

REPORT ON MACHINERY.

No. 8132

Port of Hamburg

Received at London Office 19

No. in Survey held at Rostock Date, first Survey 23rd July Last Survey 1st Aug. 1904
 Reg. Book. 69h on the Steel S.S. "Hansa" ex Borkum (Number of Visits 4)
 Master W. C. Yulle Built at Rostock By whom built Act. Cos. Neptun Tons { Gross 890
 Net 560
 Engines made at Rostock By whom made Act. Cos. Neptun when made 04
 Boilers made at Rostock By whom made Act. Cos. 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 1 Triple Expansion No. of Cylinders 3 No. of Cranks 3
 Dia. of Cylinders 16 1/8, 25 5/8, 41 3/4 Length of Stroke 28 3/4 Revs. per minute 100 Dia. of Screw shaft 9 1/4 Material of Steel
 Is the screw shaft fitted without 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 7/8
 Dia. of Tunnel shaft 8 1/2 Dia. of Crank shaft journals 8 3/4 Dia. of Crank pin 8 1/2 Size of Crank webs 5 1/2 x 12 1/2 Dia. of thrust shaft under
 collars 8 3/16 Dia. of screw 11 7/8 Pitch of screw 11 6 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 7/16 & 10 1/4 x 10 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 & 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 in 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 & riv. long. seams dbl butt qua riv
 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 Morrison Material Steel Outside diameter 41 3/8"
 Length of plain part 6" Thickness of plates 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 nut & heads Working pressure by rules 186 lbs
 Material of stays Steel Diameter at smallest part 1 5/8" Area supported by each stay 58 sq. in. 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 dbl 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 7/8" Greatest pitch of stays 14" Working pressure of plate by rules 278.3 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 5/16" 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 and
 thickness 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 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 —

If not, state whether, and when, one will be sent? Is a Report also sent on the Hull of the ship?

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. & rings for L.P. cyl. & 1 ring for L.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 fly valve spring, 1 spring for escape valve cyl., 1 spring for feed pumps, 20 tubes & 40 feet for condenser, 10% tubes for main pumps, 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.

H. Krapp, J. Min

Dates of Survey while building

During progress of work in shops	-
During erection on board vessel	23/7, 24/7, 26/7, 28/7, 1/8.
Total No. of visits	4

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

“ “ “ donkey “ “ “ “

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, stern bush and sea connections, pumps, crankshafts, thrust shaft and block and line of funnel 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
 25/10/14
 When received,
 29/10/14

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

Committee's Minute

Assigned

MACHINERY CERTIFICATE
 WRITTEN
 31.10.14



19.10.14

Lloyd's Register
 Foundation

Rpt. 13.

Port of

No. in Reg. Book *692*

Owners

Yard No.

DESRIPTION

Capacity of

Where is

Position of

Positions of

If cut out

circuit

If cessel is

Are the cut

Are all cut

are per

Are all swit

Total number

A 1

B 1

C 1

D 2

E 1

M

If arc lights

Where are

DESCRIPTION

Main cable ca

Branch cable

Branch cables

Leads to lamp

Cargo light ca

DESCRIPTION

All

protect

Joints in cable

Are all the jo

made in

Are there any

How are the c