

REPORT ON MACHINERY.

No. 117111

WED. 8 JUN 1904

Port of Newcastle on Tyne Received at London Office 10

Date, first Survey Oct. 30th '03 Last Survey June 2nd 1904

Survey held at Newcastle

on the S/S "Berne"

Built at Newcastle By whom built Armstrong Whitworth & Co. Tons Gross 3039

By whom made Wadding Shipway & Eng. Co. when made 1904

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Registered Horse Power 265 Owners Burmah Oil Co. Ltd. Port belonging to Rangoon

Horse Power as per Section 28 265 Is Refrigerating Machinery fitted no Is Electric Light fitted yes

Engines, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3

of Cylinders 22", 37", 61" Length of Stroke 42" Revs. per minute 70 Dia. of Screw shaft 12 1/2" Material of screw shaft Steel

Is the after end of the liner made water tight 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

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

Dia. of Crank shaft journals 11-7 1/2" Dia. of Crank pin 12 1/2" Size of Crank webs 2 1/2 x 8 Dia. of thrust shaft under

of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 22" Can one be overhauled while the other is at work yes

of Bilge pumps 2 Diameter of ditto 3 3/4" Stroke 22" Can one be overhauled while the other is at work yes

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

Engine Room 3' x 3' 1/2' In Holds, &c. one 5" suction in each cargo tank

of bilge injections 1 sizes 6" Connected to condenser, or to circulating pump yes Is a separate donkey suction fitted in Engine room & size yes 3 1/2"

Are the sluces on Engine room bulkheads always accessible yes

Are the roses in Engine room always accessible yes Are they Valves or Cocks Both

Are the discharge pipes above or below the deep water line above

Are the blow off cocks fitted with a spigot and brass covering plate yes

How are they protected yes

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

Is the screw shaft tunnel watertight yes

Is forced draft fitted no

Boilers, &c.—(Letter for record 2) Total Heating Surface of Boilers 4130 sq

Working Pressure 180 lbs Tested by hydraulic pressure to 260 lbs

Area of fire grate in each boiler 6 1/2 sq No. and Description of safety valves to

Pressure to which they are adjusted 183 lbs Are they fitted with easing gear yes

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 long. seams butt

Lap of plates or width of butt straps 19 3/4

Working pressure of shell by rules 215 Size of manhole in shell 12x16

No. and Description of Furnaces in each boiler 3 Material S Outside diameter 45"

Thickness of plates 3/16" Description of longitudinal joint weld No. of strengthening rings yes

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

Working pressure by rules 190

Material of stays Iron Diameter at smallest part 1 1/16" Area supported by each stay 85.5 sq Working pressure by rules 203 End plates in steam space:

Working pressure by rules 250 Material of stays S

Material of Front plates at bottom S

Working pressure of plate by rules 184

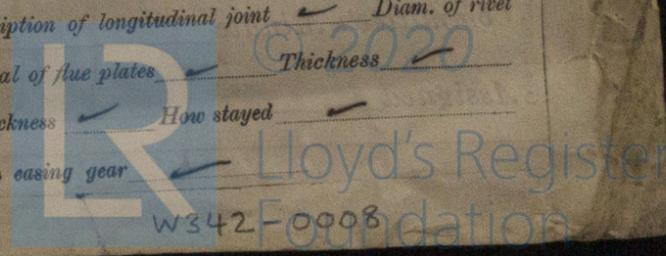
Material of Lower back plate S Thickness 1" Greatest pitch of stays 13 1/2 & 15" Working pressure of plate by rules 184

Mean pitch of stays 8 1/2"

Material of tube plates S Thickness: Front 1" Back 3/4"

Working pressures by rules 210 Girders to Chamber tops: Material S Depth and

Number and pitch of Stays in each 2, 9 3/4"



W342 Foundation

REP 4

47114

DONKEY BOILER— No. *One* Description *Simple tank Multitubular*
 Made at *Newcastle* By whom made *Wallsend Shipbuilding & Eng. Co* When made *29/1/04* Where fixed *Stockholm*
 Working pressure *120 lbs* tested by hydraulic pressure to *240 lbs* No. of Certificate *6729* Fire grate area *30 sq* Description of safety valves *Spring*
 No. of safety valves *2* Area of each *4 sq* Pressure to which they are adjusted *120 lbs* If fitted with casing gear *No* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler *10'-0"* Length *9'-1"* Material of shell plates *S* Thickness *3/16* Range of tensile strength *29-32* Descrip. of riveting long. seams *Lap with* Dia. of rivet holes *3/16* Whether punched or drilled *Drilled* Pitch of rivets *4 1/2*
 Lap of plating *7/8"* Per centage of strength of joint Rivets *81* Thickness of shell *end* plates *3/16* Radius of do. *1 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 *7/16* Description of joint *As single rivet* Thickness of furnace *end* plates *3/16* Stayed by *1 3/8" off. stays* Working pressure of shell by rules *123*
 Working pressure of furnace by rules *131* Diameter of *tube* *2 3/4* Thickness of *tube* *3/16* plates *3/16* Thickness of *tube* *5/16* tubes *5/16*

SPARE GEAR. State the articles supplied:— *One propeller shaft, two lip end & two bottom end con. rods bolts & nuts, two main bearing bolts, one set coupling bolts, one set feed & lift pump valves essential bolts & nuts, 200 of various sizes.*

The foregoing is a correct description,

THE WALLSEND SHIPBUILDING & ENGINEERING CO., LIMITED.

M. Mearns Manufacturer.

Dates of Survey while building
 During progress of work in shops— *1903 Oct. 20 / 1904 Dec. 16*
 During erection on board vessel— *1904 Jan. 15 20 28 29 Feb. 15 16 26 29*
 Total No. of days *16*

Is the approved plan of main boiler forwarded herewith *No*

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 Echs and Ruskens patent burners. Two 15 ton evaporators are fitted to make up loss of water due to spraying the oil. The oil fuel is carried in bunkers at fore end of stockhold in way of donkey boiler but not underneath engines or boilers. The donkey boiler in way of bunkers is thoroughly insulated being covered thickly with non-conducting composition. Two duplex pumps are fitted in stockhold to pump the oil fuel from bunkers to settling tanks in hold, and for pumping out oil well in way of bunkers. The oil to be used for fuel is Burmah oil which is 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 slight in my opinion to have used of L.M.C. 6.14.

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 6.04 ELEC: LIGHT.

Fitted for Liquid Fuel 6.04

WMS
8.6.04

J.M.

The amount of Entry Fee... £ *2* : :
 Special... £ *33* : *5* :
 Donkey Boiler Fee... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, JUN 1904
 When received, JUN 1904

G.A. Sata

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

Committee's Minute

FRI. 10 JUN 1904

Assigned

+ L.M.C. 6.04

Elec. light

Fitted for liquid fuel 6.04

MADE BY WALLSEND SHIPBUILDING & ENGINEERING CO. WRITTEN.



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Certificate (if required) to be sent to Newcastle-on-Tyne.