

# REPORT ON MACHINERY.

No. 510

(Received at London Office)

13th JULY 82.

No. in Survey held at  
Reg. Book.

Rostock

Date, first Survey

2<sup>nd</sup> April

Last Survey

8<sup>th</sup> July 1882

on the

S.S. Defrance

Tons 528.22

Master

N. Hauge

Built at

Rostock

When built

1882

Engines made at

Rostocker Aktien Gesellschaft für Schiff

By whom made

Rostocker Aktien

when made

1882

Boilers made at

Rostock

By whom made

Graillochaft für Schiff

when made

1882

Registered Horse Power

75

Owners

Kars Halvorsen og Kulscompagnie af 1881

Port belonging to

Bergen

## ENGINES, &c.—

Description of Engines

Direct Acting Compound inverted.

Diameter of Cylinders

22 x 41 3/4

Length of Stroke

27 1/2

No. of Rev. per minute

85

Point of Cut off, High Pressure

0.6

Low Pressure

0.67

Diameter of Screw shaft

7 1/2

Diameter of Tunnel shaft

6 1/2

Diameter of Crank shaft journals

7 1/2

Diameter of Crank pin

7 1/2

size of Crank webs

8 x 4 1/2

Diameter of screw

10

Pitch of screw

11 1/10

No. of blades

4

state whether moveable

no

total surface

3111

No. of Feed pumps

2

diameter of ditto

2 3/8

Stroke

16

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

diameter of ditto

3 1/2

Stroke

8

Can one be overhauled while the other is at work

yes

Where do they pump from

Sea, all compartments and Waterballast tank

No. of Donkey Engines

1

Size of Pumps

2 1/4 x 6

Where do they pump from

Sea, bilge cistern

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

1

and sizes

4"

Are they connected to condenser, or to circulating pump

to circulating pump

How are the pumps worked

from lever

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

yes no

Are they Valves or Cocks

Locks and valves

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

no

How are they protected

yes

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

yes

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

upper Engine room

## BOILERS, &c.—

Number of Boilers

1

Description

Cylindrical return tubular

Working Pressure

80 lbs

Tested by hydraulic pressure to

160 lbs

Date of test

15<sup>th</sup> May 1882

Description of superheating apparatus or steam chest

Horizontal steam chest

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

54 sq

Description of safety valves

Spring valves

No. to each boiler

2

area of each valve

23 3/4 sq

Are they fitted with easing gear

yes

No. of safety valves to superheater

yes

area of each valve

yes

are they fitted with easing gear

yes

Smallest distance between boilers and bunkers or woodwork

2' 6"

Diameter of boilers

14 1/4

Length of boilers

124

description of riveting of shell long. seams

5 seams

circum. seams

double riveting

Thickness of shell plates

7/8

diameter of rivet holes

15/16

whether punched or drilled

punched

pitch of rivets

5 1/4

Lap of plating

9 1/16

per centage of strength of longitudinal joint

76.3

working pressure of shell by rules

80.1 lbs

Size of manholes in shell

12 3/16 x 16 1/2

size of compensating rings

yes

No. of Furnaces in each boiler

3

outside diameter

32 1/2

length, top

9 5/4

bottom

9 5/4

Thickness of plates

1/2

description of joint

double riveting

if rings are fitted

yes

greatest length between rings

34

Working pressure of furnace by the rules

273 lbs

Combustion chamber plating, thickness, sides

9/16

back

9/16

top

9/16

Pitch of stays to ditto

6 1/4

sides

6 1/4 x 7 7/8

back

6 3/4 x 6 5/16

top

12 3/16

If stays are fitted with nuts or riveted heads

riveted heads

working pressure of plating by rules

114 lbs

Diameter of stays at smallest part

15/16

working pressure of ditto by rules

570.5

End plates in steam space, thickness

11/16

pitch of stays to ditto

15 3/4

how stays are secured

with nuts and washers

Working pressure by rules

89 lbs

diameter of stays at smallest part

2"

working pressure by rules

96 lbs

Front plates at bottom, thickness

11/16

Back plates, thickness

11/16

greatest pitch of stays

10 1/8

working pressure by rules

120 lbs



Diameter of tubes  $3\frac{1}{4}$ " outside pitch of tubes  $4\frac{5}{16}$ " thickness of tube plates, front  $\frac{11}{16}$ " back  $\frac{11}{16}$ "  
 How stayed *with stay tubes* pitch of stays  $13"$  width of water spaces  $1\frac{1}{16}"$   
 Diameter of Superheater or Steam chest  $59\frac{1}{16}"$  length  $98\frac{3}{8}"$   
 Thickness of plates  $\frac{1}{2}"$  description of longitudinal joint *double riveting* diameter of rivet holes  $13\frac{1}{16}"$  pitch of rivets  $2\frac{3}{16}"$   
 Working pressure of shell by rules  $93\frac{1}{16}$  Diameter of flue  $\frac{11}{16}"$  thickness of plates  $\frac{11}{16}"$   
 If stiffened with rings  $\frac{11}{16}"$  distance between rings  $\frac{11}{16}"$  Working pressure by rules  $\frac{11}{16}"$   
 End plates of superheater, or steam chest; thickness  $\frac{11}{16}"$  How stayed *with 7 stays 2" diam*  
 Superheater or steam chest; how connected to boiler *with 2 Pipes 15 3/4"*

**DONKEY BOILER—** Description *Vertical cross tubes*  
 Made at *Hamburg* By whom made *Poussin & Nicolay* when made *1882*  
 Where fixed *Engine room* working pressure  $50\text{ lbs}$  Tested by hydraulic pressure to  $120\text{ lbs}$  No. of Certificate *161*  
 Fire grate area  $16\frac{1}{2}$  Description of safety valves *lever loaded* No. of safety valves  $1$  area of each  $16\frac{1}{2}$   
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes*  
 Diameter of donkey boiler  $49\frac{1}{8}"$  length  $108"$  description of riveting *single riveting*  
 thickness of shell plates  $5\frac{1}{16}"$  diameter of rivet holes  $3\frac{1}{4}"$  whether punched or drilled *punched and drilled*  
 pitch of rivets  $2\frac{9}{16}"$  lap of plating  $5\frac{1}{4}"$  per centage of strength of joint  $54\frac{1}{2}$   
 thickness of crown plates  $9\frac{1}{16}"$  stayed by *Uptake*  
 Diameter of furnace, top  $43"$  bottom  $43"$  length of furnace  $69\frac{3}{4}"$   
 thickness of plates  $5\frac{1}{16}"$  description of joint *welded*  
 thickness of furnace crown plates  $9\frac{1}{16}"$  stayed by  $54\frac{1}{2}$   
 Working pressure of shell by rules  $54\frac{1}{2}$  working pressure of furnace by rules  $54\frac{1}{2}$   
 diameter of uptake  $13\frac{3}{4}"$  thickness of plates  $5\frac{1}{16}"$  thickness of water tubes  $5\frac{1}{16}"$

The foregoing is a correct description,

*Mendroth* Manufacturer.

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

The Engine and Boiler of this Vessel  
 are of very good material, and work-  
 manship, and in my opinion entitle  
 the Vessel to be classed *Lloyd's M.C. 7.82.*  
 in the Register Book.

Dissatisfied that this  
 vessel is eligible to have  
 the registration & Lloyd's  
 recorded. Am 14/7/82

The amount of Entry Fee .. £ 1 : 10 : 0 received by me,

Special. ... .. £ 11 : 5 : 0

Certificate (if required) .. £ 0 : 5 : 0 18

To be sent as per margin.

(Travelling Expenses, if any, £ 0. 0. 0.)

Committee's Minute

Friday 21st July 1882.

+ Lloyd's

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



Lloyd's Register  
Foundation