

REPORT ON MACHINERY.

No. 14839

Received at London Office

THU. FEB. 26, 1914

Date of writing Report

19

When handed in at Local Office

25/2/14 Port of West Hartlepool

No. in Survey held at

West Hartlepool

Date, First Survey

2nd July 1913

Last Survey

25th Feb. 1914

Reg. Book.

on the

Steel steamer

Baroka

(Number of Visits)

Master G. J. Terwiel

Built at West Hartlepool

By whom built W. Gray & Co. Ltd.

Engines made at

West Hartlepool

By whom made

Central Marine & Works

when made

1914

Boilers made at

West Hartlepool

By whom made

Central Marine & Works

when made

1914

Registered Horse Power

Owners

Nederland Stoomvaart Maats.

Port belonging to

Amsterdam

Nom. Horse Power as per Section 28

656

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple Compound

No. of Cylinders

Three

No. of Cranks

Three

Dia. of Cylinders

28.46.77

Length of Stroke

54

Revs. per minute

65

Dia. of Screw shaft

as per rule 15.51

Material of

0.0001

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

Yes

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

Yes

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

Yes

If two

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

65

Dia. of Tunnel shaft

as per rule 14.25

Dia. of Crank shaft journals

as per rule 14.96

Dia. of Crank pin

15.4

Size of Crank webs

21.4.8.7.6

Dia. of thrust shaft under

collars

15.4

Dia. of screw

19.0

Pitch of Screw

17.6

No. of Blades

4

No. of Feed pumps

Two

Diameter of ditto

4.4

Stroke

32

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

4.4

Stroke

32

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Three

Sizes of Pumps

5.6.5.12.11.10

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

In Engine Room

Four 3.4

In Holds, &c.

Ten 3.4

No. of Bilge Injections

Two

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room

Yes

Size

3.4

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

How are they protected

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

23/12/13

of Stern Tube

14/1/14

Screw shaft and Propeller

30/1/14

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

Top Station

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

J. Spencer & Son

Total Heating Surface of Boilers

10121

Is Forced Draft fitted

Yes

No. and Description of Boilers

Four single ended

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

13/12/13

No. of Certificate

3350 + 3352

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

58 lb

No. and Description of Safety Valves to

each boiler

Two opening

Area of each valve

12.56

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

24

Mean dia. of boilers

15.0

Length

11.6

Material of shell plates

Steel

Thickness

1.4

Range of tensile strength

27.30

Are the shell plates welded or flanged

Both

Descrip. of riveting: cir. seams

Steel in shell

long. seams

all up the

Diameter of rivet holes in long. seams

1.4

Pitch of rivets

9.5

Lap of plates or width of butt straps

20.4

Per centages of strength of longitudinal joint

rivets 91.8

plate 85.7

Working pressure of shell by rules

181 lb

Size of manhole in shell

16.12

Size of compensating ring

32.28.1.4

No. and Description of Furnaces in each boiler

3 built in

Material

Steel

Outside diameter

46.7

Length of plain part

top 9.16

Thickness of plates

bottom 9.16

Description of longitudinal joint

Welded

No. of strengthening rings

Long

Working pressure of furnace by the rules

191 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

10.16

Back

10.16

Top

10.16

Bottom

14.16

Pitch of stays to ditto: Sides

8.5

Back

8.5

Top

9.16

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

181 lb

Material of stays

Steel

Diameter at smallest part

1.4

Area supported by each stay

8.5

Working pressure by rules

192 lb

End plates in steam space:

Material

Steel

Thickness

15.16

Pitch of stays

21.19

How are stays secured

All up the

Working pressure by rules

187 lb

Material of stays

Steel

Diameter at smallest part

3.03

Area supported by each stay

21.19

Working pressure by rules

189 lb

Material of Front plates at bottom

Steel

Thickness

15.16

Material of Lower back plate

Steel

Thickness

15.16

Greatest pitch of stays

15

Working pressure of plate by rules

180 lb

Diameter of tubes

2.12

Pitch of tubes

3.4

Material of tube plates

Steel

Thickness: Front

15.16

Back

12.16

Mean pitch of stays

7.12

Pitch across wide water spaces

13.12

Working pressures by rules

185 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8.12.1.4

Length as per rule

29.5

Distance apart

7.12

Number and pitch of stays in each

Ten

Pitch

9.16

Working pressure by rules

186 lb

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

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 superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

W663-0017

Ho ✓

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:—The top end bolts. The bottom end bolts. The main bearing bolts. One cut coupling bolts. One cut for piston springs cut feed pump valves cut bridge pump valves. One Sarswell shaft. $\frac{1}{3}$ part Crank Shaft. Two cut Sarswell blades, one for Locustville shaft, Air pump latched, head valve, rod and guide. One main check valve one monkey check valve. 1 pair connecting and tranes. One cut safety valve springs. Blades, Bolts, nuts. Same &c.

FOR THE CENTRAL MARINE ENGINE WORKS,
(M. Gray & Co. Ltd.)

The foregoing is a correct description,

(W. Gray & Co. Id.)
James S. Ebb

DIRECTOR.

Manufacturer.

Dates of Survey while building	{ During progress of work in shops -- During erection on board vessel -- Total No. of visits }	1913. July 2. 4. 8. 9. 11. 14. 15. 16. 18. Aug ¹ 12. 13. 14. 20. 26. Sep 1. 4. 11. 16. 17. 19. 22. 23. 24. 25. 26. 29. 30.	
		Oct 1. 3. 6. 7. 8. 9. 10. 13. 14. 15. 17. 20. 21. 22. 23. 24. 27. 28. 30. 31. Nov 3. 4. 6. 7. 8. 10. 11. 12.	
		13. 14. 17. 18. 19. 20. 21. 24. 27. 28. Dec 1. 3. 5. 8. 9. 10. 11. 12. 13. 15. 16. 17. 18. 19. 22. 23. 24. 29. 30. 31.	
		1914. Jan 5. 6. 8. 9. 12. 13. 14. 15. 17. 20. 21. 22. 23. 27. 28. 29. 30. Feb 2. 3. 4. 9. 11. 12. 13. 17. 19. 25.	
		112.	Is the approved plan of main boiler forwarded herewith <i>Yes</i> ✓

Is the approved plan of main boiler forwarded herewith *Le* ✓

“ ” ” *donkey* ” ” ”

Dates of Examination of principal parts—Cylinders 15/12/13 Slides 19/12/13 Covers 16/12/13 Pistons 19/12/13 Rods 9/12/13

Connecting rods 15/12/13 Crank shaft 5/12/13 Thrust shaft 5/12/13 Tunnel shafts 19/1/14 Screw shaft 28/1/13 Propeller 29/1/14

Connecting rods 11/13 Crank shaft 11/13
Stern tube 30/12/13 Steam pipes tested Jan 6, 9, 10, 11, 12, 13 and at Hong Kong. delaying Engine and boiler seatings 8/1/14 Engines holding down bolts 40/2/14

Completion of pumping arrangements 17/2/14 Boilers fixed 4/2/14 Engines tried under steam 17/2/14

Main boiler safety valves adjusted	Thickness of adjusting washers

Material of Crank shaft Steel Identification Mark on Do. 5443 Material of Thrust shaft Steel Identification Mark on Do. 5443

Material of Tunnel shafts Steel Identification Marks on Do. 5443 Material of Screw shafts Steel Identification Marks on Do. 5443

Material of Steam Pipes *Steel Lap welded* Test pressure *600 lb*

Is an installation fitted for burning oil fuel ☒ Is the flash point of the oil to be used over 150°F. ☒

Have the requirements of Section 49 of the Rules been complied with.....

Is this machinery duplicate of a previous case. no If so, state name of vessel no

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

Erp. in Cnts tested to 400 lbs and today to 50 lbs. Cont'd seed basket
tested to 50 lbs.

A. C. M. C. W. Oberholser a few approved whole trout.

consisting of 16 Elements, the axis of Iron to each Bridge, fitted in the left side.

The Superheaters, Cast Steel Stop Valves, Junction Pipes, and Leads have all

been tested to 360 lb per square inch and found good. A three inch safety

I have to get to each of the four bridge sections. The superstructure are to

arranged, that all steam from the boilers must go through them to the engines.

To Complete The Story. The Supermarine Safety Valve. A adjustment to

190 lb and main bridle safety pads to 185 lb. Amsterdam Overgear advised.

The Machinery and Riggers of this Vessel have been constructed under special Survey, and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition, and the case is respectfully submitted for the satisfaction & LANC. See in the Register Book, upon completion of the Survey.

The amount of Entry Fee	...	£ 3	:	0	:	When applied for,
Special	...	£ 52	:	16	:	24/2/19
Donkey Boiler Fee	...	£	:		:	When received,
Travelling Expenses (if any)	£	:	:		:	25/2/19

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

Committee's Minute

MAR 27 1914

Assigned

+ Lm 6. 2. 14
F. D.

MACHINERY CERTIFICATE
WRITTEN.