

# REPORT ON MACHINERY.

No. 17155

Received at London Office WED. 11 JUL. 1917

of writing Report 23 June 1917 When handed in at Local Office 28 June 1917 Port of Greenock

in Survey held at Greenock, St. Nazaire Date, First Survey 11<sup>th</sup> Apr 1916 Last Survey 27 June 1917

Book on the Steel screw steamer "Maikar" (Number of Visits 106)

ter Built at St. Nazaire By whom built Lucas & Co Tons } Gross }  
Net } When built 1917

ines made at Greenock By whom made John S Kincaid & Co Ltd when made 1917

lers made at Greenock By whom made John S Kincaid & Co Ltd when made 1917

istered Horse Power Owners J & J Brocklebank Ltd Port belonging to Liverpool

Horse Power as per Section 28 800 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted ye

INES, &c.—Description of Engines Triple Compound No. of Cylinders Three No. of Cranks Three

of Cylinders 28-47 1/2-80 Length of Stroke 54 Revs. per minute 75 Dia. of Screw shaft as per rule 16.02 Material of screw shaft as fitted 17 1/4

he screw shaft fitted with a continuous liner the whole length of the stern tube ye Is the after end of the liner made water tight

he propeller boss ye If the liner is in more than one length are the joints burned no If the liner does not fit tightly at the part

een the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive no If two

s are fitted, is the shaft lapped or protected between the liners no Length of stern bush 69

of Tunnel shaft as per rule 14.87 Dia. of Crank shaft journals as per rule 15.61 Dia. of Crank pin 16 Size of Crank webs 24-10 1/2 Dia. of thrust shaft under

ers 16 Dia. of screw 18.6 Pitch of Screw 18.3 No. of Blades 4 State whether moveable ye Total surface 110.98

of Feed pumps 2 Weir Diameter of ditto 12 Stroke 24 Can one be overhauled while the other is at work ye

of Bilge pumps Two Diameter of ditto 4 1/2 Stroke 20 Can one be overhauled while the other is at work ye

of Donkey Engines Three Sizes of Pumps 7-18 12-18 8-12 No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two 3 1/2 In Holds, &c. Two 3 1/2 Tunnel 2 1/2

Circulating Pump separate engine

of Bilge Injections Two sizes 10 Connected to condenser, or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size ye 3 1/2

all the bilge suction pipes fitted with roses ye Are the roses in Engine room always accessible ye Are the sluices on Engine room bulkheads always accessible ye

all connections with the sea direct on the skin of the ship ye Are they Valves or Cocks both

they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ye Are the Discharge Pipes above or below the deep water line above

they each fitted with a Discharge Valve always accessible on the plating of the vessel ye Are the Blow Off Cocks fitted with a spigot and brass covering plate ye

at pipes are carried through the bunkers no How are they protected no

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times ye

the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges ye

es of examination of completion of fitting of Sea Connections 12/4/17 of Stern Tube 12/4/17 Screw shaft and Propeller 12/4/17

he Screw Shaft Tunnel watertight ye Is it fitted with a watertight door ye worked from top stokehold

ELERS, &c.—(Letter for record ye) Manufacturers of Steel Cottrill & Sons

al Heating Surface of Boilers 15710 Is Forced Draft fitted no No. and Description of Boilers Two bottle ended and one

orking Pressure 200 lb Tested by hydraulic pressure to 400 lb Date of test 24.30/4/17 No. of Certificate 284-1285

each boiler be worked separately ye Area of fire grate in each boiler Single 61.5 No. and Description of Safety Valves to

boiler Two Spring Area of each valve 12.56 Pressure to which they are adjusted 305 lb Are they fitted with easing gear ye

allest distance between boilers or uptakes and bunkers or woodwork 30.5 dia. of boilers: 17.0 Length 19.6 Material of shell plates Steel

ickness 1 1/2 Range of tensile strength 29 1/2-33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams 3/16 in 4

seams all chip 3/16 Diameter of rivet holes in long. seams 1 17/32 Pitch of rivets 10 1/2 Lap of plates or width of butt straps 2 1/2

centages of strength of longitudinal joint 87.0 Working pressure of shell by rules 208 lb Size of manhole in shell 16-12

of compensating ring Winged 1 1/2 No. and Description of Furnaces in each boiler 8 Brighton Material Steel Outside diameter 45 1/2

gth of plain part top 10 1/16 Thickness of plates bottom 10 1/16 Description of longitudinal joint welded No. of strengthening rings longitudinal

orking pressure of furnace by the rules 223 lb Combustion chamber plates: Material Steel Thickness: Sides 1 1/16 Back 1 1/16 Top 1 1/16 Bottom 1 1/16

h of stays to ditto: Sides 9 1/4-8 1/4 Back 9 1/4-8 1/4 Top 9 1/4-8 1/4 If stays are fitted with nuts or riveted heads both Working pressure by rules 202 lb

erial of stays Iron Diameter at smallest part 2.36 Area supported by each stay 51 Working pressure by rules 219 lb End plates in steam space:

erial Steel Thickness 1 7/16 Pitch of stays 23-21 1/4 How are stays secured all nut Working pressure by rules 201 lb Material of stays Steel

at smallest part 9.52 Area supported by each stay 480 Working pressure by rules 211 lb Material of Front plates at bottom Steel

ickness 1 1/16 Material of Lower back plate no Thickness no Greatest pitch of stays no Working pressure of plate by rules no

eter of tubes 5 Pitch of tubes 4 1/16-4 1/8 Material of tube plates Steel Thickness: Front 1 1/16 Back 1 1/32 Mean pitch of stays 8 1/16-8 1/4

h across wide water spaces no Working pressures by rules 207 lb Girders to Chamber tops: Material Steel Depth and

ness of girder at centre 13 1/4-14 Length as per rule 49.81 Distance apart 8 1/4 Number and pitch of stays in each 4-9 1/4

orking pressure by rules 205 lb Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked

ately no Diameter no Length no Thickness of shell plates no Material no Description of longitudinal joint no Diam. of rivet

Pitch of rivets no Working pressure of shell by rules no Diameter of flue no Material of flue plates no Thickness no

ffened with rings no Distance between rings no Working pressure by rules no End plates: Thickness no How stayed no

orking pressure of end plates no Area of safety valves to superheater no Are they fitted with easing gear no

00282-00289-0274

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**VERTICAL DONKEY BOILER—** Manufacturers of Steel *Iron* ✓

No.	Description		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
	Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
	If fitted with casing 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:— *The top end bell. Two bottom end bell. Two main beam bell. One set coupling bell. One set end pump valve. One set bridge pump valve. One crank pin lock complete. One eccentric with block & complete. Two safety blades (one fine steel, but in same size pump rod. Three safety valve spring. bell nut &c &c.*

**FOR JOHN G. KNOX & Co. Ltd.** as a correct description,

*Robert Green* Manufacturer.

Dates of Survey while building	1916		1917	
	During progress of work in shops --	During erection on board vessel ---	During progress of work in shops --	During erection on board vessel ---
	Apr 11-13-25	May 10-26	June 2-30	July 31
	Nov 2-6-14-17-21-22-25-27-29	Dec 1-6-8-12-15-20-22-25-26-29	Jan 7-10-12-16-17-19-22-24-26-29-31	Feb 1-3
	16-20-22-23-26-28	Feb 2-5-7-9-12-15-19-22-26-28-29	Apr 2-4-5-6-10-12-13-16-18-20-24-26-27-30-31	June 7-13-19-27
Total No. of visits	106			

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

**Dates of Examination of principal parts**—Cylinders *24/1/17* Slides *19/3/17* Covers *24/1/17* Pistons *28/2/17* Rods *28/2/17*  
 Connecting rods *8/2/17* Crank shaft *en list* Thrust shaft *en list* Tunnel shafts *14/5/17* Screw shaft *22/3/17* Propeller *22/3/17*  
 Stern tube *19/3/17* Steam pipes tested *22-30-31/5/17* Engine and boiler seatings *5/4/17* Engines holding down bolts *14/5/17*  
 Completion of pumping arrangements *19/6/17* Boilers fixed *13/6/17* Engines tried under steam *19/6/17*  
 Main boiler safety valves adjusted *19/6/17* Thickness of adjusting washers *P 1 1/2 S 1/2 - P 1 1/2 S 1 1/2 - P 1 1/2 S 1 1/2*  
 Material of Crank shaft *Steel* Identification Mark on Do. *2305 D* Material of Thrust shaft *Steel* Identification Mark on Do. *2305 D*  
 Material of Tunnel shafts *Steel* Identification Marks on Do. *2305 D* Material of Screw shafts *Steel* Identification Marks on Do. *2305 D*  
 Material of Steam Pipes *Iron* ✓ Test pressure *600 lbs* ✓

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

*The machinery and boiler of this steamer have been constructed under special survey, and placed on board in accordance with the Board's Rules. They are now in my opinion in safe working condition, and the case is respectfully submitted for the certification + L M C 6-17 in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD. + L M C 6. 17.

*JWD.*  
*19/7/17.*  
*James Jones.*

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

The amount of Entry Fee .. £ 3 : 0 :	When applied for,
Special .. £ 60 : 0 :	<i>30/6/17</i>
Donkey Boiler Fee .. £ :	When received,
Travelling Expenses (if any) £ :	<i>19/7/17</i>

Committee's Minute **GLASGOW.** 10 JUL 1917

Assigned + L M C 6, 17



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Certificate (if required) to be sent to the Registrar

*10-7-17*