

REPORT ON MACHINERY.

No. 46265

Port of Newcastle-on-Tyne

SAI. 19 DEC 1906

Received at London Office

No. in Survey held at Newcastle

Date, first Survey April 8th Last Survey 16/12 1903

Reg. Book.

(Number of Visits 12)

on the S/S "Singu"

Tons { Gross 3037
Net 1912

Master G.M. Currie Built at Newcastle

By whom built Armstrong Whitworth Co When built 1903

Engines made at Newcastle

By whom made Holland Shipway & Eng. Co when made 1903

Boilers made at Newcastle

By whom made Holland Shipway & Eng. Co when made 1903

Registered Horse Power

Owners Burmah Oil Co. Ltd.

Port belonging to Rangoon

Nom. Horse Power as per Section 28 265

Is Refrigerating Machinery fitted no

Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Trip

No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 22", 37", 61" Length of Stroke 42 Revs. per minute 70 Dia. of Screw shaft 12 5/8 as per rule 12 5/8 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 ✓ 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 ✓ If two

liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 4'-9"

Dia. of Tunnel shaft 12 1/4 as per rule 11-7 1/2 Dia. of Crank shaft journals 12 1/4 as per rule 11-7 1/2 Dia. of Crank pin 12 1/4 Size of Crank webs 8+24 1/2 Dia. of thrust shaft under

collars 12 1/4 Dia. of screw 16-0 Pitch of screw 17-3 No. of blades 4 State whether movable no Total surface 78 5/8

No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 22" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 3/4" Stroke 22" Can one be overhauled while the other is at work yes

No. of Donkey Engines 2+2 Sizes of Pumps 6x4x6, 6x7 1/2x6 No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room Two 3" in oil well, Two 3" in oil tank, etc. — In Holds, &c. One 5" suction in each cargo tank, one diam suction in each pump room, one 3" suction in cargo hold.

No. of bilge injections 1 sizes 6" Connected to condenser or to circulating pump no 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 None 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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Nov Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door ✓ worked from Engines fitted aft.

BOILERS, &c.— (Letter for record ✓) Total Heating Surface of Boilers 4130 5/8 Is forced draft fitted no

No. and Description of Boilers Two simple end Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs

Date of test 17/6/03 Can each boiler be worked separately yes Area of fire grate in each boiler 6 1/2 5/8 No. and Description of safety valves to

each boiler Two spring valves Area of each valve 7.07 1/4" Pressure to which they are adjusted 185 lbs Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork Way of tanks Mean dia. of boilers 14-0" Length 11-6" Material of shell plates S

Thickness 1 1/4" Range of tensile strength 29-32 Are they welded or flanged no Descrip. of riveting: cir. seams lap 1/4" long. seams 1 1/2" with riv.

Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 9" Lap of plates or width of butt straps 19 3/16

Per centages of strength of longitudinal joint rivets 93 Working pressure of shell by rules 205 Size of manhole in shell 12x16

Size of compensating ring None No. and Description of Furnaces in each boiler 3 Diagonal Material S Outside diameter 45"

Length of plain part top ✓ bottom ✓ Thickness of plates crown 3 3/8" bottom 3 5/8" Description of longitudinal joint Welded No. of strengthening rings ✓

Working pressure of furnace by the rules 188 Combustion chamber plates: Material S Thickness: Sides 1/8" Back 1/8" Top 1/16" Bottom 3/32"

Pitch of stays to ditto: Sides 8 3/4x9 3/4 Back 8 1/2x9 3/8 Top 8 3/4x9 3/4 If stays are fitted with nuts or riveted heads None Working pressure by rules 190

Material of stays Iron Diameter at smallest part 1 1/8" Area supported by each stay 85.5 1/4" Working pressure by rules 203 End plates in steam space:

Material S Thickness 1 23/64" Pitch of stays 16 1/2x19 3/4" How are stays secured d.n.r.w. Working pressure by rules 250 Material of stays S

Diameter at smallest part 7 24/64" Area supported by each stay 331 1/4" Working pressure by rules 222 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 1" Greatest pitch of stays 13 1/2x15" Working pressure of plate by rules 184

Diameter of tubes 3" Pitch of tubes 4 1/2x4 1/2 Material of tube plates S Thickness: Front 1" Back 3/4" Mean pitch of stays 9"

Pitch across wide water spaces 13 1/2 Working pressures by rules 210 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 9x1 1/2" Length as per rule 31 3/4" Distance apart 8 3/4" Number and pitch of Stays in each 2, 9 3/4"

Working pressure by rules 196 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked

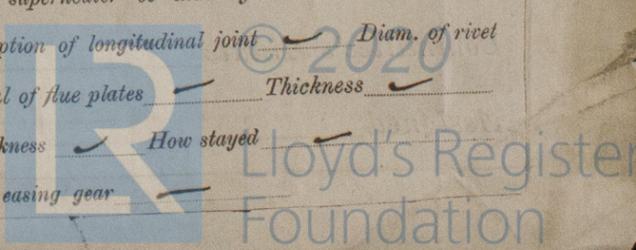
separately ✓ Diameter ✓ Length ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet

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 ✓

51206-0095



DONKEY BOILER— No. *One* Description *Single Ended Multitubular*
 Made at *Newcastle* By whom made *Wattana Shipway & Eng. Co.* When made *17/6/03* Where fixed *Wharfedale*
 Working pressure *120 lbs* tested by hydraulic pressure to *240 lbs* No. of Certificate *6608* Fire grate area *30 5/8* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *4.9* Pressure to which they are adjusted *120 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*
 Dia. of donkey boiler *10-0* Length *9-0* Material of shell plates *S* Thickness *1/8* Range of tensile strength *29-32* Descrip. of riveting long. seams *Lap with*
 Dia. of rivet holes *3/32* Whether punched or drilled *Drilled* Pitch of rivets *1 1/2*
 Lap of plating *7/8* Per centage of strength of joint *81* Rivets *81* Thickness of shell *and* plates *3/8* Radius of do. *1/2* No. of Stays to do. *14 x 1 1/2*
 Dia. of stays. *2.57* Diameter of furnace *Top 38* Bottom *38* Length of furnace *5-9* Thickness of furnace plates *3/8* Description of joint *W. Single riv.* Thickness of furnace crown plates *3/8* Stayed by *1 3/8 off. stays* Working pressure of shell by rules *123*
 Working pressure of furnace by rules *131* Diameter of *uptake* tubes *2 1/4* Thickness of *uptake* plates *3/8* Thickness of *water* tubes *5/8*

SPARE GEAR. State the articles supplied:— *One propeller shaft, two top end & two bottom end con. rods bolts & nuts, two main bearing bolts, one set coupling bolts, one set fuel & lube pump valves, assorted bolts & nuts, two of various sizes.*

The foregoing is a correct description,

A. King Manufacturer.

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

1903. Apr 28, May 26, June 5, 10, 17, Aug 26, Oct 26, 29, Dec 10, 16

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

donkey " " " *Yes*

General Remarks (State quality of workmanship, opinions as to class, &c. *This vessel is built to carry oil in bulk. The main and donkey boilers are fitted to burn liquid fuel with Edison Rusdens patent burners. Two 15 ton Morrison's evaporators are fitted to make up loss of water due to spraying the oil. The oil fuel is carried in bunkers in way of donkey boiler and in Cofferdam at fore side of this bunker but not underneath boiler. The donkey boiler in way of bunkers is thoroughly insulated being covered thickly with non conducting composition. Two Worthington duplex pumps are fitted in sternhold to pump the oil fuel from bunkers to settling tanks in fiddley and for pumping out oil well in way of bunkers. The oil to be used for fuel is Burmah oil stated to have a flash point not less than F 200.*

The machinery of this vessel has been constructed under special survey, the materials and workmanship are sound and good and under the vessel eligible in my opinion to have record of + L.M.C. 12.03

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 12.03. ELEC LIGHT.

Fitted for Liquid Fuel 12.03

Ed. M.S.
21.12.03 19.12.03

The amount of Entry Fee. £ *2* : : :
 Special £ *33* : *5* : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, *18 DEC 1903*
 When received, *23/12/03*

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

Committee's Minute *TUES. 22 DEC 1903*

Assigned *+ L.M.C. 12.03*

MACHINERY CERTIFICATE WRITTEN.

Fitted for liquid fuel

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Lloyd's Register Foundation

Newcastle-on-Tyne

Certificate (if required) to be sent to

The Surveyors are requested not to write on or interfere the space for Committee's Minute.