

MON. DEC 23 1901

No. 6680

532

REPORT ON MACHINERY.

Port of

Hamburg

Received at London Office

15

No. in Survey held at

Hamburg

Date, first Survey 14th AprilLast Survey 18th Oct. 1901.

Book.

(Number of Visits 24)

on the Steel S.S. "Rostock"

Tons { Gross 4972
Net 2884

H. Trulsen Built at Hamburg By whom built Hensburger Schiffab. Ges. When built 1901

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red Horse Power 819 Owners Deutsch Austral. Dampf. Ges. Port belonging to Hamburg

Horse Power as per Section 28 810 Is Electric Light fitted No

NES, &c.—Description of Engines Quadruple expansion on four cranks No. of Cylinders 4 No. of Cranks 4

Diameter of Cylinders 26" 31.5" 55" x 80" Length of Stroke 60 Revolutions per minute 70 Diameter of Screw shaft as per rule 16.34" as fitted 16.38"

Diameter of Tunnel shaft as per rule 14.86" as fitted 15.25" Diameter of Crank shaft journals 16" Diameter of Crank pin 16" Size of Crank webs 10.57" x 2.25"

Diameter of screw 19.56" Pitch of screw 20.3" No. of blades 4 State whether moveable No Total surface 90.49 ft

Feed pumps 2 Diameter of ditto 4.9" Stroke 31.5" Can one be overhauled while the other is at work yes

Bilge pumps 2 Diameter of ditto 4.5" Stroke 31.5" Can one be overhauled while the other is at work yes

Donkey Engines 3 Sizes of Pumps 2 1/2" 1 1/2" 1 1/2" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room 4 Tank suction 2 1/2" 12 hold suction 1 1/2" In Holds, &c. 15-4+5" from Tanks

Bilge injections 1 sizes 8" Connected to condenser, or to circulating pump cad. Is a separate donkey suction fitted in Engine room & size yes-4"

Are 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 no

Are 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

How are they protected iron boxes

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

Were stern tube, propeller, screw shaft, and all connections examined in dry dock on stock Is the screw shaft tunnel watertight yes

Is the screw shaft fitted with a watertight door yes worked from cylinder platform

BRS, &c.—(Letter for record 5) Total Heating Surface of Boilers 12725 sq. ft. Is forced draft fitted No

and Description of Boilers 6 single ended cylind. multib. Working Pressure 213 lbs. Tested by hydraulic pressure to 426 lbs.

3-7/10.04 of test 3-4/10.04 Can each boiler be worked separately yes Area of fire grate in each boiler 426 sq. ft. No. and Description of safety valves to

boiler 2 spring loaded Area of each valve 8.3 sq. Pressure to which they are adjusted 213 lbs. Are they fitted

easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 24"

Material of shell plates Steel Thickness 1.41" Description of riveting: circum. seams lap breasted long. seams all. bth. gad. riv.

Diameter of rivet holes in long. seams 1.45" Pitch of rivets 4.82" Lap of plates or width of butt straps 29.29"

Percentages of strength of longitudinal joint rivets 99.7% Working pressure of shell by rules 231.1 lbs. Size of manhole in shell 15.7" x 11.9"

plate 92.4% of compensating ring 8" x 1.41" No. and Description of Furnaces in each boiler 3 Marison's Material Steel Outside diameter 43.9"

Thickness of plates crown 1.64" Description of longitudinal joint welded No. of strengthening rings

Working pressure of furnace by the rules 240 lbs. Combustion chamber plates: Material Steel Thickness: Sides 1.62" Back 1.62" Top 1.62" Bottom 1.88"

No. of stays to ditto: Sides 7.48" Back 7.48" Top 7.48" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 244.5 lbs.

Material of stays Steel Diameter at smallest part 1.5" Area supported by each stay 55.9 sq. Working pressure by rules 257.9 lbs. End plates in steam space:

Material Steel Thickness 1.12" Pitch of stays 14.9" How are stays secured all. riveted Working pressure by rules 230.6 lbs. Material of stays Steel

Diameter at smallest part 2.71" Area supported by each stay 222.4 sq. Working pressure by rules 260 lbs. Material of Front plates at bottom Steel

Thickness 1.86" Material of Lower back plate Steel Thickness 1.86" Greatest pitch of stays 13.3" Working pressure of plate by rules 318.2 lbs.

Diameter of tubes 3.38" Pitch of tubes 4.72" Material of tube plates Steel Thickness: Front 1.18" Back 1.22" Mean pitch of stays 9.44"

Depth across wide water spaces 13.9" Working pressures by rules 247.8 lbs. Girders to Chamber tops: Material Steel Depth and

Thickness of girder at centre 11.2" x 1.44" Length as per rule 32.5" Distance apart 7.48" Number and pitch of Stays in each 3-7.48"

Working pressure by rules 288 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

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
W857-0021

DONKEY BOILER— 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 easing gear _____ If steam from main boilers can enter the donkey boiler _____

Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____

Description of riveting long. seams _____ Diameter 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:— *Bottom stop end brasses, 2 pump links complete, 1 air pump, 1 circ. pump rod, 1 set valves for air, 1 set for circulating pump, 2 seats & valves for feed, bilge pumps, 1 valve & seat for feed Donkey, 1 set coupling bolts, 2 main bearing bolts, 2 connecting rod bolts & 2 bottom end bolts, 1 spring for main safety valves, 120 condenser tubes, 40 screw glands, 15 main boiler tubes, 12 set fire bars, iron, bolts, nuts studs, rivets, and a quantity of iron assorted.*

The foregoing is a correct description,
Flensburger Schiffbau-Gesellschaft Manufacturer.

Dates: During progress of work in shops— *19/4, 25/4, 30/4, 4/5, 14/5, 31/5, 10/6, 21/6, 24/6, 27/6, 17/7, 28/7, 29/7, 10/8, 26/8, 7/10, 1901.*

of Survey while building: During erection on board vessel— *16/10, 22/10, 6/11, 30/11, 5/12, 19/12, 18/12, 1901*

Total No. of visits *24*

General Remarks (State quality of workmanship, opinions as to class, &c. *Screw shaft fitted with one continuous line.*

ENGINES—Length of stern bush *5' 6"* Diameter of crank shaft journals *as per rule 15.62"* Diameter of thrust shaft under collars *15 5/8"*

BOILERS—Range of tensile strength *Shell 28/82* Are they welded or flanged *flanged* **DONKEY BOILERS**—No. *—* Range of tensile strength *—*

Is the approved plan of main boiler forwarded herewith *NO* Is the approved plan of donkey boiler forwarded herewith *—*

Materials and workmanship of these Engines and Boilers are of very best description, except the H. P. Cylinder, which is a little spongy at bottom. The leaky places were drilled out and turned brass sleeves fitted. I tested the Cylinder with hydraulic pressure of 320 lbs and by a severe full power steam trial but found it light and standing the strains well. I recommend however that it be reexamined after six months, but believe that it will be replaced by a new one after the vessel return from her first voyage to the east.

I attended a satisfactory trial trip on the 18th December 1901, when I found all the safety valves correctly adjusted to 212 lbs.

The copies of the invoices of the Steel Boiler materials, signed by the testing officers are in my hands. The forging certificates, as far as they have, not been sent with 1st Entry Report on the sister ship "Apolda", will be found attached. The approved plan of the Boilers has been sent with the 1st Entry Report on the sister ship "Apolda".

*The Machinery of this vessel, having been constructed under Special Survey, is in my opinion eligible for a vessel classed in the Society's Register Book, and I beg to recommend that **L.M.C 12.01** be entered against her name subject to her H. P. Cylinder being reexamined within six months.*

The amount of Entry Fee, £ *3: 0: 0* When applied for, _____

Special £ *60: 19: 0* *18/12/1901*

Donkey Boiler Fee £ *10: 15: 0* When received, _____

Travelling Expenses (if any) £ *—: —: —* *20/12/1901*

Committee's Minute

Assigned

TUES. 24 DEC 1901

L.M.C 12.01 subject

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

Mr. Kieck

Lloyd's Register Foundation

MACHINERY CERTIFICATE
WRITTEN

Certificate (if required) to be sent to Harbours Office.