

Port of

Received at London Office

THUR. 17 MAY 1906

No. in Survey held at

Date, first Survey 20 October 05 Last Survey 27 April 1906

Reg. Book.

(Number of Visits 32)

101 sup. on the

Master S. Firth

Built at Selby

By whom built Cochrane & Sons

Tons Gross 250 Net 103 When built 1906

Engines made at

Grimsby

By whom made G. Central Co. & S. L. Co.

when made 1906

Boilers made at

Hartlepool

By whom made Central Marine & L.

when made 1906

Registered Horse Power

Owners Jno. & Co. Ltd. Sea Steam Navigation Co. Ltd.

Grimsby

Nom. Horse Power as per Section 28

76

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines Triple Expansion Surf. Cond. No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 12 1/4 22 35 Length of Stroke 24 Revs. per minute 108 Dia. of Screw shaft as per rule 7 1/2 as fitted 7 1/2 Material of screw shaft 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 Yes 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 36
Dia. of Tunnel shaft as per rule 6 3/8 as fitted 6 3/8 Dia. of Crank shaft journals as per rule 6 7/8 as fitted 6 7/8 Dia. of Crank pin 7 Size of Crank webs 13 x 4 1/4 Dia. of thrust shaft under collars 7 1/2 Dia. of screw 8 1/2 Pitch of Screw 11 1/2 No. of Blades 4 State whether moveable no Total surface 28 1/2
No. of Feed pumps 1 Diameter of ditto 2 1/2 Stroke 12 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 1 Diameter of ditto 3 Stroke 12 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 1 Sizes of Pumps 3 1/2 x 6 stroke No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room Sea bilge & Hotwell 2 bore In Holds, &c. 2 rooms 2 bore

No. of Bilge Injections 1 sizes 2 1/4 Connected to condenser, or to circulating pump pump 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 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 2 1/2 inch & 2 inch tank suction How are they protected Wood & iron 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 Mar 12/06 of Stern Tube Mar 12/06 Screw shaft and Propeller Mar 12/06
Is the Screw Shaft Tunnel watertight no tunnel Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.—(Letter for record) Manufacturers of Steel
Total Heating Surface of Boilers Is Forced Draft fitted No. and Description of Boilers
Working Pressure Tested by hydraulic pressure to Date of test No. of Certificate
Can each boiler be worked separately Area of the grate in each boiler No. and Description of Safety Valves to each boiler
Area of each valve Pressure to which they are adjusted Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length 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 hole 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 tank No. and Description of Furnaces in each boiler Material Outside diameter
Length of plain part Thickness of plates crown bottom 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 nuts or 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

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 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 easing 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 _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *Has each of top & bottom end & main bearing bolts, one set coupling bolts, one set each of air circulating feed & bilge pump valves, main ramchary feed check valves, stud iron bolts & nuts, condenser tubes.*

The foregoing is a correct description,

For the GREAT CENTRAL CO-OPERATIVE
 ENGINEERING & SHIP REPAIRING COMPANY, LTD.

Manufacturer.

Thred Lister

Dates of Survey while building
 During progress of work in shops— 1905:— Oct 20, 27, 28, 29, 30, 31, Nov 2, 10, 14, 18, 22, 28, Dec 8, 14, 21, 1906:— Jan 1, 9, 19, 27, 31, Feb 6, 21, 22, 23, Mar 19, April 4, 11, 19, 20, 21, 24, 26, 27
 During erection on board vessel— April 6:— 10, 11, 17, 19, 20, 21, 24, 26, 27
 Total No. of visits 32
 Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders 27/10/05 Slides 27/10/05 Covers 27/10/05 Pistons 31/1/06 Rods 10/11/05
 Connecting rods 10/11/05 Crank shaft 27/12/05 Thrust shaft 19/3/06 Tunnel shafts ✓ Screw shaft 23/2/06 Propeller 23/2/06
 Stern tube 19/1/06 Steam pipes tested 17/4/06 Engine and boiler seatings 10/4/06 Engines holding down bolts 17/19/4/06
 Completion of pumping arrangements 21/4/06 Boilers fixed 19/24/4/06 Engines tried under steam 26/4/06
 Main boiler safety valves adjusted 27/4/06 Thickness of adjusting washers 3/16
 Material of Crank shaft *Iron* Identification Mark on Do. 4519.08 Material of Thrust shaft *Iron* Identification Mark on Do. 4779.08
 Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. 4679.08
 Material of Steam Pipes *Copper, solid drawn 7W.9* Test pressure 360 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) *This machinery has been built under special survey. The materials and workmanship are good and the case is eligible in my opinion for the notation +L.M.C. 4.06.*

The Committee have approved, in this instance, of one bilge pump and one feed pump being fitted. See Secretary's letter E dated 22nd March, 1906.

It is submitted that
 this vessel is eligible for
 THE RECORD *+L.M.C. 4.06.*

Rd. 17.5.06
Fms. 17.5.06

The amount of Entry Fee.. £ 1 : 00
 Special £ 11 : 80
 Donkey Boiler Fee .. £ 12 : 80
 Travelling Expenses (if any) .. £ 13 : 16 : 0
 28 - 12 - 0

When received, 17 7 1906 9.7.06

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

Committee's Minute

FRI. 18 MAY 1906

Assigned

+ L.M.C. 4.06

MACHINERY CERTIFICATE
 WRITTEN.

Lloyd's Register
 Foundation