

REPORT ON MACHINERY.

No. 10713
SAT. JUN. 12 1920

Received at London Office

Writing Report 5.6.20 When handed in at Local Office 9.6.20 Port of **MIDDLESBRO**
 in Survey held at **Stockton-on-Tees** Date, First Survey 10th Jan. 1919 Last Survey 4th June 1920
 Book. on the **Steel Screw Steamer H.H. Asquith** (Number of Visits 75) (S.S. No. 522) Gross Tons Net Tons
 Built at **Stockton** By whom built **Messrs Refner S.R. & Co. Ltd** When built 1920
 Lines made at **Stockton** By whom made **Messrs Blair & Co. Ltd** (No. 1873) when made 1920
 Makers made at **Stockton** By whom made **Messrs Blair & Co. Ltd** (No. 1873 & E 1339) when made 1920
 Registered Horse Power Owners Port belonging to
 Horse Power as per Section 28 **475** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**

GINES, & Co.—Description of Engines **Tri-compound** No. of Cylinders **3** No. of Cranks **3**
 No. of Cylinders **26-43-71** Length of Stroke **48** Revs. per minute **64** Dia. of Screw shaft **14.7** as per rule **14.7** Material of screw shaft **W. Iron**
 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
 Is the propeller boss **yes** If the liner is in more than one length are the joints burned **in one** 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 **tight-fit** If two
 are fitted, is the shaft lapped or protected between the liners **✓** Length of stern bush **5'-4"**
 Dia. of Tunnel shaft **13.05** as per rule **13.7** Dia. of Crank shaft journals **13.7** as per rule **14.5** Dia. of Crank pin **14.5** Size of Crank web **28.5 x 9.5** Dia. of thrust shaft under
 arms **14.5** Dia. of screw **18'-0"** Pitch of Screw **17'-6"** No. of Blades **4** State whether moveable **no** Total surface **98 f**
 No. of Feed pumps **2** Diameter of ditto **3.5"** Stroke **34"** Can one be overhauled while the other is at work **yes**
 No. of Bilge pumps **2** Diameter of ditto **5"** Stroke **34"** Can one be overhauled while the other is at work **yes**
 No. of Donkey Engines **4** Sizes of Pumps **11 x 18, 9 x 7, 14 x 10, 6 x 4** No. and size of Suctions connected to both Bilge and Donkey pumps
 Engine Room **3 @ 3.5"** **will one @ 3.5"** In Holds, &c. **2 @ 3.5" in each hold. Tunnel**
 No. of Bilge Injections **1** sizes **6.75"** Connected to **Centrifugal** circulating pump **yes** Is a separate Donkey Suction fitted in Engine room & size **yes - 4"**
 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**
 How are they protected **wood ceiling**
 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 **22.3.20** of Stern Tube **22.3.20** Screw shaft and Propeller **20.4.20**
 Is the Screw Shaft Tunnel watertight **yes** Is it fitted with a watertight door **yes** worked from **Top platform**

WILKES, & Co.—(Letter for record (S)) Manufacturers of Steel **Messrs John Spencer & Sons Ltd**
 3 Main & 1 Aux **3 S.B. & 1 Aux S.B.**
 Total Heating Surface of Boilers **8647** Is Forced Draft fitted **no** No. and Description of Boilers **3 Main & 1 Aux single ended.**
 Working Pressure **180** Tested by hydraulic pressure to **360** Date of test **26.3.20** No. of Certificate **6105**
 Can each boiler be worked separately **yes** Area of fire grate in each boiler **60.6 f** No. and Description of Safety Valves to
 each boiler **2 direct spring** Area of each valve **7.07** Pressure to which they are adjusted **185** Are they fitted with easing gear **yes**
 Smallest distance between boilers on **upstabs** and bunkers on **woodwork** **2'-0"** Mean dia. of boilers **15'-6"** Length **11'-6"** Material of shell plates **steel**
 Thickness **1.5"** Range of tensile strength **28-32** Are the shell plates welded or flanged **no** Descrip. of riveting: cir. seams **2 Riv. lap**
 Long. seams **2 Riv. 5 Riv. per pitch** Diameter of rivet holes in long. seams **1.5"** Pitch of rivets **9.5"** Width of butt straps **19.5" x 1.5"**
 Percentages of strength of longitudinal joint **87.0** Working pressure of shell by rules **184** Size of manhole in shell **16" x 12"**
 Size of compensating ring **7.5" x 1.5"** No. and Description of Furnaces in each boiler **3 Brighton** Material **steel** Outside diameter **46.5"**
 Length of plain part **top 9"** Thickness of plates **bottom 9"** Description of longitudinal joint **Weld** No. of strengthening rings **✓**
 Working pressure of furnace by the rules **190** Combustion chamber plates: Material **steel** Thickness: Sides **1/8"** Back **1/8"** Top **1/8"** Bottom **3/4"**
 Pitch of stays to ditto: Sides **8.5" x 10.5"** Back **9.5" x 9.5"** Top **9.5" x 9"** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **186**
 Material of stays **steel** Diameter at smallest part **1.99** Area supported by each stay **86.7** Working pressure by rules **206** End plates in steam space
 Material **steel** Thickness **1.5"** Pitch of stays **20" x 18"** How are stays secured **nuts & washers** Working pressure by rules **187** Material of stays **steel**
 Diameter at smallest part **7.87** Area supported by each stay **420** Working pressure by rules **195** Material of Front plates at bottom **steel**
 Thickness **1.5"** Material of Lower back plate **steel** Thickness **1"** Greatest pitch of stays **14.5" x 9.5"** Working pressure of plate by rules **258**
 Diameter of tubes **3.5"** Pitch of tubes **4.5" x 4.5"** Material of tube plates **steel** Thickness: Front **1.5"** Back **1.5"** Mean pitch of stays **9.5"**
 Pitch across wide water spaces **14.5"** Working pressures by rules **187** Girders to Chamber tops: Material **steel** Depth and
 thickness of girder at centre **8.5" x 1.5"** Length as per rule **32"** Distance apart **9.5"** Number and pitch of stays in each **2 @ 9"**
 Working pressure by rules **190** Superheater or Steam chest; how connected to boiler **none** Can the superheater be shut off and the boiler worked
 separately **no** 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

14148-0143

IS A ^{Auxiliary} ~~BOILER~~ BOILER FITTED? *yes*

If so, is a report now forwarded? *Report attached*

SPARE GEAR. State the articles supplied:— *Two each of con. rod top-end, bottom-end and main bearing bolts and nuts: one set of coupling bolts and nuts: one set each of feed & bilge pump valves & check valves, assorted bolts and nuts: iron of various sizes: one cast iron propeller; one tail end shaft and minor gear.*

The foregoing is a correct description,
For BLAIR & CO., LIMITED,

Geo. H. Atkinson

MANAGING DIRECTOR

Manufacturer.

1919
Dates of Survey while building { During progress of work in shops - Nov. 10-12-18-20-24-26 Dec. 4-8-10-11-15-18-19-22-24 Jan. 12-19-21-23-26-28-29 Feb. 2-5-9-10-13-16-18-20-23-25-27 March 1-3-6-10-11-12-13-19-20-21-27 June 1-3
During erection on board vessel - 5-9-11-12-15-17-19-22-23-25-26-29-31 April 1-8-12-13-16-18-19-20-21-23-27-30 May 2-5-6-10-11-12-13-19-20-21-27 June 1-3
Total No. of visits *75*

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

" " " *donkey aux* " " *yes*

Dates of Examination of principal parts—Cylinders *11.3.20* Slides *25.3.20* Covers *11.3.20* Pistons *9.3.20* Rods *9.3.20*
Connecting rods *23.3.20* Crank shaft *23.1.20* Thrust shaft *6.11.19* Tunnel shafts *26.11.19* Screw shafts *15.4.20* Propeller *15.4.20*
Stern tube *15.3.20* Steam pipes tested *5.5.20* Engine and boiler seatings *22.3.20* Engines holding down bolts *11.5.20*
Completion of pumping arrangements *27.5.20* Boilers fixed *27.5.20* Engines tried under steam *27.5.20*
Main boiler safety valves adjusted *27.5.20* Thickness of adjusting washers *P.B. 5-15/32 C.B. 5-7/8 S.B. 5-3/4 F.B. 5-3/8*
Material of Crank shaft *hy steel* Identification Mark on Do. *7229* Material of Thrust shaft *hy steel* Identification Mark on Do. *4575*
Material of Tunnel shafts *hy steel* Identification Marks on Do. *4575-N* Material of Screw shafts *iron* Identification Marks on Do. *7229*
Material of Steam Pipes *solid drawn copper 4" x 1/4"* Test pressure *400 lb*

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 and workmanship are sound and good. The boilers were tested by hydraulic pressure and the engines and boilers examined under steam and all found satisfactory.*

The machinery is now in a good and self-working condition and renders the vessel eligible in my opinion to have the record of L.M.C. 6.20 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. L.M.C. 6.20.

14/6/20

JHD JMC

Note:— *This vessel is fitted with Electric light and "wireless"*

The amount of Entry Fee ... £ *3-0-0* When applied for, *11.6.1920*
Special ... £ *43-15-0*
Donkey Boiler Fee ... £ *5*
Travelling Expenses (if any) £ *15/6/20*

Wm Morrison

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

Committee's Minute *FRI JUN 18 1920*

Assigned

+ L.M.C. 6.20



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