

REPORT ON MACHINERY.

No. 14921

THU. JUN. 25 1914.

Date of writing Report 20 June 1914 When handed in at Local Office 22/6/14 Port of West Hartlepool
 No. in Survey held at West Hartlepool Date, First Survey 23rd Oct 1913 Last Survey 17th June 1914
 Reg. Book. on the Steel Steamer City of Rangoon (Number of Visits 128)
 Master J. Mayall Built at West Hartlepool By whom built W May & Co Ltd Tons { Gross 6635
 Net 4272
 When built 1914

Engines made at West Hartlepool By whom made Central Marine Engine Works when made 1914
 Boilers made at West Hartlepool By whom made Central Marine Engine Works when made 1914

Registered Horse Power Owners Ellerman Lines Ltd Port belonging to Liverpool

Nom. Horse Power as per Section 28 617 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks 3
 Dia. of Cylinders 25 1/2" 44 1/2" 77" Length of Stroke 51" Revs. per minute 65 Dia. of Screw shaft as per rule 15.25 Material of Steel
 as fitted 16 1/4" screw shaft
 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 67"
 Dia. of Tunnel shaft as per rule 14.31 Dia. of Crank shaft journals as per rule 15.03 Dia. of Crank pin 15 1/2" Size of Crank webs 21 1/4" 9" Dia. of thrust shaft under
 collars 15 1/2" Dia. of screw 18.6" Pitch of Screw 17.9" No. of Blades 4 State whether moveable yes Total surface 115 sq ft
 No. of Feed pumps Two Diameter of ditto 9" Stroke 21" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two Diameter of ditto 4 1/2" Stroke 30" Can one be overhauled while the other is at work yes
 No. of Donkey Engines Three Sizes of Pumps 10 1/2" 10" 6" 10" 8" 12" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Four 3 1/2" In Holds, &c. Three 3 1/2" Two 3 1/2"
Circulating Pump 6 MEW. Separate Engine.

No. of Bilge Injections one sizes 9" Connected to condenser, or to circulating pump yes Is a separate Donkey Suction fitted in Engine room & size yes 3 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 — How are they protected —

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 9/4/14 of Stern Tube 20/4/14 Screw shaft and Propeller 25/5/14
 Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from Up Station

BOILERS, &c.—(Letter for record S) Manufacturers of Steel J. H. Jones & Co

Total Heating Surface of Boilers 8641 Is Forced Draft fitted yes No. and Description of Boilers Three single ended
 Working Pressure 220 lb Tested by hydraulic pressure to 440 lb Date of test 17/3/14 No. of Certificate 3360

Can each boiler be worked separately yes Area of fire grate in each boiler 72 sq ft No. and Description of Safety Valves to
 each boiler Two lifting Area of each valve 11.04" Pressure to which they are adjusted 225 lb Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 16.0" Length 12.6" Material of shell plates Steel

Thickness 1 19/32" Range of tensile strength 27-30 Are the shell plates welded or flanged both Descrip. of riveting: cir. seams all in lap

long. seams all in lap Diameter of rivet holes in long. seams 1 19/32" Pitch of rivets 10 1/2" Lap of plates or width of butt straps 23 1/4"

Per centages of strength of longitudinal joint rivets 85.6 plate 84.8 Working pressure of shell by rules 224 lb Size of manhole in shell 16" 12"

Size of compensating ring flanged ring No. and Description of Furnaces in each boiler 4 Brighton Material Steel Outside diameter 45 ft

Length of plain part top bottom Thickness of plates top bottom 10/16" Description of longitudinal joint butt No. of strengthening rings four

Working pressure of furnace by the rules 233 lb Combustion chamber plates: Material Steel Thickness: Sides 1 1/16" Back 1 1/16" Top 1 1/16" Bottom 1"

Pitch of stays to ditto: Sides 8 7/8" 8 1/2" Back 7 1/2" 7 1/2" Top 8 1/4" 8 1/4" If stays are fitted with nuts or riveted heads both Working pressure by rules 220 lb

Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 9 1/4" 7 1/4" Working pressure by rules 260 lb End plates in steam space:

Material Steel Thickness 1 1/2" Pitch of stays 10 1/2" 17" How are stays secured all in lap Working pressure by rules 221 lb Material of stays Steel

Diameter at smallest part 1 5/8" Area supported by each stay 10 1/2" 17" Working pressure by rules 208 lb Material of Front plates at bottom Steel

Thickness 1 1/4" Material of Lower back plate Steel Thickness 1" Greatest pitch of stays 10 1/2" Working pressure of plate by rules 220 lb

Diameter of tubes 3 1/2" Pitch of tubes 3 1/4" Material of tube plates Steel Thickness: Front 1 1/16" Back 10/16" Mean pitch of stays 7 1/2"

Pitch across wide water spaces 14" Working pressures by rules 221 lb Girders to Chamber tops: Material Steel Depth and

thickness of girder at centre 10 1/2" 1 1/2" Length as per rule 38 1/2" Distance apart 8 1/4" Number and pitch of stays in each Three 8 1/4"

Working pressure by rules 222 lb 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 —

IS A DONKEY BOILER FITTED?

None

If so, is a report now forwarded? -

SPARE GEAR.

State the articles supplied:—

The top end bolts, The bottom end bolts, The main bearing bolts, One set coupling bolts, One set dead pump valves, One set safety pump valves, The propeller blades, The set of piston rings. One slide valve spindle one pair crank pin bolts complete. The safety valve springs. Bolts. nuts. set of various sizes &c. Also spare gear for a 7000 Engine and C.M.E.W. separate circulating pump.

The foregoing is a correct description,

FOR THE CENTRAL MARINE ENGINE WORKS,

(St. Gray & Co. Ltd.)

Maunier & Co. Ltd.

Manufacturer.

Dates of Survey while building
During progress of work in shops - - -
During erection on board vessel - - -
Total No. of visits 128.

Is the approved plan of main boiler forwarded herewith? -

Is the approved plan of donkey boiler forwarded herewith? -

Dates of Examination of principal parts—Cylinders 20/3/14 Slides 1/4/14 Covers 20/3/14 Pistons 21/3/14 Rods 19/3/14

Connecting rods 19/3/14 Crank shaft 12/3/14 Thrust shaft 12/3/14 Tunnel shafts 27/4/14 Screw shaft 18/3/14 Propeller 9/4/14

Stern tube 7/4/14 Steam pipes tested at 60 lb. Engine and boiler seatings 20/4/14 Engines holding down bolts 19/5/14

Completion of pumping arrangements 2/6/14 Boilers fixed 21/5/14 Engines tried under steam 3/6/14

Main boiler safety valves adjusted 3/6/14 Thickness of adjusting washers 22/5/14 21/6/14 21/6/14 21/6/14

Material of Crank shaft Unit Identification Mark on Do. 5484 Material of Thrust shaft Unit Identification Mark on Do. 5484

Material of Tunnel shafts Unit Identification Marks on Do. 5484 Material of Screw shafts Unit Identification Marks on Do. 5484

Material of Steam Pipes Lap welded Unit Test pressure 660 lb.

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? - If so, state name of vessel -

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

The Bolts of this vessel are fitted with C.M.E.W. Lubrication, as per approved Photo Paint, one set fitted in each Boiler upright, and have each a safety valve attached thereto. The installation is so arranged, that either hot or lubricated steam can be used. All the Lubrication has been tested by hydraulic pressure to 660 lb. The steel steam pipes and branch pipes and the Lubrication Oil valves to 660 lb. and all found good.

The Lubrication pipes tested to 440 lb. and body to 50 lb.

The Machinery and Bolts of this Steamer have been constructed 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 Certification + L.M.C. 6.14, in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 6.14

The amount of Entry Fee ... £ 3 0 :
Special ... £ 50 17 :
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : :
When applied for, 11/6/1914
When received, 24/6/1914

Committee's Minute TUE. JUN. 30. 1914

Assigned ...

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

Assigned ...

Assigned ...

Assigned ...

Rpt. 13.

Port of

No. in Reg. Book

Owners

Yard No.

DESCRIPTION

One

Continued

Capacity of

Where is

Position of

Positions of

Under

Is the vessel

Are the fuse

Are all fuses

are per

Are all switch

Total number

A

B

C

D

E

W

M

Are the lights, w

Where are the

DESCRIPTION

Main cable carry

Branch cables ca

Branch cables ca

Leads to lamps of

Cargo light cables

DESCRIPTION

Insulation

Armoured

Joints in cables, h

Are all the joints

positions, nor

Are there any join

How are the cable

of hatch, w



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