

REPORT ON MACHINERY.

(Received at London Office) 13th JULY 82.

No. 510

No. in Survey held at Reg. Book.

Rostock

Date, first Survey

2nd April

Last Survey

8th July 1882

on the

S.S. Defrance

Tons 528, 22

Master

N. Hauge

Built at

Rostock

When built

1882

Engines made at

Rostocker Actien Gesellschaft für Schiffb.

By whom made

Rostocker Actien

when made

1882

Boilers made at

Rostock

By whom made

Actien Gesellschaft für Schiffb. & Maschinenbau

when made

1882

Registered Horse Power

75

Owners

Kars Halvorsen og Hulscompagnie 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" 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

all compartment and 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 1 and sizes 4" Are they connected to condenser, or to circulating pump No 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 none How are they protected

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

16th Mai 1882

Description of superheating apparatus or steam chest

Horizontal steam chest.

Can each boiler be worked separately

Can the superheater be shut off and the boiler worked separately

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

54 sq ft

Description of safety valves

Spring valves

No. to each boiler

2

area of each valve

23 3/4 sq in

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

2' 6"

Diameter of boilers 141 3/4" 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 and drilled 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 lbs

Size of manholes in shell 12 3/16 x 16 1/2" size of compensating rings

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 welded to the web and

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 $93\frac{1}{2}$ lbs 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 $\frac{11}{16}$ " How stayed with 7 stays 2" diam
 Superheater or steam chest; how connected to boiler with 2 Pipes $15\frac{3}{4}$ "

DONKEY BOILER— Description *Vertical cross tubes*
 Made at *Hamburg* By whom made *Poussin & Nicolay* when made —
 Where fixed *Engine room* working pressure 50 lbs Tested by hydraulic pressure to 180 lbs No. of Certificate *16th Mar 1882*
 Fire grate area — Description of safety valves *lever loaded* No. of safety valves 1 area of each —
 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 — 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 $9\frac{1}{16}$ $54\frac{1}{2}$ lbs stayed by —
 Working pressure of shell by rules $54\frac{1}{2}$ lbs working pressure of furnace by rules —
 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,
Heudroth 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 workmanship, and in my opinion entitle the vessel to be classed *Lloyd's M.C. 7. 82.* in the Register Book.

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

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

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



Lloyd's Register Foundation