

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report

19

When handed in at Local Office

3. 5.

19

45

Port of

NEWCASTLE-ON-TYNE

Received at London Office

No. in Survey held at

Newcastle

Date, First Survey

(1944) Apr. 29th

Last Survey

18-4-1945

Reg. Book

on the S/s EMPIRE NAIROBI.

(Number of Visits)

78

Tons

Gross

6685.11

Net

Built at

Sunderland

By whom built

Short Bros.

Yard No.

484.

When built

1945.

Engines made at

Thur (wallsend)

By whom made

N.E. Mar. Eng. Co. (1938) Ltd

Engine No.

3108.

When made

1945.

Boilers made at

"

By whom made

ditto

Boiler No.

3070.

When made

-

Registered Horse Power

Owners

Min. of War Transport

Port belonging to

Nom. Horse Power as per Rule

510.

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which vessel is intended

Ocean going.

ENGINES, &c.—Description of Engines

3 Cyl. Triple Exp.

Dia. of Cylinders

24½, 37, 70"

Length of Stroke

48"

No. of Cylinders

3.

No. of Cranks

3.

Revs. per minute

76.

Crank shaft, dia. of journals

as per Rule

13.98"

as fitted

14½"

Crank pin dia.

14½"

Crank webs

Mid. length breadth

25½"

Thickness parallel to axis

9" + 9½"

Intermediate Shafts, diameter

as per Rule

13.32"

as fitted

13.98"

Mid. length thickness

9" + 9½"

Thickness around eye-hole

7½ + 7¾"

Thrust shaft, diameter at collars

as per Rule

13.98"

as fitted

14½"

Tube Shafts, diameter

as per Rule

14.84"

as fitted

15½"

Screw Shaft, diameter

as per Rule

14.84"

as fitted

15½"

Is the

screw

shaft fitted with a continuous liner

Yes

Bronze Liners, thickness in way of bushes

as per Rule

.753"

as fitted

.812"

Thickness between bushes

as per Rule

.565"

as fitted

.656"

Is the after end of the liner made watertight in the

propeller boss

Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

In one piece

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

a tight fit.

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

Yes

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Shaft

No

If so, state type

Yes

Propeller, dia.

18-3"

Pitch

15-6"

No. of Blades

4

Material

C. Iron

whether Moveable

No

Total Developed Surface

985

sq. feet

Feed Pumps worked from the Main Engines, No.

2.

Diameter

4½"

Stroke

26"

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No.

2.

Diameter

4½"

Stroke

26"

Can one be overhauled while the other is at work

Yes

Feed

No. and size

Two of 7½ x 21"

Pumps connected to the

Main Bilge Line

No. and size

G.S.P. 9½ x 21"

Ball. P.

+ Two of 4½ x 26"

How driven

by steam

40 tons/hr

250 tons/hr

each 20.5 tons/hr

by M. Eng.

Ballast Pumps, No. and size

One 10½ x 13 x 24"

Lubricating Oil Pumps, including Spare Pump, No. and size

2.

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Bilge Pumps:—In Engine and Boiler Room

1 of 3" P. side of E.R.

1 of 3" in Thrust Recess

2 of 3" in Blr Rm

1 of 2½" in Tunnel Well

In Pump Room

Yes

In Holds, &c.

2 of 3" in each hold.

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps

No. and size

one of 9" in P. side

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

one of 5 on S. side E.R.

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes

Are all Sea Connections fitted direct on the skin of the ship

Yes

Are they fitted with 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 Overboard Discharges above or below the deep water line

Below.

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 pass through the bunkers

Nil.

How are they protected

What pipes pass through the deep tanks

Nil.

Have they been tested as per Rule

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Yes

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another

Yes

Is the Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

No

worked from

Yes

MAIN BOILERS, &c.—(Letter for record

S.)

Total Heating Surface of Boilers

7248 sq. ft.

Which Boilers are fitted with Forced Draft

all.

Which Boilers are fitted with Superheaters

all.

No. and Description of Boilers

3. S.B. (Spt.)

Working Pressure

220 lbs/sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Can the donkey boiler be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

Standard

Main Boilers

17-11-43

Auxiliary Boilers

Donkey Boilers

Yes

(If not state date of approval)

Standard

B" Type

Superheaters

NEM. Standard

General Pumping Arrangements

Pumping Arrangements in E & B Spaces

11-4-45

Oil fuel Burning Piping Arrangements

Yes

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

as per specifi.

The foregoing is a correct description.

THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.

John Nall

Manufacturer.

DIRECTOR.



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Lloyd's Register Foundation

012211-012220-0104

Rpt. 6
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(1944) Apr. 29. May 9. 18. 22. June 1. 13. 15. 19. 22. July 4. 6. 12. 25. Aug 24. Sept. 18.
During progress of work in shops - - - 18. 19. 22. 25. 28. 29. Oct. 2. 3. 4. 9. 11. 13. 16. 17. 18. 20. 23. 24. 25. 27. 30. 31. Nov. 1.
Dates of Survey while building { 2. 7. 10. 13. 14. 15. 16. 17. 24. 29. 30. Dec. 4. 5. 9. 13. 14. 19. 29. (1945) Jan. 2. 3. 25. 26.
During erection on board vessel - - - 29. 31. Feb. 5. 12. 22. 27. Mar. 2. 5. 6. 7. 8. 9. 19. 20. 21. 22. 26. Apr. 18.
Total No. of visits 78

Dates of Examination of principal parts - Cylinders 24-11-44 Slides 26-1-45 Covers 24-11-44
Pistons 26-1-45 Piston Rods 26-1-45 Connecting rods 26-1-45
Crank shaft 14-11-44 Thrust shaft 7-11-44 Intermediate shafts 30-11-44
Tube shaft ✓ Screw shaft 29-1-45 Propeller 27-2-45
Stern tube 4-1-45. Sld. Engine and boiler seatings 27-2-45 & 8-3-45 Engines holding down bolts 8-3-45
Completion of fitting sea connections 8-1-45 Sld.
Completion of pumping arrangements 26-3-45 Boilers fixed 21-3-45 Engines tried under steam 26-3-45
Main boiler safety valves adjusted 26-3-45 Thickness of adjusting washers PORT. BLR. 1/4 11/32 STARP. V. 1/4 23/64 SUPORT. V. 17/64 9/32
Crank shaft material F. Sld. Identification Mark LLOYDS 3108 Thrust shaft material F. Steel Identification Mark LLOYDS 3883 T.T.
Intermediate shafts, material F. Sld. Identification Marks LLOYDS 4048 T.T. (two), 4058 T.T. (two), 4061 T.T., 4073 T.T.
Screw shaft, material F. Sld. Identification Mark LLOYDS 3883 T.T. Steam Pipes, material S.D. Steel (OH) Test pressure 660 lb. Date of Test 5th to 21st March 1945
Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150° F. ✓
Have the requirements of the Rules for the use of oil as fuel been complied with ✓
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No ✓ If so, have the requirements of the Rules been complied with ✓
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with No desired.
Is this machinery duplicate of a previous case Similar to. If so, state name of vessel Empire Mandarin NEM. No. 3069.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Machinery of this Vessel has been constructed and installed under Special survey in accordance with the approved plans, Specification and the Society's Rules, and the materials and workmanship are good. It is eligible, in my opinion, to be classed and to have record + LMC. 4.45, and the notations 3 SB (Spt), WP. 220 lbs. FD. CL.

The amount of Entry Fee ... £ 6 : - : When applied for,
Special ... £ 100 : 10/- : - 7 MAY 1945
+ 25% for Special Survey 25 : 2/6 :
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ - : : 19

A. Watt.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute ... 18 MAY 1945
Assigned + LMC 4.45
F.D. C.L. Spt.