

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

20 DEC 1929

NEWCASTLE-ON-TYNE

Date of writing Report

When handed in at Local Office

19/12/29 Port of

No. in Survey held at  
Reg. Book.

Date, First Survey

Last Survey

18-12-1929

on the

Wallsend-on-Tyne New Steel S.S. Anglo-African

(Number of Visits 70)

Gross

Tons

Net

When built

1929

when made

1929

when made

1929

Built at

Sunderland

By whom built

Short Bros Ltd

Yard No.

439

Engines made at

Wallsend-on-Tyne

By whom made

North Eastern M.E.C. Ltd

Engine No.

2406

Boilers made at

Wallsend-on-Tyne

By whom made

North Eastern M.E.C. Ltd

Boiler No.

2406

Registered Horse Power

453

Owners

Nitrate Producers S.S.C. Ltd

Port belonging to

London

Nom. Horse Power as per Rule

453

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

yes

Trade for which Vessel is intended

Ocean going, General Cargo

## ENGINES, &amp;c.—Description of Engines

Quadruple Expansion

Revs. per minute

63

Dia. of Cylinders

23 1/2, 22 1/2, 14 1/2, 6 1/2

Length of Stroke

48

No. of Cylinders

4

No. of Cranks

4

Crank shaft, dia. of journals

as per Rule 13.629"

as fitted 13 1/4"

Crank pin dia.

14 1/4"

Crank webs

Mid. length breadth

21 1/2"

Mid. length thickness

8 1/4"

shrunk

Thickness parallel to axis

8 3/4"

Thickness around eye-hole

1 1/2 x 1 1/8"

Intermediate Shafts, diameter

as per Rule 12.99"

as fitted 12 3/8"

Thrust shaft, diameter at collars

as per Rule 13.629"

as fitted 13 1/8"

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 14 1/2"

as fitted 14 1/8"

Is the tube

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule 4 1/2"

as fitted 4 1/4"

Thickness between bushes

as per Rule 5 1/2"

as fitted 5 1/4"

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

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

yes

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

end of the tube shaft

no

Length of Bearing in Stern Bush next to and supporting propeller

5' 6"

Propeller, dia.

18' 0"

Pitch

18' 0"

No. of Blades

4

Material

Bronze

whether Movable

no

Total Developed Surface

100 sq. feet

Feed Pumps worked from the Main Engines, No.

2

Diameter

4"

Stroke

26"

Can one be overhauled while the other is at work

yes

Bilge Pumps worked from the Main Engines, No.

2

Diameter

4 1/2"

Stroke

26"

Can one be overhauled while the other is at work

yes

Feed Pumps

No. and size

2 @ 1 1/2" x 9 1/2" x 21 1/2" aux

Pumps connected to the

Main Bilge Line

No. and size

one duplex ballast 9 x 11 x 10

How driven

Steam

Steam

Ballast Pumps, No. and size

one 9 x 11 x 10

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

none

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

yes

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room

3 @ 3" &amp; 1 @ 2 1/2" in dry tank

1 @ 2 1/2" in Tunnel

In Holds, &amp;c.

2 @ 3" for hold, 2 @ 3" for main hold, 2 @ 2 1/2" for bunkers

2 @ 3" after

main hold, 2 @ 3" after hold, 2 @ 3" deep tank

Main Water Circulating Pump Direct Bilge Suctions, No. and size

No. and size

1 @ 5"

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 de-p water line

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

How are they protected

wood liners

yes

What Pipes pass through the bunkers

Bilge suction

none

Have they been tested as per Rule

yes

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

yes

worked from

top platform

Main Water Circulating Pump Direct Bilge Suctions, No. and size

No. and size

1 @ 9"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

1 @ 5"

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1929  
 During progress of work in shops - - - Mar. 1. 11. 21. Apr. 3. 4. 8. 12. 18. 24. 30. May 2. 8. 14. 15. 17. 24. 28. 29. 30. 31. June 4. 11. 12. 20. 21. July 2. 4.  
 9. 12. 15. 16. 19. 25. Aug. 2. 8. 9. 12. 13. 23. 27. 28. 29. 30. Sep. 3. 4. 16. 17. 20. 26. Oct. 1. 4. 7. 8. 11. 21. 22. 24. 30. Nov. 4.  
 During erection on board vessel - - - 7. 8. 11. 12. 20. 27. Dec. 3. 5. 6. 10. 18.  
 Total No. of visits 70.

Dates of Examination of principal parts—Cylinders 11-6-29 Slides 11-10-29 Covers 16-4-29  
 Pistons 11-10-29 Piston Rods 16-9-29 Connecting rods 4-9-29  
 Crank shaft 21-10-29 Thrust shaft 30-5-29 Intermediate shafts 21-10-29 & 4-11-29  
 Tube shaft ✓ Screw shaft 26-9-29 Propeller 26-9-29  
 Stern tube 4-10-29 Engine and boiler seatings 22-10-29 Engines holding down bolts 24-11-29  
 Completion of fitting sea connections 22-10-29  
 Completion of pumping arrangements 24-11-29 Boilers fixed 24-11-29 Engines tried under steam 3-12-29  
 Main boiler safety valves adjusted 3-12-29 Thickness of adjusting washers P 5 16 32; C 13 P 5 32 super 9 64; S 13 32 64; S 13 32 64; S 13 32 64  
 Crank shaft material O.H. Steel Identification Mark 2406 W.B. Thrust shaft material O.H. Steel Identification Mark 1494 W.B.  
 Intermediate shafts, material O.H. Steel Identification Marks 2495, 2456, 1464, 2454, 2454 all W.B. Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material O.H. Steel Identification Mark 2504 & 1459 W.B. Steam Pipes, material S.D. Steel Test pressure 660 lbs Date of Test 11-11-29 to 24-11-29  
 Is an installation fitted for burning oil fuel ho Is the flash point of the oil to be used over 150°F. ✓  
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓  
 Is this machinery duplicate of a previous case yes If so, state name of vessel Anglo-Saxon.

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
 The Machinery of this vessel has been built under Special Survey. Materials & Workmanship good. Hydraulic tests satisfactory. The whole of the machinery is efficiently installed & fixed in the vessel & has been tried under steam and is in good & safe working condition and eligible in my opinion to be classed & have records. ✕ L.M.C 12-29. in the Register Book. also Sail Shaft C.L.

It is submitted that this vessel is eligible for THE RECORD. + LMC 12-29 CL. F.D.

W. Butler 2/12/29

The amount of Entry Fee ... £ 5 0 0: When applied for, 19 DEC 1929  
 Special ... £ 92 19 0: When received, 31-12-29  
 Donkey Boiler Fee ... £ ✓  
 Travelling Expenses (if any) £ ✓

William Butler  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 24 DEC 1929

Assigned

+ LMC 12.29  
 W.D. C.