

24 JUN 1902

No. 51812.

REPORT ON MACHINERY.

Port of LIVERPOOL.

Received at London Office **WED. 25 JUN 1902**

No. in Survey held at **Lytham** Date, first Survey **30th Jan'y** Last Survey **23rd June 1902.**
 eg. Book. **06** on the **steel S.S. "Ribajo"** Number of Visits **12**
 Tons { Gross **1141.**
 Net **313.**
 Built at **St Glasgow** By whom built **David J. Dunlop & Co.** When built **1889.**
 Engines made at **St Glasgow** By whom made **David J. Dunlop & Co.** when made **1889.**
 Boilers made at **Lytham** By whom made **Lytham Shipbuilding & Eng^y Co** when made **1902-6.**
 Registered Horse Power **114.** Owners **Royal Niger Co Ltd** Port belonging to **London.**
 Is Refrigerating Machinery fitted ☒ Is Electric Light fitted ☒

ENGINES, &c.—Description of Engines

No. of Cylinders	No. of Cranks	Length of Stroke	Revs. per minute	Dia. of Screw shaft	Lgth. of stern bush
as per rule	as per rule	as per rule	as per rule	as fitted	as fitted
Dia. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under	
as fitted	as fitted	as fitted			
Dia. of screw	Pitch of screw	No. of blades	State whether moveable	Total surface	
No. of Feed pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work		
No. of Bilge pumps	Diameter of ditto	Stroke	Can one be overhauled while the other is at work		
No. of Donkey Engines	Sizes of Pumps		No. and size of Suctions connected to both Bilge and Donkey pumps		
Engine Room			In Holds, &c.		
No. of bilge injections	sizes	Connected to condenser, or to circulating pump	Is a separate donkey suction fitted in Engine room & size		
Are all the bilge suction pipes fitted with roses	Are the roses in Engine room always accessible	Are the sluices on Engine room bulkheads always accessible			
Are all connections with the sea direct on the skin of the ship	Are they Valves or Cocks				
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates	Are the discharge pipes above or below the deep water line				
Are they each fitted with a discharge valve always accessible on the plating of the vessel	Are the blow off cocks fitted with a spigot and brass covering plate				
That 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					
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges					
Then were stern tube, propeller, screw shaft, and all connections examined in dry dock	Is the screw shaft tunnel watertight				
Is it fitted with a watertight door	worked from				

BOILERS, &c.— (Letter for record **S.**) Total Heating Surface of Boilers **1270 sq ft.** Is forced draft fitted ☒
 No. and Description of Boilers **one Cylindrical Multitubular** Working Pressure **80 lbs** Tested by hydraulic pressure to **160 lbs**
 Date of test **4/6/02** Can each boiler be worked separately ☒ Area of fire grate in each boiler **46.8 sq ft** 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 **12" 9 3/4"** Length **9' 0"** Material of shell plates **Steel**
 Thickness **1/16"** Range of tensile strength **27 lbs** Are they welded or flanged ☒ Descrip. of riveting: cir. seams **Lap D.R.** long. seams **Butt Strap D.R.**
 Diameter of rivet holes in long. seams **15/16"** Pitch of rivets **3 1/2"** Lap of plates or width of butt straps **4 3/4"** 9 3/4" x 1 1/4"
 Percentages of strength of longitudinal joint **83.72%** Working pressure of shell by rules **98 lbs** Size of manhole in shell **15" x 12"**
 Size of compensating ring **McNeil** No. and Description of Furnaces in each boiler **three plain** Material **Steel** Outside diameter **37 1/2"**
 Length of plain part **top 5' 6"** Thickness of plates **crown 3/32"** Description of longitudinal joint **welded.** No. of strengthening rings **—**
 Working pressure of furnace by the rules **135 lbs** Combustion chamber plates: Material **Steel** Thickness: Sides **1/2"** Back **1/2"** Top **1/2"** Bottom **1/2"**
 Pitch of stays to ditto: Sides **8 1/2" x 8 1/2"** Back **8 1/2" x 8 1/2"** Top **8 1/2" x 7"** If stays are fitted with nuts or riveted heads **nuts** Working pressure by rules **106 lbs**
 Material of stays **Steel** Diameter at smallest part **1.01"** Area supported by each stay **72.25"** Working pressure by rules **114 lbs** End plates in steam space: **—**
 Material **Steel** Thickness **1/16"** Pitch of stays **14 1/2" x 14"** How are stays secured **nuts & washers** Working pressure by rules **104 lbs** Material of stays **Steel**
 Diameter at smallest part **2.51"** Area supported by each stay **243"** Working pressure by rules **103 lbs** Material of Front plates at bottom **Steel**
 Thickness **1/16"** Material of Lower back plate **Steel** Thickness **1/16"** Greatest pitch of stays **Summit** Working pressure of plate by rules **95 lbs**
 Diameter of tubes **3 1/4"** Pitch of tubes **4 1/2" x 4 1/2"** Material of tube plates **Steel** Thickness: Front **1/16"** Back **1/16"** Mean pitch of stays **9"**
 Pitch across wide water spaces **14 1/2"** Working pressures by rules **86 lbs** Girders to Chamber tops: Material **Steel** Depth and thickness of girder at centre **5" x 2"** Length as per rule **2' 2 1/2"** Distance apart **7"** Number and pitch of Stays in each **two 7" x 8 1/2"**
 Working pressure by rules **142 lbs** 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 ☒

LIVS93-0147

DONKEY BOILER— No. Description
Made at By whom made When made Where fixed
Working pressure tested by hydraulic pressure to No. of Certificate Fire grate area Description of safety valves
No. of safety valves Area of each Pressure to which they are adjusted 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 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
Thickness of furnace crown plates Stayed by Working pressure of shell by rules
Working pressure of furnace by rules Diameter of uptake Thickness of uptake plates Thickness of water tubes

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,
Manufacturer.

Dates During progress of work in shops— Jan 30. Feb 20. 24. Mar 7. 24. Apr 14. 21. 25. May 8. 30. June 4. 23.
of Survey During erection on board vessel—
while building Total No. of visits 12.
Is the approved plan of main boiler forwarded herewith yes.
" " " donkey " " " ✓

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

Material of screw shaft Is the screw shaft fitted with a continuous liner the whole length of the stern tube
Is the after end of the liner made water tight in the propeller boss 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

A new Main Boiler has now been made under special purvey and in accordance with the approved plan and Secretaries letter (C) dated 22nd Jan 1902. The materials and workmanship are of a good quality and when tested by hydraulic pressure to 160 lbs per sq inch was found tight and satisfactory. It has now been fitted on board and is eligible in my opinion for the record NB. 02

No 1689.
LLOYD'S TEST.
160 lbs.
J. D. 14-6-02.

This boiler being fitted on board an unclassified vessel it is submitted the notation NB 02 in black be inserted in the Register Book.

The amount of Entry Fee. £ : :
Special £ 5 : 5 :
Donkey Boiler Fee £ : :
Travelling Expenses (if any) £ 1 : 15 :
When applied for, 24 JUN 1902
When received, 19 JUL 1902

Committee's Minute LIVERPOOL, 24 JUN 1902

Assigned

N. B 02

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