

Port of *Newcastle*

SAT. 4 NOV 1905

Received at London Office

10

No. in Survey held at *Jarrow*
Reg. Book.Date, first Survey *Apr 5*Last Survey *Oct 23* 1905(Number of Visits *36*)on the *S.S. "King Bledodyn"*Master *J. R. Kitch* Built at *Jarrow*By whom built *Palmer's Co Ltd.*Gross *4387*Tons Net *2852*When built *1905*Engines made at *Jarrow*By whom made *Palmer's Co Ltd.*when made *1905*Boilers made at *do*By whom made *do*when made *1905*Registered Horse Power *356*Owners *King Line Ltd. (Philippe Philippe & Co)*Port belonging to *London*Nom. Horse Power as per Section 28 *356*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *no*

ENGINES, &c.—Description of Engines

*Triple expansion*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *26"-43"-70"*Length of Stroke *45"*Revs. per minute *70*

Dia. of Screw shaft

as per rule *14.5"*Material of *Steel*as fitted *14.5"*

screw shaft

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 *yes*

If two

liners are fitted, is the shaft lapped or protected between the liners *✓*Length of stern bush *4"-10"*Dia. of Tunnel shaft as per rule *12.75"*as fitted *12.3/4"*Dia. of Crank shaft journals as per rule *13.3.8"*as fitted *13.2"*Dia. of Crank pin *13.2"*Size of Crank webs *19"x8.3/4"*

Dia. of thrust shaft under

collars *13.2"*Dia. of screw *18'-0"*Pitch of screw *17'-0"*No. of blades *4*State whether moveable *no*Total surface *86 sq*No. of Feed pumps *2*Diameter of ditto *4"*Stroke *22.2"*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *4.2"*Stroke *22.2"*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *2*Sizes of Pumps *7.3/4"x9"x10" + 7.2"x4.2"x10"*

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

In Engine Room *Three 3.2"*In Holds, &c. *Fore hold 2-3.2" No 2 hold 2-3.2"**No 3 hold 2-3.2" No 4 hold 2-3.2" after hold well 3.2" Tunnel well 3.2"*No. of bilge injections *1* sizes *5.2"*Connected to condenser, or to circulating pump *yes*Is a separate donkey suction fitted in Engine room & size *yes 3.2"*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 *none*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 *Sections to fore holds*How are they protected *wood casing*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 *New vessel*Is the screw shaft tunnel watertight *yes*Is it fitted with a watertight door *yes*worked from *Top platform*

BOILERS, &c.—

(Letter for record *S*)Total Heating Surface of Boilers *5486 sq*Is forced draft fitted *no*No. and Description of Boilers *Two, multitubular single ended*Working Pressure *180 lbs*Tested by hydraulic pressure to *360 lbs*Date of test *28/7/05*Can each boiler be worked separately *yes*Area of fire grate in each boiler *75 sq*

No. and Description of safety valves to

each boiler *Two, spring*Area of each valve *8.29 sq*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 *18"*Mean dia. of boilers *16'-7.5/16"*Length *11'-2"*Material of shell plates *Steel*Thickness *1.5/16"*Range of tensile strength *29-32*Are they welded or flanged *no*Descrip. of riveting: cir. seams *S. Lap*long. seams *S.B.S.T. Rivet*Diameter of rivet holes in long. seams *1.1/2"*Pitch of rivets *8.7/8"*Lap of plates or width of butt straps *19.3/4"*

Per centages of strength of longitudinal joint

rivets *90.3*Working pressure of shell by rules *183 lbs*Size of manhole in shell end *16" x 12"*Size of compensating ring *flanged*No. and Description of Furnaces in each boiler *3 - Morrison's*Material *Steel*Outside diameter *21'-5.7/8"*Length of plain part top *✓*Thickness of plates crown *5/8"*Description of longitudinal joint *Welded*No. of strengthening rings *✓*Working pressure of furnace by the rules *189 lbs*Combustion chamber plates: Material *Steel*Thickness: Sides *5/8"*Back *5/8"*Top *5/8"*Bottom *7/8"*Pitch of stays to ditto: Sides *8.1/2" x 4.1/2"*Back *8.3/4" x 8.1/2"*Top *9.1/2" x 8"*If stays are fitted with nuts or riveted heads *nuts*Working pressure by rules *183 lbs*Material of stays *Steel*Diameter at smallest part *1.79"*Area supported by each stay *73 sq*Working pressure by rules *220 lbs*

End plates in steam space:

Material *Steel*Thickness *1.1/2"*Pitch of stays *17.1/2" x 16"*How are stays secured *S.N.W.*Working pressure by rules *190 lbs*Material of stays *Steel*Diameter at smallest part *5.27"*Area supported by each stay *280 sq*Working pressure by rules *185 lbs*Material of Front plates at bottom *Steel*Thickness *7/8"*Material of Lower back plate *Steel*Thickness *1.5/16"*Greatest pitch of stays *14.1/2"*Working pressure of plate by rules *219 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"*Back *1.3/16"*Mean pitch of stays *11.1/4"*Pitch across wide water spaces *14.1/2"*Working pressures by rules *182 lbs*Girders to Chamber tops: Material *Steel*

Depth and

thickness of girder at centre *8.3/4" x 2"*Length as per rule *34"*Distance apart *9.1/2"*Number and pitch of Stays in each *3-8"*Working pressure by rules *200 lbs*Superheater or Steam chest; how connected to boiler *none*

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 *✓*

Lloyd's Register

Foundation

W860-0012

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:— 2 top-end, 2 bottom-end + 2 main. bearing, bolts + nuts, 1 set of coupling bolts, 1 set of feed + bilge pump valves, a quantity of assorted iron + bolts + nuts, a spare propeller shaft, a spare propeller, a set of H.P. piston rings

The foregoing is a correct description,
Palmer & Sons Co. Ltd.
 Manufacturer.

Dates During progress work in shops— **Engine Works Manager** 1905 Apr 6 + 21 May 14 + 17 + 27 + 31 June 29 + 14 + 15 + 20 + 22 July 5 + 11 + 17 + 21
 of Survey During erection on board vessel— 28 Aug 18 + 19 + 20 + 31 Sep 17 + 15 + 20 + 29 Oct 13 + 16 + 20 + 29
 while building Total No. of visits 36

Is the approved plan of main boiler forwarded herewith *yes*
 " " " donkey " " " "

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

The engines + boilers of this vessel have been constructed under special survey + the materials + workmanship are found + good. The engines have been tried under steam + the safety valves of main + donkey boilers adjusted at their working pressures. The machinery is now in good + safe working condition + eligible in my opinion to have the notation of +L M C 10.05.

It is submitted that
 this vessel is eligible for
 THE RECORD **LM.C. 10.05**

Wm. S.
 4.11.05
Wm. S.
 4.11.05

The amount of Entry Fee.. £ 3 : : :
 Special £ 37 : 16 : :
 Donkey Boiler Fee £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, **3 NOV 1905**
 When received, 13/11/05

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

Committee's Minute

TUES. 7 NOV 1905

Assigned

+L M C 10.05

MACHINERY CERTIFICATE
 WRITTEN.



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 Foundation

Newcastle-on-Tyne.

Certificate (if required) to be sent to

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