

Port of

Hamburg

Received at London Office

19

No. in Survey held at

Rostock

Date, first Survey 23rd JulyLast Survey 1st Aug. 1904

Reg. Book.

69th on the *Steel S.S. "Hansa" ex Borkum*

(Number of Visits 4)

Gross 890

Net 560

When built 1904

Master *W. C. Kulle*Built at *Rostock*By whom built *Act. Eng. Neptun*Engines made at *Rostock*By whom made *Act. Eng. Neptun*when made *04*Boilers made at *Rostock*By whom made *Act. Eng. Neptun*when made *04*Registered Horse Power *120*Owners *Donald Currier & Co*Port belonging to *London*Nom. Horse Power as per Section 28 *120*Is Refrigerating Machinery fitted *no*Is Electric Light fitted *yes*

ENGINES, &c.—Description of Engines

*Triple Expansion*No. of Cylinders *3*No. of Cranks *3*Dia. of Cylinders *16 1/8, 25 1/8, 41 1/4* Length of Stroke *28 3/4* Revs. per minute *100*Dia. of Screw shaft *as per rule 9 1/4* Material of *Steel*Is the screw shaft fitted *without* 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 *—*

If two

liners are fitted, is the shaft lapped or protected between the liners *—*Length of stern bush *38 1/8*Dia. of Tunnel shaft *as per rule 7 1/2*Dia. of Crank shaft journals *as per rule 8 3/8*Dia. of Crank pin *8 1/2*Size of Crank webs *5 1/2 x 12 1/2* Dia. of thrust shaft undercollars *8 3/8* Dia. of screw *11 7/8* Pitch of screw *11 1/2*No. of blades *4*State whether moveable *no* Total surface *34.9 sq. ft.*No. of Feed pumps *2*Diameter of ditto *2 1/4*Stroke *16 1/2*Can one be overhauled while the other is at work *yes*No. of Bilge pumps *2*Diameter of ditto *2 1/4*Stroke *16 1/2*Can one be overhauled while the other is at work *yes*No. of Donkey Engines *2*Sizes of Pumps *3 1/2 x 5 x 5 7/8*Stroke *10 1/2*

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

In Engine Room *4 off - 2 - 2 3/8", 2 - 2 3/4"*In Holds, &c. *4 off - 2 3/8", Tunnel 7 after Peak 1 - 2"*

fore Peak 1 - 2 3/8", Tanks: 4 off - 2 3/8", 4 off - 2 1/4", 1 off - 3 1/2", 1 off - 4"

No. of bilge injections *1* sizes *3 1/2"* Connected to condenser, or to circulating pump *yes*Is a separate donkey suction fitted in Engine room & size *no*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 *none*How are they protected *—*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 *28. 7. 04* Is the screw shaft tunnel watertight *yes*Is it fitted with a watertight door *yes* worked from *cyl. platform*

BOILERS, &c.—

(Letter for record *S*)Total Heating Surface of Boilers *2138 sq. ft.*Is forced draft fitted *no*No. and Description of Boilers *2 single end, multitubular*Working Pressure *185 lbs*Tested by hydraulic pressure to *256 lbs*Date of test *Can each boiler be worked separately yes*Area of fire grate in each boiler *30.6 sq. ft.*

No. and Description of safety valves to

each boiler *2 Spring loaded*Area of each valve *4.5 sq. in.* Pressure to which they are adjusted *185 lbs*Are they fitted with easing gear *yes*Smallest distance between boilers or uptakes and bunkers *6"*Mean dia. of boilers *10 6 1/2"* Length *9 3 1/2"* Material of shell plates *Steel*Thickness *1"* Range of tensile strength *29.5 tons* Are they welded or flanged *flang.*Descrip. of riveting: cir. seams *lap dble riv.* long. seams *dble butt quario*Diameter of rivet holes in long. seams *1"*Pitch of rivets *11 3/8"*Lap of plates or width of butt straps *13 1/4" x 1"*Per centages of strength of longitudinal joint *80.5%*Working pressure of shell by rules *186.7 lbs*Size of manhole in shell *15.75" x 11.8"*Size of compensating ring *4 7/8" x 1"*No. and Description of Furnaces in each boiler *2 horizontal*Material *Steel* Outside diameter *41 3/8"*Length of plain part *top 6"*Thickness of plates *bottom 9/16"*Description of longitudinal joint *welded*No. of strengthening rings *none*Working pressure of furnace by the rules *212.8 lbs*Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *3/4"*Pitch of stays to ditto: Sides *7/8" x 7/8"* Back *7/8" x 7/8"* Top *7/8" x 7/8"* If stays are fitted with nuts or riveted heads *nuts & heads*Working pressure by rules *186 lbs*Material of stays *Steel* Diameter at smallest part *1 1/8"* Area supported by each stay *5.5 sq. ft.*Working pressure by rules *220 lbs* End plates in steam space:Material *Steel* Thickness *7/8"*Pitch of stays *15" x 15 3/4"* How are stays secured *dble nut, who*Working pressure by rules *218 lbs* Material of stays *Steel*Diameter, at smallest part *2 1/2"*Area supported by each stay *226 sq. in.*Working pressure by rules *218.2 lbs* Material of Front plates at bottom *Steel*Thickness *7/8"* Material of Lower back plate *Steel*Thickness *1"* Greatest pitch of stays *14"*Working pressure of plate by rules *278.3 lbs*Diameter of tubes *3 1/2"*Pitch of tubes *4 7/16"* Material of tube plates *Steel*Thickness: Front *7/8"* Back *7/8"* Mean pitch of stays *4 5/16"*Pitch across wide water spaces *11"*Working pressures by rules *283.1 lbs*Girders to Chamber tops: Material *Steel* Depth andthickness of girder at centre *8 1/8"*Length as per rule *223 1/4"* Distance apart *4 7/8"*Number and pitch of Stays in each *2 - 7 7/8"*Working pressure by rules *250 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 rivetholes *—* 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 *—*If a Report also sent on the Hull of the Ship? *yes*

[2000-5-03-Copyable Ink.]

Lloyd's Register
Foundation
W523-0143

DONKEY BOILER— No. Description *No Donkey Boiler fitted*

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 safety 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 Rivet Plates 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:— *4 1/2 pound brasses, 1 pair link brasses, 1 eccentric strap, 1 set bolts & nuts for bottom end, 1 set for top end brasses, 1 set for main bearings, 1 set for couplings, 1 set valves for feed, 1 set for bilge pumps, 1 set of check valves, 1 set piston rings for H.P. cyl. & ring for 2nd P. cyl. & 1 ring for 2nd P. cyl., 1 set air pump valves, 1 set circulating pump valves, 1 set valve spindle, 1 air pump rod, 1 circulating pump rod, 1 set link bars with brass conpl., 1 set by valve spring, 1 spring for escape valve cyl., 1 spring for feed pumps, 20 tubes & 40 feet for condenser, 10% tubes for main boilers, 1 set fire bars, a large number of bolts, nuts, rivets & iron assorted.*

The foregoing is a correct description,

Actien-Gesellschaft „Neptun“

Schiffswerft u. Maschinenfabrik Manufacturer.

Dates of Survey while building
During progress of work in shops—
During erection on board vessel—
Total No. of visits

23/7, 24/7, 26/7, 28/7, 1/8.

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

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

I attended a satisfactory trial trip, and adjusted the safety valves of all Boilers to the above stated pressure.

** On the 26th July 1914 when the Engines worked to general satisfaction. Materials and workmanship of these Boilers and Engines are of very best description, the outfit is ample and substantial.*

The following examinations were made by the Surveyors at this port:

In Drydock the propeller, propeller shaft drawn, sternbush and seaconnections, pumps, crankshafts, thrustshaft and block and line of tunnel shafting condenser pumps and pipe connections, further cylinders, pistons & slide valves. All of these parts found in sound and efficient condition, and the sizes of shafting corresponding with the drawings attached, except the dia. of the propeller shaft at thick end of cone was found 9 3/16", instead 2 3/8".

Examined the Main Boilers inside and outside and under steam and found them throughout satisfactory. The scantlings of these Boilers were found to correspond with the plans attached.

1 Forgings and 3 tests of Boiler Steel found attached.

The Engines and Boilers of this vessel are in my opinion in efficient condition and fit for a vessel classed in the Society's Register Book, I therefore beg to recommend that L.M.C 8, 04 be entered.

The electric Report is following.

It is submitted that this vessel is eligible for

THE RECORD L.M.C 8.04. ELEC: LIG

The amount of Entry Fee.. £ *2* : :
Special .. £ *10* : *10* :
Donkey Boiler Fee .. £ : :
Travelling Expenses (if any) £ *6* : *6* :
When applied for, in London *25/7/14*
When received, *29/7/14*

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

Committee's Minute

Assigned

MACHINERY CERTIFICATE
WRITTEN
31.10.14



19.10.14

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Foundation