

REPORT ON MACHINERY.

No. 15067

Received at London Office

THU. FEB. 11. 1915

Date of writing Report 20/1/15 When handed in at Local Office 2nd to 15 Port of West Ham
 No. in Survey held at West Ham Date, First Survey 15th July/14 Last Survey 2nd Dec. 1915
 Reg. Book. on the Steel Steamer "Girfield" (Number of Visits 99) Tons { Gross 4028.74
 Net 2520.27
 Master W. Clarke Built at West Ham By whom built W. Hay & Co. When built 1915
 Engines made at West Ham By whom made Central Marine & Work. when made 1915
 Boilers made at West Ham By whom made Central Marine & Work. when made 1915
 Registered Horse Power Owners Southern Shipping Co. Ltd. Port belonging to West Ham
 Nom. Horse Power as per Section 28 401 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three
 Dia. of Cylinders 25: 41: 68 Length of Stroke 48 Revs. per minute 65 Dia. of Screw shaft as per rule 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
 in the propeller boss Yes If the liner is in more than one length are the joints burned No 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 59
 Dia. of Tunnel shaft as per rule 12.69 Dia. of Crank shaft journals as per rule 13.32 Dia. of Crank pin 13 1/2 Size of Crank webs 18 1/2 x 8 Dia. of thrust shaft under
 collars 13 1/2 Dia. of screw 18.0 Pitch of Screw 16.9 No. of Blades 4 State whether moveable No Total surface 102 sq ft
 No. of Feed pumps Two Diameter of ditto 3 1/2 Stroke 28 Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 4 Stroke 28 Can one be overhauled while the other is at work Yes
 No. of Donkey Engines Three Sizes of Pumps 9-9-5-6-5-12 No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Two 3 1/2 In Holds, &c. Eight 3 1/2 Tunnel 3 1/2

No. of Bilge Injections Five Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size 2 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 Yes
 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 Below
 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 None

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 2/12/14 of Stern Tube 23/12/14 Screw shaft and Propeller 9/1/15
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from 7th Stal from

BOILERS, &c.—(Letter for record R) Manufacturers of Steel Phoenix Iron
 Total Heating Surface of Boilers 5701 Is Forced Draft fitted No No. and Description of Boilers Two Large End
 Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 28/11/14 No. of Certificate 3391
 Can each boiler be worked separately Yes Area of fire grate in each boiler 66 sq ft No. and Description of Safety Valves to
 each boiler Two Opening Area of each valve 9.62 Pressure to which they are adjusted 185 lb Are they fitted with easing gear Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork 21 Mean dia. of boilers 17.0 Length 11.0 Material of shell plates Steel
 Thickness 1 7/16 Range of tensile strength 29-32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams Yes
 long. seams Yes Diameter of rivet holes in long. seams 1 7/16 Pitch of rivets 5 1/4 Lap of plates or width of butt straps 19 1/4
 Per centages of strength of longitudinal joint rivets 87.6 Working pressure of shell by rules 180 lb Size of manhole in shell 16 x 12
 plate 85.0 Size of compensating ring Hanged No. and Description of Furnaces in each boiler One Large Material Steel Outside diameter 46 1/8
 Length of plain part top bottom Thickness of plates 9 1/16 Description of longitudinal joint Welded No. of strengthening rings One
 Working pressure of furnace by the rules 191 lb Combustion chamber plates: Material Steel Thickness: Sides 10 1/16 Back 10 1/16 Top 10 1/16 Bottom 14 1/16
 Pitch of stays to ditto: Sides 8 5/8 Back 8 1/2 Top 9 1/4 If stays are fitted with nuts or riveted heads Yes Working pressure by rules 181 lb
 Material of stays Steel Diameter at smallest part 1 5/8 Area supported by each stay 8 1/4 x 8 1/4 Working pressure by rules 211 lb End plates in steam space:
 Material Steel Thickness 1 1/8 Pitch of stays 23 1/2 x 19 How are stays secured all nuts Working pressure by rules 185 lb Material of stays Steel
 Diameter at smallest part 3 1/4 Area supported by each stay 20 1/2 x 19 Working pressure by rules 183 lb Material of Front plates at bottom Steel
 Thickness 1 1/4 Material of Lower back plate Steel Thickness 1 9/16 Greatest pitch of stays 15 Working pressure of plate by rules 180 lb
 Diameter of tubes 3 1/4 Pitch of tubes 4 1/2 Material of tube plates Steel Thickness: Front 1 Back 12 1/16 Mean pitch of stays 9
 Pitch across wide water spaces 14 1/4 Working pressures by rules 189 lb Girders to Chamber tops: Material Steel Depth and
 thickness of girder at centre 8 1/4 x 1 1/4 Length as per rule 50 7/8 Distance apart 8 Number and pitch of stays in each Two 9 1/4
 Working pressure by rules 180 lb Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked
 separately Yes 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 Are they fitted with easing gear
 Working pressure of end plates Area of safety valves to superheater

IS A DONKEY BOILER FITTED? *Amiel Boiler* If so, is a report now forwarded? *Yes*
SPARE GEAR. State the articles supplied: - *Two top end bolts. Two bottom end bolts. Two*
main bearing bolts. One set coupling bolts. One set dead pump valves
One set bridge pump valves. One set 100 piston springs. Propeller shaft
Propeller. Bolt nut &c

The foregoing is a correct description,
FOR THE CENTRAL MARINE ENGINE WORKS,
(M. Gray & Co. Ltd.)

Maunus E. Ebb

Manufacturer.

DIRECTOR
Dates of Survey while building
During progress of work in shops - 1914 July 15-22-23-24 Aug 12-18-19-20-21-24-25-26-27-28-31 Sep 1-2-3-4-7-8-10-11-14-15-16-17-18-20-22-23-24-25-28
During erection on board vessel - 29-30 Oct 1-2-5-6-7-8-9-10-12-14-15-16-19-20-21-22-27-28-29-30 Nov 2-3-4-5-6-9-10-11-12-13-16-18-19-20-23-24
Total No. of visits 99

Is the approved plan of main boiler forwarded herewith *Yes*
" " " " " " *Yes*

Dates of Examination of principal parts - Cylinders 24/11/14 Slides 24/11/14 Covers 24/11/14 Pistons 24/11/14 Rods 24/11/14
Connecting rods 24/11/14 Crank shaft 20/11/14 Thrust shaft 20/11/14 Tunnel shafts 8/1/15 Screw shaft 20/11/14 Propeller 23/11/14
Stern tube 24/11/14 Steam pipes tested 18/27/28/1/15 Engine and boiler seatings 23/12/14 Engines holding down bolts 27/1/15
Completion of pumping arrangements 29/1/15 Boilers fixed 25/1/15 Engines tried under steam 29/1/15
Main boiler safety valves adjusted 29/1/15 Thickness of adjusting washers *Amiel Steel Bolt* 7 29/64 A 29/64 - P 23/32 - S 41/64 - P 14/16 S 10/16

Material of Crank shaft *Steel* Identification Mark on Do. 5550 Material of Thrust shaft *Steel* Identification Mark on Do. 5550

Material of Tunnel shafts *Steel* Identification Marks on Do. 5550 Material of Screw shafts *Steel* Identification Marks on Do. 5550

Material of Steam Pipes *Main Steel Amiel Copper* Test pressure *Main boiler Amiel 450 lb*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *Workmanship good.*

Superheater coils tested to 400 lb and body to 50 lb.

The Machinery and Boilers of this Steamer have been
examined under Special Survey and placed on board
in accordance with the Society's Rules. They are now in my
opinion in safe working condition and the case is respectfully
submitted for the notification + LMC 2-15 in the
Register Book.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 2.15.

2SB & 1AuxSB.

The amount of Entry Fee ... £ 3 : 0 :
Special ... £ 40 : 1 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 4/2/1915
When received, 6/2/1915

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

Committee's Minute

FRI. FEB. 12. 1915

Assigned

+ LMC 2 15

MACHINERY CERTIFICATE
WRITTEN



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Foundation