

REPORT ON MACHINERY.

No. 26804

Date of writing Report 14-10-13

When handed in at Local Office

14-10-13

Port of

Received at London Office

10 Oct 17 1913

No. in Survey held at

Hull

Date, First Survey

Dec 10/12

Last Survey

Oct 14/13

Reg. Book.

on the steel screw steamer New Sweden

(Number of Visits)

84

Master

Built at

Hull

By whom built

Charles C. L. L.

Engines made at

Hull

By whom made

Charles C. L. L.

Boilers made at

Hull

By whom made

Charles C. L. L.

Registered Horse Power

Owners

(A. Broström & Son)

Port belonging to

Gothenburg

Nom. Horse Power as per Section 28

534

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

28"-45 1/2"-76"

Length of Stroke

54"

Revs. per minute

62

Dia. of Screw shaft

as per rule 15 1/2"

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

yes

Is the after end of the liner made water tight

in the propeller boss

✓

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

Dia. of Tunnel shaft

as per rule 14 1/2"

Dia. of Crank shaft journals

as per rule 14 1/2"

Dia. of Crank pin

15 1/2"

Size of Crank webs

23"x10"

Dia. of thrust shaft under

collars

15 1/4"

Dia. of screw

18'-9"

Pitch of Screw

18'-9"

No. of Blades

4

State whether moveable

yes

Total surface

108 sq

No. of Feed pumps

2" indp

Diameter of ditto

8"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

Diameter of ditto

4 1/2"

Stroke

30"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

two Duplex

Sizes of Pumps

8 1/2"x8 1/2"x12 1/2"x15"

Bilge & Ballast

No. and size of Suctions connected to both Bilge and Donkey pumps

2" in

In Holds, &c.

Two, 3 1/2" in each compartment—Dup

Tank filling & suction pipes fitted with blank flanges as per rule

yes

In Engine Room

Four 3 1/2" one 3 1/2" to Boiler room dry tank, one 2 1/2" in tunnel well

No. of Bilge Injections

one sizes 7 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes

3 1/2"

Are all 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

yes

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

Forward suction

How are they protected

strong wooden casings

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

Dates of examination of completion of fitting of Sea Connections

8-8-13

of Stern Tube

1-9-13

Screw shaft and Propeller

1-9-13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Phoenix A. G. Alt Hölzer

Friedrich Hölzer

Total Heating Surface of Boilers

7395

Is Forced Draft fitted

yes

No. and Description of Boilers

Three single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

300 lbs

Date of test

19-8-13

No. of Certificate

20043

Can each boiler be worked separately

yes

each boiler

two spring loaded

Area of fire grate in each boiler

63 sq

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers

on woodwork

Alt 3'-0"

Mean dia. of boilers

14 3/4"

Length

11'-6"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

J. R. R. B. J.

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

9 3/16"

Lap of plates or width of butt straps

19 3/4"

Per centages of strength of longitudinal joint

rivets

87.8

plate

85.7

Working pressure of shell by rules

183

Size of manhole in shell

12"x16"

Size of compensating ring

flanged

No. and Description of Furnaces in each boiler

3 Dighton

Material

steel

Outside diameter

50"

Length of plain part

top

Thickness of plates

crown

3 1/2"

Description of longitudinal joint

welded

No. of strengthening rings

✓

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

3/4"

Back

2 3/8"

Top

1 1/2"

Bottom

3/4"

Pitch of stays to ditto: Sides

11 3/4"x8 1/2"

Back

10"x9 1/2"

Top

10"x8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

185

Material of stays

steel

Diameter at smallest part

2'-0"

Area supported by each stay

100 sq

Working pressure by rules

186

End plates in steam space:

Material

steel

Material

steel

Thickness

1 7/32"

Pitch of stays

2 1/4"x16 1/8"

How are stays secured

A. H.

Working pressure by rules

180

Material of stays

steel

Diameter at smallest part

6'23"

Area supported by each stay

357 sq

Working pressure by rules

181

Material of Front plates at bottom

steel

Thickness

1"

Material of Lower back plate

steel

Thickness

1 5/16"

Greatest pitch of stays

14 1/2"x9 1/2"

Working pressure of plate by rules

206

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/4"x3 3/4"

Material of tube plates

steel

Thickness: Front

1"

Back

1 3/16"

Mean pitch of stays

7 1/2"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

181 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9 1/2"x1 3/4"

Length as per rule

34 3/16"

Distance apart

Working pressure by rules

191

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 super

VERTICAL DONKEY BOILER—

Manufacturers of Steel

No.	Description				
Made at	By whom made		When made	Where fixed	
Working pressure	tested by hydraulic pressure to	Date of test	No. of Certificate	Fire grate area	Description of Safety
Valves	No. of Safety Valves	Area of each	Pressure to which they are adjusted	Date of adjustment	
If fitted with casing 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	Rivets
Working pressure of shell by rules	Thickness of shell crown plates	Radius of do.	No. of stays to do.	Dia. of stays	Plates
Diameter of furnace Top	Bottom	Length of furnace	Thickness of furnace plates	Description of joint	
Working pressure of furnace by rules	Thickness of furnace crown plates	Radius of do.	Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:—Two top end bolts & nuts, Two bottom end bolts & nuts, Two train bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed, bilge, air, circulating & donkey pump valves, one main & one donkey check valve, one third crank shaft (Thrust 5351 AB one screw shaft (Thrust 2267 R.L.A.) one propeller, & a quantity of bolts & nuts & iron of various sizes.

The foregoing is a correct description,

Manufacturer.

H. Hackett

Dates of Survey while building
 During progress of work in shops - 1912. Dec 10, 17, 19, 20, 24, 31 / 1913. Jan 7, 10, 14, 16, 23, 25
 During erection on board vessel - Apr 8, 11, 15, 17, 21, 24, 25 May 2, 5, 8, 16, 20, 22, 26, 28 Jun 3, 5, 7, 10, 19, 20, 25, 26, 30 Jul 1, 9, 14, 17, 21, 23
 Total No. of visits 84
 Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 3-9-13 Slides 12-9-13 Covers 3-9-13 Pistons 3-9-13 Rods 3-9-13
 Connecting rods 12-9-13 Crank shaft 30-6-13 Thrust shaft 10-6-13 Tunnel shafts 13-9-13 Screw shaft 1-9-13 Propeller 1-9-13
 Stern tube 14-7-13 Steam pipes tested 26-9-13 Engine and boiler seatings 6-6-13 Engines holding down bolts 24-9-13
 Completion of pumping arrangements 22-9-13 Boilers fixed 18-9-13 Engines tried under steam 14-10-13
 Main boiler safety valves adjusted 13-10-13 Thickness of adjusting washers Pat P 3/4 x 5 3/4 x 6 1/4 P 1/2 x 5 1/4 x 6 1/4 P 3/4 x 5 3/4 x 6 1/4
 Material of Crank shaft *Steel* Identification Mark on Do. 5351 AB Material of Thrust shaft *Steel* Identification Mark on Do. 2266 MB
 Material of Tunnel shafts *Steel* Identification Marks on Do. *Sublow* Material of Screw shafts *Steel* Identification Marks on Do. 7451 R.L.A.
 Material of Steam Pipes *Solid drawn steel* Test pressure 540 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under special in accordance with the approved plans rules of this society, the materials & workmanship are good. The boiler & steam pipes have been tested. The machinery has been properly fitted & secured on board & on completion was run working under full working conditions & found satisfactory. The safety valves have been adjusted & tested for accumulation. In my opinion the vessel is eligible for the record + L.M.C. 10.13 F.R. Blue light.

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C. 10.13.

ED.

Handwritten signature

The amount of Entry Fee .. £ 3 : 0 :
 Special .. £ 46 : 14 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 14-10-13
 When received, 16-10-13

Handwritten signature

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

Committee's Minute

TUE. OCT. 21. 1913

TUE. DEC. 23. 1913

TUE. FEB. 10. 1914

Assigned

+ L.M.C. 10.13



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