Material of shell plates Steel
 Thickness 1.8" Range of tensile strength 28.8 to 32.2 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R.
 long. seams T.R.D.B.S. Diameter of rivet holes in long. seams 1.9" Pitch of rivets 9.2" Lap of plates or width of butt straps 19.5"
 Per centages of strength of longitudinal joint rivets 84.9 plate 86.4 Working pressure of shell by rules 180.3 Size of manhole in shell 16" x 12"
 Size of compensating ring 9.5" x 1.8" No. and Description of Furnaces in each boiler Three plain Material Steel Outside diameter 40.4"
 Length of plain part top 14.3" bottom 14.3" Thickness of plates crown 3" Description of longitudinal joint weld No. of strengthening rings none
 Working pressure of furnace by the rules 186 Combustion chamber plates: Material Steel Thickness: Sides 3.4" Back 3.7" Top 3.4" Bottom 3.4"
 Pitch of stays to ditto: Sides 8.5" x 12.5" Back 10.5" x 11.5" Top 8.5" x 10.5" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181 lbs
 Material of stays Steel Diameter at smallest part 1.63" Area supported by each stay 100 Working pressure by rules 188 End plates in steam space: Material Steel Thickness 1.5" Pitch of stays 20.5" x 26.5" How are stays secured D.N. Wash Working pressure by rules 181 lbs Material of stays Steel
 Diameter at smallest part 3.5" Area supported by each stay 54.3 Working pressure by rules 188 Material of Front plates at bottom Steel
 Thickness 3.4" Material of Lower back plate Steel Thickness 1.6" Greatest pitch of stays 14.5" x 11.5" Working pressure of plate by rules 180 lbs
 Diameter of tubes 3.4" Pitch of tubes 4.16" x 4.16" Material of tube plates Steel Thickness: Front 3.4" Back 3.4" Mean pitch of stays 10.5
 Pitch across wide water spaces 14.5" Working pressures by rules 185 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 8.5" x 1.5" Length as per rule 30 Distance apart 10.3" Number and pitch of stays in each 2 @ 8.5"
 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 _____

Forecastle 25.9 ft
 is to be given as
 Cellular
 length. Water Capacity
 Feet. Tons.
5 40
33 86
 No. of Visits 35
Shilton

W 575-0174



VERTICAL DONKEY BOILER— Manufacturers of Steel

| | | | | | |
|--------------------------------------|--|---------------------------|-------------------------------------|----------------------------------|-----------------------|
| No. | Description | | | When made | Where fixed |
| Made at | By whom made | | | | |
| Working pressure | tested by hydraulic pressure to | Date of test | No. of Certificate | Fire grate area | Description of Safety |
| Valves | No. of Safety Valves | Area of each | Pressure to which they are adjusted | Date of adjustment | |
| If fitted with casing gear | If steam from main boilers can enter the donkey boiler | | Dia. of donkey boiler | Length | |
| Material of shell plates | Thickness | Range of tensile strength | Descrip. of riveting long. seams | | |
| Dia. of rivet holes | Whether punched or drilled | Pitch of rivets | Lap of plating | Per centage of strength of joint | Rivets Plates |
| Working pressure of shell by rules | Thickness of shell crown plates | Radius of do. | No. of stays to do. | Dia. of stays | |
| Diameter of furnace Top | Bottom | Length of furnace | Thickness of furnace plates | Description of joint | |
| Working pressure of furnace by rules | Thickness of furnace crown plates | Radius of do. | Stayed by | | |
| Diameter of uptake | Thickness of uptake plates | Thickness of water tubes | Dates of survey | | |

SPARE GEAR. State the articles supplied:— Two each bolts & nuts for top & bottom ends of main bearings. One set of coupling bolts. One set each valves for all pumps. Assorted bolts, nuts & iron.

The foregoing is a correct description,
 NORTH EASTERN MARINE ENGINEERS CO LTD
 S. T. Harrison Secy
 Manufacturer.

Dates of Survey while building: 1913 Aug. 20, 27, Sep. 26, Oct. 2, 10, 15, 23, 24, 30, 31
 During erection on board vessel: Nov. 6, 7, 12, 14, 18, 21, 25, 27, 28, Dec. 2, 5, 8, 9, 10, 22, 24, 30, Jan. 5, 8, 13
 Total No. of visits: (30 + 3)
 Is the approved plan of main boiler forwarded herewith? Yes

Dates of Examination of principal parts—Cylinders 28-11-13 Slides 5-1-13 Covers 5-1-13 Pistons 5-1-13 Rods 3-1-13
 Connecting rods 3-1-13 Crank shaft 28-11-13 Thrust shaft 3-1-13 Tunnel shafts 14-12-13 Screw shaft 24-11-13 Propeller 9-12-13
 Stern tube 9-12-13 Steam pipes tested 24-12-13 Engine and boiler seatings 14-12-13 Engines holding down bolts 8-1-14
 Completion of pumping arrangements 8-1-14 & 30/1/14 Boilers fixed 5-1-14 Engines tried under steam 13-1-14
 Main boiler safety valves adjusted 13-1-14 Thickness of adjusting washers 1/2" F 1/4" A 3/8" P.B.H. F 1/4" A 3/8"
 Material of Crank shaft Steel Identification Mark on Do. H.K.O. W.S. Material of Thrust shaft Steel Identification Mark on Do. 5222 H.K.
 Material of Tunnel shafts Steel Identification Marks on Do. 514-16-19 W.S. Material of Screw shafts Steel Identification Marks on Do. 24-11-13 W.S.
 Material of Steam Pipes Wrought iron lap welded 5" dia x 1/4" thick Test pressure 540 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 This machinery of this vessel has been built under special survey, the materials and workmanship are of good quality and the hydraulic tests of the boilers proved satisfactory. The whole of the machinery has been securely fixed in place & tried under steam, and is in good & safe working condition, eligible in our opinion to be classed as above record. + L.M.C. 2-14
 as completion of the survey.

To complete the survey, hold sections & spare gear have to be examined and electric light installation fitted; this will be done at Blyth. Newcastle surveyors notified.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 2-14.

| | | | |
|------------------------------|------------|--|---------|
| The amount of Entry Fee | £ 2 : 0 0 | When applied for, | 19/1/14 |
| Special | £ 31 : 4 0 | When received, as per letter from H.M. | 25.1.14 |
| Donkey Boiler Fee | £ : | | |
| Travelling Expenses (if any) | £ : | | |

Wm. Butter & Co. Surveyors
 13/1/14
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute TUE. FEB. 17, 1914
 Assigned + L.M.C. 2-14



WEB-F
 WEB-F
 WEB-F
 BRACK Web I
 BULK
 W.T. BU
 COLL PARTIT LONGIT
 Are the o
 Are the S
 ST
 FLAT PL
 GARBOAR
 State act
 thickness
 way of Do
 Bottom
 Write "Bridge Sheer Strake" and "Upper Deck Sheer Strake" opposite the corresponding letter.
 Main R.A. & P.
 THICKNESS CLEAR OF DO. OF DELG. OF F
 Length at POOP SIDE SHORT BR FORECASTLE
 Upper Stringer
 Second Stringer
 FRAMES REVERSE
 LOWER MA
 Bowsprit
 Topmasts, Rigging, M
 Sails. 2

Signal
 No., D
 Wheth
 Fore
 Bri
 Numbe
 Numbe
 Rigger
 Stern
 Build
 Galler
 Head
 Frame
 vess
 Numbe
 Numbe
 and
 Total to q
 to be
 No. of sets of Engines.
 One
 No. of Shafts.
 One.
 Under Space
 Tarret
 Forecas
 Bridge
 Poop o
 Side-H
 Deck I
 Chart
 Spaces
 Sect
 1894
 Excess
 Deduct
 NOTE 1.
 NOTE 2.
 No. of Name,
 The offic
 m
 Date
 (830) (6
 (81