

Rpt. 4.

REPORT ON MACHINERY

No. 7828.
THU. APR. 30. 1914

Date of writing Report April 27th 1914 When handed in at Local Office 10 Port of DUNDEE

No. in Survey held at Dundee Date, First Survey 26th March Last Survey 27th April 1914

Reg. Book. on the Machinery of the STEEL S.S. L.M.S. ST. "ISLAND QUEEN" (YARD N^o 110) (Number of Visits 1)

Master J. L. PETIT Built at New Warrimaroo By whom built Dan Phib & Co. Tons { Gross 701
Net 312

Engines made at Coatbridge By whom made Lidgerwood Limited (Eng. N^o 415) when made 1914

Boilers made at Glasgow By whom made Daniel Brown & Co. (BR. N^o 205) when made 1914

Registered Horse Power 99 Owners London & Channel Islands S.S. Co. Port belonging to London

Nom. Horse Power as per Section 28 99 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

ENGINES, &c.—Description of Engines Triple Expansion Surface Condensing No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 14 22 1/2 37 Length of Stroke 24 Revs. per minute 116 Dia. of Screw shaft as per rule Material of 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 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 no If two

liners are fitted, is the shaft lapped or protected between the liners no Length of stern bush 10 1/2

Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin as fitted Size of Crank webs as fitted Dia. of thrust shaft under

collars as fitted Dia. of screw as fitted Pitch of Screw as fitted No. of Blades as fitted State whether moveable as fitted Total surface as fitted

No. of Feed pumps 2 Diameter of ditto 2 1/2 Stroke 10 Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 2 1/2 Stroke 10 Can one be overhauled while the other is at work yes

No. of Donkey Engines 2 Sizes of Pumps 6 1/2 4 1/2 6 1/2 No. and size of Suctions connected to both Bilge and Donkey pumps 2 1/2

In Engine Room 2 @ 2 1/2 In Holds, &c. After peak tank 1 @ 3 1/2; Hold 2 @ 2 1/2

No. of Bilge Injections 1 sizes 3 1/2 Connected to condenser 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 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

What pipes are carried through the bunkers none How are they protected by

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 30-3-14 of Stern Tube 30-3-14 Screw shaft and Propeller 30-3-14

Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door yes worked from yes

BOILERS, &c.—(Letter for record S) Manufacturers of Steel S

Total Heating Surface of Boilers 1900 Is Forced Draft fitted no No. and Description of Boilers 2, S.E. cylindrical Multitubular

Working Pressure 180 lbs. Tested by hydraulic pressure to 225 Date of test 12-6-12 No. of Certificate 12612

Can each boiler be worked separately yes Area of fire grate in each boiler 31.7 No. and Description of Safety Valves to

each boiler 2 - Spring loaded Area of each valve 3.98 Pressure to which they are adjusted 180 lbs. Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers 4'-0" Mean dia. of boilers 4'-0" Length 4'-0" Material of shell plates as per rule

Thickness as per rule Range of tensile strength as per rule Are the shell plates welded or flanged no Descrip. of riveting: cir. seams as per rule

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

Per centages of strength of longitudinal joint as per rule Working pressure of shell by rules as per rule Size of manhole in shell as per rule

Size of compensating ring as per rule No. and Description of Furnaces in each boiler as per rule Material as per rule Outside diameter as per rule

Length of plain part as per rule Thickness of plates as per rule Description of longitudinal joint as per rule No. of strengthening rings as per rule

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

Pitch of stays to ditto: Sides as per rule Back as per rule Top as per rule If stays are fitted with nuts or riveted heads as per rule Working pressure by rules as per rule

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

Material as per rule Thickness as per rule Pitch of stays as per rule How are stays secured as per rule Working pressure by rules as per rule Material of stays as per rule

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

Thickness as per rule Material of Lower back plate as per rule Thickness as per rule Greatest pitch of stays as per rule Working pressure of plate by rules as per rule

Diameter of tubes as per rule Pitch of tubes as per rule Material of tube plates as per rule Thickness: Front as per rule Back as per rule Mean pitch of stays as per rule

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

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

Working pressure by rules as per rule Superheater or Steam chest; how connected to boiler as per rule Can the superheater be shut off and the boiler worked

separately as per rule Diameter as per rule Length as per rule Thickness of shell plates as per rule Material as per rule Description of longitudinal joint as per rule Diam. of rivet

holes as per rule Pitch of rivets as per rule Working pressure of shell by rules as per rule Diameter of flue as per rule Material of flue plates as per rule Thickness as per rule

If stiffened with rings as per rule Distance between rings as per rule Working pressure by rules as per rule End plates: Thickness as per rule How stayed as per rule

Working pressure of end plates as per rule Area of safety valves to superheater as per rule Are they fitted with easing gear as per rule

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No. _____ Description *None fitted*

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 Master

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 _____ Radius of do. _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— *2 Connecting rod top end & 2 bottom end bolts & nuts; 2 main bearing bolts; 1 set complete bolts; 1 set feed & bilge pump valves; assorted bolts & nuts, iron of various sizes; 1 set air & circulating pump valves; 30 condenser water glands; 2 springs for safety valves; 2 main feed & 2 donkey feed check valves; 6 cyl. cover studs; and 6 piston junk ring bolts*

The foregoing is a correct description,

F. RIDGERWOOD LIMITED Manufacturer. *R. Sneddon*

Dates of Survey while building

During progress of work in shops—	20/3/14	30/3/14	9/4/14	10/4/14	14/4/14	14/4/14	21/4/14	22/4/14	24/4/14	25/4/14	27/4/14
During erection on board vessel—											
Total No. of visits	11										

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

Dates of Examination of principal parts—Cylinders _____ Slides _____ Covers _____ Pistons _____ Rods _____

Connecting rods _____ Crank shaft _____ Thrust shaft _____ Tunnel shafts _____ Screw shaft _____ Propeller _____

Stern tube _____ Steam pipes tested *21-4-14* Engine and boiler seatings *30-3-14* Engines holding down bolts *10-4-14*

Completion of pumping arrangements *25-4-14* Boilers fixed *22-4-14* Engines tried under steam *25-4-14*

Main boiler safety valves adjusted *24-4-14* Thickness of adjusting washers *Port & S. 7/16* *Starboard & S. 2 1/16*

Material of Crank shaft _____ Identification Mark on Do. _____ Material of Thrust shaft _____ Identification Mark on Do. _____

Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts _____ Identification Marks on Do. _____

Material of Steam Pipes *Stamless Copper* Test pressure *360 lbs.*

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

The machinery of this vessel has now been fitted on board in accordance with the Society's rules, examined under full working conditions and found satisfactory; and eligible, in my opinion, to have record of + LMC 4.14.

Note: For particulars of engines and boilers see Glasgow Report No. 33832.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 4.14.

JWD.
30/4/14

The amount of Entry Fee .. £ *charged by Glasgow Office* When applied for, .. 19--

Special When received, .. 19--

Donkey Boiler Fee

Travelling Expenses (if any) £

Committee's Minute *FRI MAY 1-1914*Assigned *+ LMC 4.14*

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