

REPORT ON MACHINERY.

No. 67646

Date of writing Report

When handed in at Local Office

JUN 17 1915

Received at London Office SAT. JUN. 19, 1915

Port of NEWCASTLE-ON-TYNE

No. in Survey held at

North & South Shields

Date, First Survey

Aug 8, 1914

Last Survey

June 1, 1915

Reg. Book.

85 on the

SS "MATA HARI"

(Number of Plates 44)

Master W J Carver

Built at South Shields

By whom built

C. Renaldson & Co

Gross 1019

Tons Net 510

When built 1915

Engines made at

North Shields

By whom made

Shields Engineering Co

when made

1915

Boilers made at

Newcastle

By whom made

Palmer's

when made

1914

Registered Horse Power

Owners

British India steam Nav. Co. Ltd

Port belonging to

South Shields

Nom. Horse Power as per Section 28

165

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Inverted Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

17 1/2, 29, 47

Length of Stroke

30

Revs. per minute

100

Dia. of Screw shaft

as per rule 9.08

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 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

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

Length of stern bush

3'-6"

Dia. of Tunnel shaft

as per rule 8.4

Dia. of Crank shaft journals

as per rule 8.8

Dia. of Crank pin

9 1/8

Size of Crank webs

6 1/2 x 13 1/2

Dia. of thrust shaft under

collars

9 1/8

Dia. of screw

10'-6"

Pitch of Screw

12'-0"

No. of Blades

4

State whether moveable

yes

No. of Feed pumps

2

Diameter of ditto

3 1/2

Stroke

15

Can one be overhauled while the other is at work

yes

also 2 Weirs feed pumps

No. of Bilge pumps

2

Diameter of ditto

3 1/2

Stroke

15

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

One Weir's

Sizes of Pumps

9 1/2 x 7 1/2 x 18

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

In Engine Room

three 2 1/4" & two 2"

In Holds, &c.

2 1/4" Tunnel well suction

No. 1 Hold one 2 1/4"

No. of Bilge Injections

1 sizes

5 1/2

Connected to condenser, or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 2 1/4"

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 sized 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

oil suction pipes

How are they protected

yes

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

22.5.15

of Stern Tube

22.5.15

Screw shaft and Propeller

22.5.15

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from steering engine platform

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers	Is Forced Draft fitted	No. and Description of Boilers
Working Pressure	Tested by hydraulic pressure to	Date of test
Can each boiler be worked separately	Area of fire grate in each boiler	No. of Certificate
each boiler	Area of each valve	No. and Description of Safety Valves to
	Pressure to which they are adjusted	Are they fitted with easing gear
Smallest distance between boilers or uptakes and bunkers or woodwork	Mean dia. of boilers	Length
Thickness	Range of tensile strength	Material of shell plates
long. seams	Are the shell plates welded or flanged	Descrip. of riveting: cir. seams
	Diameter of rivet holes in long. seams	Pitch of rivets
	Pitch of rivets	Lap of plates or width of butt straps
Per centages of strength of longitudinal joint	Working pressure of shell by rules	Size of manhole in shell
Size of compensating ring	No. and Description of Furnaces in each boiler	Material
Length of plain part	Thickness of plates	Outside diameter
	Description of longitudinal joint	No. of strengthening rings
Working pressure of furnace by the rules	Combustion chamber plates: Material	Thickness: Sides
Pitch of stays to ditto: Sides	Back	Top
	Top	Bottom
Material of stays	Diameter at smallest part	Area supported by each stay
	Working pressure by rules	End plates in steam space
Material	Thickness	Pitch of stays
	How are stays secured	Working pressure by rules
Diameter at smallest part	Area supported by each stay	Working pressure by rules
Thickness	Material of Lower back plate	Thickness
	Greatest pitch of stays	Working pressure of plate by rules
Diameter of tubes	Pitch of tubes	Material of tube plates
	Thickness: Front	Back
Pitch across wide water spaces	Working pressures by rules	Girders to Chamber tops: Material
thickness of girder at centre	Length as per rule	Distance apart
Working pressure by rules	Superheater or Steam chest; how connected to boiler	Number and pitch of stays in each
separately	Diameter	Length
	Thickness of shell plates	Material
holes	Pitch of rivets	Description of longitudinal joint
	Working pressure of shell by rules	Diam. of rivet
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

W1530-0167

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:—

4 main bearing bolts & nuts, 4 connecting rod bottom end bolts & nuts, 4 connecting rod top end bolts & nuts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one set of piston rings & springs, one eccentric strap, one top & bottom end brass, tailend shaft, 2 bronze propeller blades bolts & nuts & iron of various sizes.

The foregoing is a correct description,
FOR THE SHIELDS ENGINEERING & DRY DOCK CO., LIMITED

E. W. Bradshaw

Manufacturer.

June 16th 1915

Dates
of Survey
while
building

During progress of
work in shops - -
During erection on
board vessel - - -
Total No. of visits

Aug 8. 7. 21. 28. Sep 7. 23. 30. Oct 7. 8. 9. 16. 20. 23. 27. 28. Nov 9. 10. 12. 14. 18. 23. 25. 26. 30. Dec 2. 7. 9. 12. 22. Jan 22. 1915
Feb 1. Mar 13. 14. 20. Apr 7. 12. 17. 26. 28. May 6. 13. 22. 27. Jun 1.

Is the approved plan of main boiler forwarded herewith

yes

Dates of Examination of principal parts—Cylinders 18. 11. 14 Slides 9. 12. 14 Covers 10. 10. 14 Pistons 9. 12. 14 Rods 10. 10. 14

Connecting rods 5. 12. 14 Crank shaft 22. 12. 14 Thrust shaft 22. 12. 14 Tunnel shafts 22. 12. 14 Screw shaft 22. 12. 14 Propeller 22. 12. 14

Stern tube 18. 11. 14 Steam pipes tested 4. 5. 15 Engine and boiler seatings 30. 3. 15 Engines holding down bolts 7. 4

Completion of pumping arrangements 13. 5. 15 Boilers fixed 7. 4. 15 Engines tried under steam 1. 6. 15

Main boiler safety valves adjusted 1. 6. 15 Thickness of adjusting washers Port Blr $R \frac{3}{8} \times 5 \frac{1}{2} \times 8$ Star Blr $R \frac{3}{8} \times 5 \frac{1}{2} \times 8$

Material of Crank shaft steel Identification Mark on Do. 1849 FC Material of Thrust shaft steel Identification Mark on Do. 1849 FC

Material of Tunnel shafts steel Identification Marks on Do. LGS 16. 10. 14 LGS 22. 10. 14 Material of Screw shafts steel Identification Marks on Do. 1849

Material of Steam Pipes copper solid drawn Test pressure 360 lbs

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

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

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

General Remarks

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

The engines of this vessel have been built under special survey & the material & workmanship are good. They have been efficiently fitted on board, tried under steam and found satisfactory.

In our opinion the vessel is eligible to have the notation of
+ LMC 6. 15

It is submitted that
this vessel is eligible for
THE RECORD + LMC 6. 15.

Added F.P. 150°F. 26/7/15 [Subd for oil fuel 6. 15 F.P. above 150°F]

The amount of Entry Fee ... £ 2 : 0 : 0
Special ... £ 24 : 12 : 6
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for
JUN 17 1915
When received,
10/7/15

Reginald & Bain & Co. Shallowcross
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. JUL 2 - 1915

Assigned

+ LMC 6. 15
Subd for oil fuel 6. 15 F.P. above 150°F
MACHINERY CERTIFICATE



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Foundation