

# REPORT ON MACHINERY.

No. 538

No. in Survey held at

Rostock

Date, first Survey

10 July

Last Survey

23 Nov. 1882

Reg. Book.

on the

S. S. Norge

Master

Wiese

Built at

Rostock

When built

1882

Engines made at

Berlin

By whom made

Borsig & Co when made 1882

Boilers made at

Rostock

By whom made

Rostocker Aktien Gesellschaft when made 1882

Registered Horse Power

130

Owners

Kiel Comp. an 1871 Bergen

Port belonging to

Bergen

Engines, &c.—

Description of Engines

Direct acting compound inverted with surface condenser

Diameter of Cylinders

29 1/16 x 5 1/8

Length of Stroke

33 1/2

No. of Rev. per minute

75

Point of Cut off, High Pressure

0.56

Low Pressure 0.47

Diameter of Screw shaft

9 1/16

Diameter of Tunnel shaft

9 1/16

Diameter of Crank shaft journals

9 1/16

Diameter of Crank pin

2 1/16

size of Crank webs 5 1/16 x 11 1/16

Diameter of screw

12 1/2

Pitch of screw

16 5/8

No. of blades

4

state whether moveable no total surface

35 1/2

No. of Feed pumps

2

diameter of ditto

3

Stroke

16 3/4

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

diameter of ditto

3

Stroke

16 3/4

Can one be overhauled while the other is at work

yes

Where do they pump from

Sea Bilge all Compartments and Waterballast

No. of Donkey Engines

2

Size of Pumps

5 1/2 x 8

Where do they pump from

Sea Bilge all

Compartment and

one Rotary Waterballast

Are all the bilge suction pipes fitted with roses

yes

Are the roses always accessible

yes

Are the sluices on Engine room bulkheads always accessible

yes

No. of bilge injections

one and sizes

5

Are they connected to condenser, or to circulating pump

to circulating pump

How are the pumps worked

by lever

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

Valves and cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

no

Are the discharge pipes above or below the deep water line

below

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

discharge pipe from

How are they protected

with iron plates

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

all except the Donkey discharge

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

new

Is the screw shaft tunnel watertight

yes

and fitted with a sluice door

yes

worked from

Engine Room

BOILERS, &c.—

Number of Boilers

2

Description

multitubular Cylindrical

Working Pressure

80

Tested by hydraulic pressure to

160

Date of test

6 Sept. 1882.

Description of superheating apparatus or steam chest

horizontal steam dome

Can each boiler be worked separately

yes

Can the superheater be shut off and the boiler worked separately

yes

No. of square feet of fire grate surface in each boiler

300

Description of safety valves

Adams Safety Valves

No. to each boiler

2

area of each valve

11 7/8

Are they fitted with easing gear

yes

No. of safety valves to superheater

—

area of each valve

—

are they fitted with easing gear

—

Smallest distance between boilers and bunkers or woodwork

no woodwork near the Boilers

Diameter of boilers

10 1/11

Length of boilers

—

description of riveting of shell long. seams

5 rows 2

circum. seams

double

Thickness of shell plates

13/16

diameter of rivet holes

15/16

whether punched or drilled

punched

pitch of rivets

5 1/8

Lap of plating

8 1/2

per centage of strength of longitudinal joint

83.1%

working pressure of shell by rules

85.13 lbs

Size of manholes in shell

15 x 15

size of compensating rings

4 x 5 1/8

length, top

7 1/8

bottom

7 1/8

No. of Furnaces in each boiler

2

outside diameter

34

length, top

7 1/8

bottom

7 1/8

greatest length between rings

45 1/2

Thickness of plates

1/2

description of joint

double riveted

rings are fitted

yes

greatest length between rings

45 1/2

Working pressure of furnace by the rules

173.

Combustion chamber plating, thickness, sides

1/2

back

9/16

top

1/2

back

5 1/8

top

8 1/2 x 16

Pitch of stays to ditto, sides

6 7/8 x 6 7/8

back

5 1/8

top

8 1/2 x 16

working pressure of plating by rules

84 x 16

145 lbs

If stays are fitted with nuts or riveted heads

riveted heads

working pressure of ditto by rules

4510 lbs

Diameter of stays at smallest part

1

pitch of stays to ditto

16

how stays are secured

double nuts

on both sides

working pressure by rules

5270

End plates in steam space, thickness

3/4

diameter of stays at smallest part

2 1/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23

Front plates at bottom, thickness

3/4

Back plates, thickness

3/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23

Working pressure by rules

80.23

diameter of stays at smallest part

2 1/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23

Front plates at bottom, thickness

3/4

Back plates, thickness

3/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23

Working pressure by rules

80.23

diameter of stays at smallest part

2 1/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23

Front plates at bottom, thickness

3/4

Back plates, thickness

3/4

greatest pitch of stays

16 x 15

working pressure by rules

80.23

80.23</



Diameter of tubes  $3\frac{1}{4}$  pitch of tubes  $4\frac{1}{2} \times 4\frac{1}{2}$  thickness of tube plates, front  $3\frac{1}{4}$  back  $3\frac{1}{4}$   
 How stayed stay tubes pitch of stays  $13\frac{1}{2}$  width of water spaces  $1\frac{1}{4}$   
 Diameter of Superheater or Steam chest  $4\frac{1}{2}$  length  $8\frac{1}{2}$   
 Thickness of plates  $\frac{1}{2}$  description of longitudinal joint double riveted diameter of rivet holes  $\frac{7}{8}$  pitch of rivets  $2\frac{5}{8}$   
 Working pressure of shell by rules  $93\frac{1}{2}$  Diameter of flue thickness of plates  
 If stiffened with rings distance between rings Working pressure by rules  
 End plates of superheater, or steam chest; thickness How stayed with angle iron  
 Superheater or steam chest; how connected to boiler

**DONKEY BOILER—** Description Vertical cross tubes  
 Made at Halle a/c. By whom made F. Schmidt when made 1882  
 Where fixed in stove working pressure 80 lbs. Tested by hydraulic pressure to 150 No. of Certificate 444  
 Fire grate area 90 Description of safety valves common valve No. of safety valves 1 area of each 4.4  
 If fitted with casing gear yes If steam from main boilers can enter the donkey boiler yes  
 Diameter of donkey boiler  $5\frac{1}{2}$  length 11 description of riveting longitudinal double round seams single  
 thickness of shell plates  $\frac{1}{2}$  diameter of rivet holes  $\frac{3}{4}$  whether punched or drilled  
 pitch of rivets  $3\frac{1}{16}$  lap of plating  $4\frac{1}{4}$  per centage of strength of joint 72  
 thickness of crown plates  $\frac{5}{8}$  stayed by  
 Diameter of furnace, top  $4\frac{1}{2}$  bottom  $4\frac{1}{2}$  length of furnace 8  
 thickness of plates  $\frac{5}{8}$  description of joint single riveted  
 thickness of furnace crown plates  $\frac{3}{4}$  stayed by  
 Working pressure of shell by rules 80 lbs. working pressure of furnace by rules 83 lbs.  
 diameter of uptake  $1\frac{3}{4}$  thickness of plates  $\frac{5}{16}$  thickness of water tubes  $\frac{5}{16}$

The foregoing is a correct description,

*F. Schmidt* Manufacturer.

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

The Engine and Boiler of this Vessel are of good material and Workmanship and in my opinion entitle the vessel to be marked with  $\star$  L.L.C. 11.82. in the Register Book.

It is submitted that this vessel is eligible to have the notification  $\star$  L.L.C. 11.82. recorded in the Register Book C.R.S.

M 4.17.82

The amount of Entry Fee .. £ : : received by me,

Special  $\frac{1}{2}$  .. £ 14:10:

Certificate (if required) .. £ : : 18

To be sent as per margin.

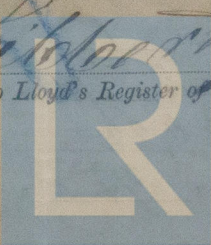
(Travelling Expenses, if any, £ 0.0.0)

Committee's Minute

Tuesday, 12th December, 1882.

*Paul Kelle*  
*Lester and others*

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



Lloyd's Register Foundation