

REPORT ON MACHINERY.

No. 23800

Mdb no 5521

Port of Sunderland

Received at London Office

SAT. 15 AUG 1908

No. in Survey held at SunderlandDate, first Survey 30th Dec: 1904 Last Survey 12 August 1908

Reg. Book.

on the

S. S. "Brika"

Mdb

14th June(Number of Visits 80)14th JulyGross 3558Master W. W. BeavanBuilt at MiddlesbroughBy whom built Messrs R. Crapps & Sons LtdTons { Gross
NetWhen built 1908Engines made at SunderlandBy whom made North Eastern Marine Engineeringwhen made 1908Boilers made at SunderlandBy whom made dittowhen made 1908

Registered Horse Power

Owners E. J. Bowring & Co. Ltd (Ingrs)

Port belonging to

London

Nom. Horse Power as per Section 28

321Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted no

ENGINES, &c.—Description of Engines

Inverted triple expansionNo. of Cylinders 3No. of Cranks 3Dia. of Cylinders 23 1/2, 39, 66"Length of Stroke 46"Revs. per minute 63

Dia. of Screw shaft

as per rule 13.64"Material of screw shaft IronIs 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 Yes

If two

liners are fitted, is the shaft lapped or protected between the liners ✓Length of stern bush 4' 8"

Dia. of Tunnel shaft

as per rule 11.96"

Dia. of Crank shaft journals

as per rule 12.58"Dia. of Crank pin 13"Size of Crank webs 18 1/2 x 8 1/2"

Dia. of thrust shaft under

collars 12 1/4"Dia. of screw 17' 0"Pitch of Screw 17' 0"No. of Blades 4State whether moveable noTotal surface 90 1/2No. of Feed pumps 2Diameter of ditto 3 1/4"Stroke 24"Can one be overhauled while the other is at work YesNo. of Bilge pumps 2Diameter of ditto 3 1/2"Stroke 24"Can one be overhauled while the other is at work YesNo. of Donkey Engines 2Sizes of Pumps 9 x 11 x 10"7 1/2 x 5 x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

Four of 3 1/2"

In Holds, &c.

Two 3 1/2" fore hold, Two 3 1/2" mainhold. Two 3 1/2" after main hold. Two 3 1/2" after hold. One 3" tunnel well.No. of Bilge Injections one size 4"Connected to condenser, or to circulating pump pumpIs a separate Donkey Suction fitted in Engine room & size Yes - 3 1/2"Are all the bilge suction pipes fitted with roses YesAre the roses in Engine room always accessible YesAre the sluices on Engine room bulkheads always accessible ✓Are all connections with the sea direct on the skin of the ship YesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates YesAre the Discharge Pipes above or below the deep water line aboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel YesAre the Blow Off Cocks fitted with a spigot and brass covering plate yesWhat pipes are carried through the bunkers noneHow are they protected ✓Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges YesDates of examination of completion of fitting of Sea Connections 16.6.08of Stern Tube 21.7.08Screw shaft and Propeller 24.7.08Is the Screw Shaft Tunnel watertight YesIs it fitted with a watertight door Yesworked from top platformBOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Messrs J. Spencer & SonsTotal Heating Surface of Boilers 5034 1/2Is Forced Draft fitted noNo. and Description of Boilers 3 S.E. Cylindrical MultWorking Pressure 180 lbsTested by hydraulic pressure to 360 lbsDate of test 13.3.08No. of Certificate 2694Can each boiler be worked separately YesArea of fire grate in each boiler 45 2/3

No. and Description of Safety Valves to

each boiler 2 springArea of each valve 4.91Pressure to which they are adjusted 185 lbsAre they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 15"Mean dia. of boilers 13.3 3/8"Length 10' 6"Material of shell plates steelThickness 1 1/8"Range of tensile strength 28 3/4/32Are the shell plates welded or flanged noDescrip. of riveting: cir. seams d x laplong. seams End B.S.Diameter of rivet holes in long. seams 1 1/8"Pitch of rivets 9"Lap of plates or width of butt straps 18"

Per centages of strength of longitudinal joint

rivets 85.5plate 86.8Working pressure of shell by rules 181 lbsSize of manhole in shell 16 x 12"Size of compensating ring flangedNo. and Description of Furnaces in each boiler 3 BrightonMaterial steelOutside diameter 40"

Length of plain part

top

Thickness of plates

crown 1 1/2"bottom 1 1/2"Description of longitudinal joint weldNo. of strengthening rings ✓Working pressure of furnace by the rules 188 lbsCombustion chamber plates: Material steelThickness: Sides 1 1/8"Back 3 1/4"Top 1 1/8"Bottom 7 1/8"Pitch of stays to ditto: Sides 8 1/2 x 10 3/8"Back 9 1/2 x 11 1/2"Top 8 1/2 x 10 3/8"If stays are fitted with nuts or riveted heads nutsWorking pressure by rules 180.4 lbsMaterial of stays steelDiameter at smallest part 2.1"Area supported by each stay 105 1/2Working pressure by rules 180.4 lbs

End plates in steam space:

Material steelThickness 1 1/2"Pitch of stays 24 1/2 x 18 1/2"How are stays secured d x w.Working pressure by rules 181 lbsMaterial of stays steelDiameter at smallest part 8.48Area supported by each stay 453 1/2Working pressure by rules 193 lbsMaterial of Front plates at bottom steelThickness 1 1/8"Material of Lower back plate steelThickness 1 1/8"Greatest pitch of stays 14 3/4 x 10 7/8"Working pressure of plate by rules 181 lbsDiameter of tubes 3 1/4"Pitch of tubes 4 1/2 x 4 1/2"Material of tube plates steelThickness: Front 3 1/8"Back 1 1/8"Mean pitch of stays 10 7/8"Pitch across wide water spaces 14 1/2"Working pressures by rules 184.9 lbsGirders to Chamber tops: Material steel

Depth and

thickness of girder at centre 8 3/4 x 15 1/8"Length as per rule 30.937Distance apart 10 3/8"Number and pitch of stays in each 2 - 8 1/2"Working pressure by rules 183 lbsSuperheater 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 ✓End plates: Thickness ✓How stayed ✓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 ✓Working pressure of end plates ✓Area of safety valves to superheater ✓Are they fitted with easing gear ✓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 ✓Working pressure of end plates ✓Area of safety valves to superheater ✓Are they fitted with easing gear ✓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 ✓Working pressure of end plates ✓Area of safety valves to superheater ✓Are they fitted with easing gear ✓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 ✓

VERTICAL DONKEY BOILER— Manufacturers of Steel

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 Safety
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	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 Top end, 2 bottom end, 2 Main bearing & 1 set of Coupling bolts, 1 set of feed & bilge pump Valves, bolts & nuts assorted & iron of sizes, 1 Propeller & 1 Propeller shaft

The foregoing is a correct description,
NORTH EASTERN MARINE ENGINEERING CO. LTD.
Walter & Deatherage Manufacturer.

Dates of Survey while building	During progress of work in shops—	1907: Dec. 30, 1908: Jan. 7, 9, 14, 20, 21, 24, 28, 31, Feb. 4, 5, 10, 11, 12, 14, 18, 19, 21, 25, 26, 28, Mar. 2, 6, 9, 12, 13, 16, 18, 20, 26,
	During erection on board vessel—	Apr. 2, 4, 10, 13, 16, 23, 24, 29, 30, May, 1, 4, 6, 7, 11, 15, 19, 25, 27, 29, June 2, 4, 10, 12, 16, 18, 22, 26, 30, July, 1, 2, 4, 9, 11, 13, 15, 16, 18, 21, 23, 24, 28, 29, 30, Aug. 5, 6, 7, 10, 12,
	Total No. of visits	80. (mdo) 16th June 14th July Is the approved plan of main boiler forwarded herewith Yes.

" " " donkey " " "
 Dates of Examination of principal parts—Cylinders 10.6.08 Slides 16.6.08 Covers 10.6.08 Pistons 18.6.08 Rods 21.1.08
 Connecting rods 16.6.08 Crank shaft 16.6.08 Thrust shaft 4.6.08 Tunnel shafts 18.6.08 Screw shaft 16.7.08 Propeller 18.7.08
 Stern tube 15.6.08 Steam pipes tested 29.3.08 Engine and boiler seatings 14.7.08 Engines holding down bolts 30.7.08
 Completion of pumping arrangements 7.8.08 Boilers fixed 30.7.08 Engines tried under steam 7.8.08
 Main boiler safety valves adjusted 7.8.08 Thickness of adjusting washers P.F. $\frac{5}{16}$, P.A. $\frac{5}{16}$; P.F. $\frac{1}{4}$, P.A. $\frac{1}{4}$; S.F. $\frac{5}{16}$, S.A. $\frac{1}{4}$,
 Material of Crank shaft Steel Identification Mark on Do. 47015 Material of Thrust shaft Steel Identification Mark on Do. P35 R29
 Material of Tunnel shafts Steel Identification Marks on Do. 716, 717, 755, 766, 769, 770 R28 Material of Screw shafts Iron Identification Marks on Do. 463 B
 Material of Steam Pipes Copper Test pressure 400 lbs

General Remarks (State quality of workmanship, opinions as to class, &c. The Machinery of this vessel has been constructed under Special Survey. The workmanship and materials used are both of good quality, the Engines have been tried under steam and worked satisfactorily

I beg to recommend that this vessel is eligible in my opinion to have the record ~~LMC 808~~ in the Register Book

It is submitted that this vessel is eligible for THE RECORD. LMC 808

The amount of Entry Fee..	£ 3 : 0 : 0	When applied for,
Special	£ 36 : 2 : 0	14. 8. 1908.
Donkey Boiler Fee	£ : : :	When received,
Travelling Expenses (if any) £	: : :	3. 9. 08 4. 9.

Committee's Minute

FRI. 28 AUG 1908

Assigned

MACHINERY CERTIFICATE WRITTEN.



© 2020

Lloyd's Register Foundation