

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

MAY 4 1938

Date of writing Report

10

When handed in at Local Office

30<sup>th</sup> April 1938. Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Two-on-Tyre (Hebburn)

Date, First Survey

1<sup>st</sup> Oct/37

Last Survey

29<sup>th</sup> April

1938.

Reg. Book.

on the

Steel Sc "AGIOS GEORGIOS IV"

(Number of Visits 59.)

Tons

Gross

4820.4847

Net

2830.2916

Built at

Sunderland

By whom built

Messrs Bartrams &amp; Sons Ltd

Yard No.

279.

When built

1938.

Engines made at

Two-on-Tyre (Hebburn)

By whom made

Messrs White Marine Engine Co Ltd

Engine No.

When made

1938.

Boilers made at

Glasgow

By whom made

Messrs Barclay Curle &amp; Co Ltd

Boiler No.

When made

1938.

Registered Horse Power

Owners

George Nicolaou Ltd. (Inqo)

Port belonging to

Piraeus

Nom. Horse Power as per Rule

365.

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which Vessel is intended

Ocean Going.

ENGINES, &amp;c.—Description of Engines

4 Cylinder Compound Recipg Engine with SR Gearing Combined with LP Turbine with DR gearing 5 propeller shafting Revs. per minute 63.

Dia. of Cylinders

2@10<sup>1</sup>/<sub>16</sub>" & 2@2<sup>1</sup>/<sub>4</sub>"

Length of Stroke

13"

No. of Cylinders

4.

No. of Cranks

4.

Crank shaft, dia. of journals

as per Rule

6.28"

Crank pin dia.

7<sup>3</sup>/<sub>4</sub>"

Crank webs

Mid. length breadth

9<sup>3</sup>/<sub>4</sub>"

Thickness parallel to axis

4<sup>1</sup>/<sub>8</sub>"

Intermediate Shafts, diameter

as per Rule

11.68

as fitted

Thrust shaft, diameter at collars

as per Rule

12.25"

as fitted

13<sup>1</sup>/<sub>4</sub>"

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule

as fitted

Is the { tube }

screw }

shaft fitted with a continuous liner

Is the after end of the liner made watertight in the

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

Is the after end of the liner made watertight in the

propeller boss

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

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

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

If so, state type

Propeller, dia.

17'-10<sup>1</sup>/<sub>2</sub>"

Pitch

17.17 ft

No. of Blades

4

Material

CI

whether Moveable

Solid

Total Developed Surface

117 sq. feet

Feed Pumps

worked from the Main Engines, No.

one

Diameter

2<sup>1</sup>/<sub>2</sub>"

Stroke

Feed pump

Can one be overhauled while the other is at work

Bilge Pumps

worked from the Main Engines, No.

one

Diameter

4<sup>3</sup>/<sub>4</sub>"

Stroke

12"

Can one be overhauled while the other is at work

Feed

Pumps { No. and size

How driven

Pumps connected to the

Main Bilge Line

No. and size

How driven

Ballast Pumps, No. and size

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

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

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room

In Pump Room

In Holds, &amp;c.

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

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

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

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

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

Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

What Pipes pass through the bunkers

How are they protected

What pipes pass through the deep tanks

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

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

MAIN BOILERS, &amp;c.—(Letter for record

Total Heating Surface of Boilers

Is Forced Draft fitted

Yes

No. and Description of Boilers

2 Single Ended Multitubular

Working Pressure

240 lb/10"

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS.

Are approved plans forwarded herewith for

Shafting

Main Boilers

Auxiliary Boilers

Donkey Boilers

(If not state date of approval)

Superheaters

General Pumping Arrangements

Oil fuel Burning Piping Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

1 HP &amp; 1/2 HP Crank valve Springs. 12 Condenser tubes. One propeller

Shaft. One CI propeller.

The foregoing is a correct description,

For White's Marine Engineering Co. Ltd.

Manufacturer.



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Lloyd's Register

Foundation

W143-0050



1937  
 July 29. Aug. 13. 16. Sep. 3. 6. 14. 22. 28. 30. Oct. 1. 6. 8. 11. 13. 15. 18. 25. Nov. 2. 4. 11. 26.  
 1938  
 Dec. 2. 10. 17. 22. 24. 31. Jan. 4. 13. 14. 18. 20. 25. 27. 28. Feb. 1. 15. 16. 23. 28. Mar. 2. 7. 8. 11.  
 17. 18. 21. 29. 31. Apr. 4. 7. 11. 13. 20. 21. 27. 29.  
 Dates of Survey while building  
 During progress of work in shops - - -  
 During erection on board vessel - - -  
 Total No. of visits **59.**

Dates of Examination of principal parts—Cylinders **28-1-38 & 1-2-38** Slides **17-3-38** Covers **28-1-38 & 1-2-38**  
 Pistons **8-3-38.** Piston Rods **28-2-38** Connecting rods **28-2-38**  
 Crank shaft **16-2-38.** Thrust shaft **25-2-38** Intermediate shafts ✓  
 Tube shaft ✓ Screw shaft ✓ Propeller ✓  
 Stern tube ✓ Engine and boiler seatings ✓ Engines holding down bolts ✓  
 Completion of fitting sea connections ✓  
 Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam ✓  
 Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓  
 Crank shaft material **Steel** Identification Mark **2726** Thrust shaft material **Steel** Identification Mark **3450.**  
 Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material ✓ Identification Mark ✓  
 Screw shaft, material ✓ Identification Mark ✓ Steam Pipes, material ✓ Test pressure ✓ Date of Test ✓  
 Is an installation fitted for burning oil fuel **yes.** 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 ✓ 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 ✓  
 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. **This Engine has been constructed under Special Survey in accordance with the Rules & approved plans. The materials & workmanship are good. The Engine was satisfactorily tested under steam in the shop and afterwards sent to Sunderland to be installed on board with its LP Turbine and S/R Gearing.**

$$N.H.P. = \frac{P+590}{1500} \left( \frac{SHP}{6} + \frac{H_{main}}{12} + \frac{H_{aux}}{15} \right) = \frac{240+590}{1500} \left( \frac{1530}{6} + \frac{3802}{12} + \frac{1322}{15} \right) = 365. \checkmark$$

#### Allocation of fees

Newcastle &c 1st Entry £5-0-0  
 Reciprocating Eng. £13-6-0  
 LP Turbine £11.-19-0  
**£25-5-0**

London &c S/R Gearing £9-0-0 15/- Exps.

Glasgow &c main & aux Boilers £29-11-0

Sunderland &c Installing £15-19-0. ✓

Total fee £79-15-0. Special Survey. ✓

The amount of Entry Fee ... (£ 5 : - : )  
 Special ... (£ 79 : 15 : )  
 Donkey Boiler Fee ... (£ : : : )  
 Travelling Expenses (if any) £ : 15 : )  
 When applied for  
**3 MAY 1938**  
 When received,  
 1st Instalmt. 1938. *Kure.*

*L. Prescott.*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI 22 JUL 1938**

Assigned **Sic Sea 32430**



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