

## REPORT ON MACHINERY

No. 34993  
THU. APR. - 8. 1915

Date of writing Report *April 2<sup>nd</sup> 15* When handed in at Local Office *April 2<sup>nd</sup> 15* Port of *Glasgow*  
 No. in Survey held at *Cottbridge* Date, First Survey *13/7/14* Last Survey *March 26 1915*  
 Reg. Book. *52* on the *SS EVERTON* (Number of Visits *15-5-15*)

Master *Hull* Built at *Hull* By whom built *Lockhart & Son* *N<sup>o</sup> 625* Tons *1915*  
 Engines made at *Cottbridge* By whom made *Lidgerwood Ltd (N<sup>o</sup> 424)* when made *1915*  
 Boilers made at *Middlesbro'* By whom made *Hutchinson, Westgarth & Co (N<sup>o</sup> 2236)* when made *1915*

Registered Horse Power *51.49* Owners *Gt Northern S.S. & Co Ltd* Port belonging to *Hull*  
 Nom. Horse Power as per Section 28 *51.49* Is Refrigerating Machinery fitted for cargo purposes *✓* Is Electric Light fitted *✓*

### ENGINES, &c.—Description of Engines *Maine type Triple Expansion* No. of Cylinders *3* No. of Cranks *3*

Dia. of Cylinders *10", 17", 28"* Length of Stroke *24"* Revs. per minute *7.28* Dia. of Screw shaft *7.28* Material of *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 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 *Yes* If two liners are fitted, is the shaft lapped or protected between the liners *✓*

Dia. of Tunnel shaft *5.48* Dia. of Crank shaft journals *6.34* Dia. of Crank pin *6.05* Size of Crank webs *2.3 x 12.3 x 4.4* Dia. of thrust shaft under collars *6.34* Dia. of screw *10-3* Pitch of Screw *8-0* No. of Blades *4* State whether moveable *No* Total surface *32.4*

No. of Feed pumps *1* Diameter of ditto *2.2* Stroke *12* Can one be overhauled while the other is at work *✓*  
 No. of Bilge pumps *1* Diameter of ditto *2.2* Stroke *12* Can one be overhauled while the other is at work *✓*

No. of Donkey Engines *One* Sizes of Pumps *6 x 3 x 6* No. and size of Suctions connected to both Bilge and Donkey pumps *one - 2.2 to main hold*

In Engine Room *2-2* In Holds, &c. *one - 2.2 to main hold*

No. of Bilge Injections *1* sizes *3* Connected to condenser, or to circulating pump *Yes* Is a separate Donkey Suction fitted in Engine room of size *2.2*

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 *which is also intended for spare bunker* How are they protected *wood casings*

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 *25-3-15* of Stern Tube *25-3-15* Screw shaft and Propeller *25-3-15*

Is the Screw Shaft Tunnel watertight *✓* Is it fitted with a watertight door *✓* worked from *✓*

### BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Krupp & J. Spencer & Sons Ltd*

Total Heating Surface of Boilers *872* Is Forced Draft fitted *no* No. and Description of Boilers *One S.E. Cyl. Multi*

Working Pressure *200 lb* Tested by hydraulic pressure to *400 lb* Date of test *13-11-14* No. of Certificate *5418*

Can each boiler be worked separately *✓* Area of fire grate in each boiler *25 sq ft* No. and Description of Safety Valves to each boiler *2 spring loaded*

Area of each valve *3.98 sq in* Pressure to which they are adjusted *200 lb* Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *abt 9"* Mean dia. of boilers *11-0"* Length *9-6"* Material of shell plates

Thickness *Range of tensile strength* Are the shell plates welded or flanged *Descrip. of riveting: cir. seams*

long. seams *Diameter of rivet holes in long. seams* Pitch of rivets *Lap of plates or width of butt straps*

Per centages of strength of longitudinal joint *Working pressure of shell by rules* Size of manhole in shell

Size of compensating ring *No. and Description of Furnaces in each boiler* Material *Outside diameter*

Length of plain part *Thickness of plates* Description of longitudinal joint *No. of strengthening rings*

Working pressure of furnace by the rules *Combustion chamber plates: Material* Thickness: Sides *Back* Top *Bottom*

Pitch of stays to ditto: Sides *Back* Top *If stays are fitted with riveted heads* Working pressure by rules

Material of stays *Diameter at smallest part* Area supported by each stay *Working pressure by rules* End plates in steam space

Material *Thickness* Pitch of stays *How are stays secured* Working pressure by rules *Material of stays*

Diameter at smallest part *Area supported by each stay* Working pressure by rules *Material of Front plates at bottom*

Thickness *Material of Lower back plate* Thickness *Greatest pitch of stays* Working pressure of plate by rules

Diameter of tubes *Pitch of tubes* Material of tube plates *Thickness: Front* Back *Mean pitch of stays*

Pitch across wide water spaces *Working pressures by rules* Girders to Chamber tops: Material *Depth and*

thickness of girder at centre *Length as per rule* Distance apart *Number and pitch of stays in each*

Working pressure by rules *Superheater or Steam chest; how connected to boiler* 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 *✓*

005901-005413-0230



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied :-

2 Bottom End Bolts & Nuts, 2 Top End Bolts & Nuts, 2 Main Bearing Bolts & Nuts, 1 set of Coupling Bolts, 1 set of Bilge Pump Valves, 1 set of Feed Pump Valves, Assorted Nuts & Bolts, Iron of various sizes.

The foregoing is a correct description,

LIDGERWOOD LIMITED

LIDGERWOOD LIMITED

Manufacturer.

W. S. Wilson

Dates of Survey while building { During progress of work in shops - 1914 July 13 Aug 3-27 Sept 3-8-14-17-21 Oct 6 Nov 24 Dec 9-14-17-22-24 1915 Jan 6-11-20-22  
During erection on board vessel - 27 Feb 1-5-10-17-22 Mar 5-16-23  
Total No. of visits 28 + 11 = 39.  
Is the approved plan of main boiler forwarded herewith yes

Dates of Examination of principal parts - Cylinders 9/12/14, 14/12/14, 20/1/15. Slides 22/1/15. Covers 17/12/14, 17/12/14, 17/12/14. Rods 5.2.15.  
Connecting rods 24.11.14, 20.1.15. Crank shaft 9.12.14, 22.12.14. Thrust shaft 20.1.15. Tunnel shafts 17, 24, 12.14. Screw shaft 20.1.15. Propeller 24-3-15.  
Stern tube 6, 11, 27.1.15. Steam pipes tested 28-4-15. Engine and boiler seatings 24-3-15. Engines holding down bolts 1-4-15.  
Completion of pumping arrangements 11-5-15. Boilers fixed 21-4-15. Engines tried under steam 8-5-15.  
Main boiler safety valves adjusted 8-5-15. Thickness of adjusting washers P 13/32 S 3/8.  
Material of Crank shaft SM Steel Identification Mark on Do. 423781. Material of Thrust shaft SM Steel Identification Mark on Do. 423781.  
Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Iron Identification Marks on Do. 423775.  
Material of Steam Pipes Solid drawn copper. Test pressure 400 lbs per sq. inch.  
Is an installation fitted for burning oil fuel. 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

S/S ESHER (Eng N° 426)

General Remarks (State quality of workmanship, opinions as to class, &c.)

This machinery has been built under special survey, the materials & workmanship are good; the machinery has now been forwarded to Hull to be fitted on board.

This machinery has been properly fitted & secured on board, & on completion tried under steam & found satisfactory. The steam pipes have been tested as above by hydraulic pressure & found sound & good. The safety valves have been adjusted under steam, & tested for accumulation, which did not exceed 207 lbs.

In my opinion the vessel is eligible for the record + LMC 5, 15.

P. Fitzgerald.

It is submitted that this vessel is eligible for THE RECORD + LMC 5, 15.

The amount of Entry Fee ... £ 1 : :  
Special ... £ 2 : 13 :  
Donkey Boiler Fee ... £ 2 : 14 :  
Travelling Expenses (if any) £ : :  
When applied for, 6/4/15  
When issued, 4/6/15

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

TUE. JUL. 6-1915

Committee's Minute GLASGOW 7-APR 1915

Assigned Deferred for compln

+ LMC 5, 15

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