

Rpt. 4.

REPORT ON MACHINERY.

No. 7165.

MON. SEP 24 1906

Port of

Antwerp

Received at London Office

19

No. in Survey held at

Seranig Hoboken

Date, first Survey

Jan. 26

Last Survey

Sept. 12 1906

Reg. Book.

pp. 2 on the

S.S. "Witiaz"

(Number of Visits 16.)

Gross 1619

Net 1060

Master

Markeritz

Built at

Hoboken

By whom built

John Cockerill

When built

1906

Engines made at

Seranig

By whom made

John Cockerill

when made

1906

Boilers made at

do.

By whom made

do.

when made

1906

Registered Horse Power

Owners: Soc. Ruess d'assurance et de Transport.

Port belonging to

Odessa

Nom. Horse Power as per Section 28

262

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple expansion Vert.

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

22 7/16 x 35 13/16 x 57 1/2

Length of Stroke

43 5/8

Revs. per minute

87

Dia. of Screw shaft

as per rule 12.44

Material of screw shaft

Steel

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

no

Is the after end of the liner made water tight

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

No

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

Length of stern bush

4' 7"

Dia. of Tunnel shaft

as per rule 11.1

Dia. of Crank shaft journals

as per rule 11.7/8

Dia. of Crank pin

11 7/8

Size of Crank webs

4 1/2 x 7 1/2

Dia. of thrust shaft under

collars

11 7/8

Dia. of screw

13 ft.

Pitch of Screw

16.5"

No. of Blades

4

State whether moveable

Yes

Total surface

58 sq

No. of Feed pumps

2

Diameter of ditto

7"

Stroke

18"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4"

Stroke

20"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

9 x 11 3/4 x 10 x 7 1/2 x 5 x 5 3/4

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

In Engine Room

Three 2 1/2"

In Holds, &c.

Two 2 1/2"

in each hold.

No. of Bilge Injections

1

sizes

10"

Connected to condenser, or to circulating pump pumps a separate Donkey Suction fitted in Engine room & size

2 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

none

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

Yes

Are they Valves or Cocks

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

suctions to fore hold

How are they protected

wood casing

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

13/6/06

of Stern Tube

13/6/06

Screw shaft and Propeller

25/6/06

12/9/06

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Engine Room

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

John Cockerill, Thyssen & Duisburg, Essen, &c.

Total Heating Surface of Boilers

3614 sq

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Single ended.

Working Pressure

170

Tested by hydraulic pressure to

340

Date of test

15.6.06

No. of Certificate

9

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

49 sq

No. and Description of Safety Valves to

each boiler

2

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

18"

Mean dia. of boilers

15 9/16"

Length

118"

Material of shell plates

Steel

Thickness

1 3/16

Range of tensile strength

27-32

Are the shell plates welded or flanged

Yes

Descrip. of riveting: cir. seams

S.R.

long. seams

S.R.

Diameter of rivet holes in long. seams

1 1/4

Pitch of rivets

7 3/16

Tap of plates on

width of butt straps

17 3/4

Per centages of strength of longitudinal joint

rivets 99.4

plate 83

Working pressure of shell by rules

185

Size of manhole in shell

16 3/4 x 12 3/4

Size of compensating ring

34 x 15 1/16

No. and Description of Furnaces in each boiler

3 horizon

Material

Steel

Outside diameter

43 7/16

Length of plain part

top 21 1/2

Thickness of plates

9 1/16

Description of longitudinal joint

welded

No. of strengthening rings

Yes

Working pressure of furnace by the rules

180

Combustion chamber plates: Material

Steel

Thickness: Sides

19/32

Back

19/32

Top

19/32

Bottom

25/32

Pitch of stays to ditto: Sides

8 1/4 x 8 1/4

Back

8 x 7 1/8

Top

8 x 7 1/8

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

175

End plates in steam space:

Material of stays

Steel

Diameter at smallest part

1 1/2"

Area supported by each stay

650"

Working pressure by rules

176

Material of stays

Steel

Material

Steel

Thickness

31/32

Pitch of stays

16 1/2"

How are stays secured

nuts

Working pressure by rules

200

Material of Front plates at bottom

Steel

Diameter at smallest part

25 1/8

Area supported by each stay

2720"

Working pressure by rules

200

Material of plate by rules

170

Thickness

7/8

Greatest pitch of stays

plate 25/32

Diameter of tubes

32

Pitch of tubes

3 15/32

Material of tube plates

Steel

Thickness: Front

25/32

Back

25/32

Mean pitch of stays

6 27/32

Pitch across wide water spaces

14 1/2

Working pressures by rules

170

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

6 3/4 x 14 1/2

Length as per rule

25"

Distance apart

Working pressure by rules

200

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

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

End plates: Thickness

How stayed

If stiffened with rings

Distance between rings

Working pressure by rules

Area of safety valves to superheater

Are they fitted with easing gear

Working pressure of end plates

2021

Lloyd's Register

FOW 660-10119

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 easing 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	
Working pressure of shell by rules	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	
Working pressure of furnace by rules	Thickness of furnace crown plates	Stayed by			
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 2 connecting rod, top end bolts nuts
2 bottom end bolts nuts, 2 main bearing bolts, 1 set of
coupling bolts, 1 set of feed & bilge pump valves, 1 crank shaft
piston rod, valve rods, propeller blades.

The foregoing is a correct description,
Le Secrétaire, Le Directeur Général, Manufacturer.

Dates of Survey while building	During progress of work in shops - - -	1906 January 26, March 13, April 6, 27 June 8, 15.
	During erection on board vessel - - -	June 25, 26 July 10, 11 August 3, 11, 20, 22 Sept 8, 12.
Total No. of visits		16.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders	27/4/06	Slides	25/6/06	Covers	25/6/06	Pistons	27/4/06	Rods	27/4/06
Connecting rods	25/6/06	Crank shaft	15/6/06	Thrust shaft	15/6/06	Tunnel shafts	15/6/06	Screw shaft	25/6/06
Stern tube	13/6/06	Steam pipes tested	22/6/06	Engine and boiler seatings	13/6/06	Engines holding down bolts	30/8/06	Propeller	12/9/06
Completion of pumping arrangements	30/8/06	Boilers fixed	30/8/06	Engines tried under steam	22/9/06				
Main boiler safety valves adjusted	30/8/06	Thickness of adjusting washers	7/16"						
Material of Crank shaft	Steel	Identification Mark on Do.	25.6.06	Material of Thrust shaft	Steel	Identification Mark on Do.	25.6.06		
Material of Tunnel shafts	Steel	Identification Marks on Do.	25.6.06	Material of Screw shafts	Steel	Identification Marks on Do.	25.6.06		
Material of Steam Pipes	Copper	Test pressure	340 lbs per sq in						

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

The machinery of this vessel has been constructed under special survey and in accordance with the Rules. The materials are good and the workmanship is good.
The feed pumps are independent engines and are fitted with automatic speed regulator.
The steel used in the construction of the boilers and in the manufacture of the shafting has been tested in accordance with the Rules by the Society's Surveyors.
The Boilers were tested by hydraulic pressure to 340 lbs.
The machinery and boilers are in good order and eligible in my opinion for the record of + L.H.C. 9.06

It is submitted that this vessel is eligible for THE RECORD + L.H.C. 9.06. FD. The light.

The amount of Entry Fee..	£ 2 : 0 : 0	When applied for,	19/9/06
Special (B.F.B.) ..	£ 33 : 2 : 0		
Donkey Boiler Fee ..	£ 2 : 2 : 0	When received,	24/9/06
Travelling Expenses (if any) £	10 : 13 : 0		
	= £ 121.50		

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

Committee's Minute
Assigned
+ L.H.C. 9.06
F.D. Elec. light

MACHINERY CERTIFICATE WRITTEN.

