

Received at London Office

Date of writing Report 11th June, 1918 When handed in at Local Office

19 Port of West Hartlepool

No. in Survey held at W. Hartlepool

Date, First Survey 11th April 1917 Last Survey 27th May 1918

Reg. Book.

on the Steamer S.S. (Oil Steamer) "Palmol" (W. Gray & Co's No. 890)

(Number of Visits 85)

Tons Gross 1143.73

Net 520.88

When built 1918

Master H. J. B. Popplewell Built at W. Hartlepool

By whom built W. Gray & Co. Ltd.

Engines made at Stockholm (Sweden)

By whom made J. & C. G. Bolinder

when made

Boilers made at

By whom made

when made

Registered Horse Power 640

Owners Admiralty

Port belonging to London

Nom. Horse Power as per Section 28 183.11 HP

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Two Cycle Hot Bulb with direct reverse No. of Cylinders 4 (each 12 in. dia.) No. of Cranks 4 (each 12 in. dia.)

Dia. of Cylinders 16 1/2" Length of Stroke 18 1/2" Revs. per minute 215 Dia. of Screw shaft as per rule as fitted 8 1/2" Material of propeller shaft Ingot Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Stern bush & one of 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 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 No Length of stern bushes 26 1/2" inner 30 1/2" outer

Dia. of Tunnel shaft as per rule 7 1/2" Dia. of Crank shaft journals as per rule 7 1/2" Dia. of Crank pin 7 1/2" Size of Crank webs 10 5/8" x 4 1/2" Dia. of thrust shaft under collars 6 7/8" Dia. of screw 6-3" Pitch of Screw 5-0" No. of Blades 3 State whether moveable No Total surface (one propeller) 12 sq. ft.

No. of Bilge pumps 2 to each engine Diameter of ditto 3 7/8" Stroke 2" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2 in engine room Sizes of pumps 3 throw Rams 8 1/2" dia. 4" stroke No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3, 3" in after peak tank, one, 3 1/2"

In Holds, &c. Connected to fore pump, in fore peak, one 4"

No. of Bilge Injections sizes Connected to condenser, or to circulating pump Is a separate Donkey Suction fitted in Engine room & size Yes, 6 1/2"

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 None

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks all valves except donkey boiler blow-down except ballast donkey

Are they fixed sufficiently high on the ship's side to be seen without lifting the hatch plates Yes Are the Discharge Pipes above or below the deep water line all above to Admiralty requirements

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

What pipes are carried through the bunkers How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and 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

Is the Screw Shaft Tunnel watertight None Is it fitted with a watertight door worked from

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. and Description of Safety Valves to each boiler
Area of each valve	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
Material of shell plates	Thickenss	Range of tensile strength
Are the shell plates welded or flanged	Descrip. of riveting: cir. seams	long. seams
Diameter of rivet holes in long. seams	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
Outside diameter	Length of plain part	No. of strengthening rings
Thickenss of plates	Description of longitudinal joint	Back
Top	Bottom	Bottom
Working pressure of furnace by the rules	Combustion chamber plates: Material	Thickenss: Sides
Back	Top	If stays are fitted with nuts or riveted heads
Working pressure by rules	End plates in steam space:	Material of stays
Area at smallest part	Area supported by each stay	Working pressure by rules
Material	Thickenss	Pitch of stays
How are stays secured	Working pressure by rules	Material of Front plates at bottom
Area at smallest part	Area supported by each stay	Working pressure of plate by rules
Thickenss	Material of Lower back plate	Thickenss
Greatest pitch of stays	Working pressure of plate by rules	Mean pitch of stays
Diameter of tubes	Pitch of tubes	Material of tube plates
Thickenss: Front	Back	Mean pitch of stays
Pitch across wide water spaces	Working pressures by rules	Girders to Chamber tops: Material
Depth and thickenss of girder at centre	Length as per rule	Distance apart
Number and pitch of stays in each	Working pressure by rules	Steam dome: description of joint to shell
% of strength of joint	Diameter	Thickenss of shell plates
Material	Description of longitudinal joint	Diam. of rivet holes
Pitch of rivets	Working pressure of shell by rules	Crown plates
Thickenss	How stayed	

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

W518-0019

© 2019 Lloyd's Register Foundation

IS A DONKEY BOILER FITTED? *Yes.*

If so, is a report now forwarded? *Yes.*

Gls No 37107

SPARE GEAR. State the articles supplied:— 2 blow lamps, 32 piston springs, 16 injection nozzles, 48 cleaning needles

8 pressure valves, 8 suction valves, 8 oil valves, 88 valve springs, 16 governor springs, 8 fuel pump springs, 12 elbow plates for governor, 4 back pump springs, 16 air valve springs, 24 spindles for oil valves & 8 for fuel pump, 8 pressure & 8 suction valves & 4 springs for water injection pump, oil fuel pump valves (suction & delivery) & 4 spring bilge pump valves (2) & springs, 4 injection bulbs, 8 flanges for water valve, 2 boxes of blow lamp spares, Set shaft coupling bolts & nuts, assorted studs & nuts; complete sets of spare gear for each of the following auxiliary

eng. — 2 electrically driven ballast & bilge pumps, 2 gear driven cargo oil pumps, 2 sets of electric generating machinery, & feed pump & steam & hand oil fuel pumps for donkey boiler.

N.B. — The articles of spare gear detailed in Hpl. Ppt. No. 15462 on Machinery of R.F.A. "Oakol", & which are not carried on board ship but are stored at the naval base, are common to both vessels ("Oakol" & "Palmol").

The foregoing is a correct description,
FOR THE CENTRAL MARINE ENGINE WORKS,

(In. Eng. & Co. Ltd.)

John Williamson

Manufacturer.

Dates of Survey while building { During progress of work in shops — 1917. Apr. 11. May 4. 7. 8. 9. 14. 15. 21. 23. 24. 31. June 1. 21. 22. 27. July 2. 3. 5. 6. 13. 19. 25. 27. Aug. 17. 20. 22. Oct. 16. 18. 19. 22. Nov. 9. 12. 13. 14. 16. 19. 23. 26. 27. 28. 29. 30. Dec. 3. 4. 11. 20. 21. 1918 Jan. 15. 17. 21. 22. 29. 30. Feb. 5. 6. 7. 11. 12. 13. 19. Mar. 5. 11. 12. 13. 14. 15. 20. 25. Apr. 4. 9. 13. 15. 16. 17. 18. 24. 26. May 7. 8. 13. 22. 23. 25. Total No. of visits *85.*

Is the approved plan of main boiler forwarded herewith ☒

" " " donkey " " " *Yes.*

Dates of Examination of principal parts — Cylinders 16-19/11/17 Slides ☒ Covers 16-19/11/17 Pistons 16-19/11/17 Rods ☒

Connecting rods 16-19/11/17 Crank shafts 16-19/11/17 Thrust shafts 16-19/11/17 Tunnel shafts ☒ Screw shafts 17/5/17 Propellers 4/4/18

Stern tubes 12/11/17 Steam pipes tested ☒ Engine and boiler seatings 15/1/18 Engines holding down bolts 29/1/18

Completion of pumping arrangements 22/5/18 Boilers fixed ☒ Engines tried under steam 23 to 27/5/18

Completion of fitting sea connections 15/4/18 Stern tubes 15/4/18 Screw shaft and propellers 16/4/18

Main boiler safety valves adjusted ☒ Thickness of adjusting washers ☒

Material of Crank shaft ☒ Identification Mark on Do. ☒ Material of Thrust shaft ☒ Identification Mark on Do. ☒

Material of ~~Intermediate~~ shafts ☒ Identification Marks on Do. 5942 Material of Screw shafts ☒ Identification Marks on Do. 5942

Material of Steam Pipes ☒ Test pressure ☒

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 *Yes.* If so, state name of vessel *R.F.A. "Oakol"*

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

The requirements of the Admiralty Specification have been carried out. And it is respectfully submitted that the record of LMC 5,18 may be made in the Register Book, in the case of this vessel.

The propelling machinery consists of two sets of Bolinder, direct reversible, crude oil engines. No marks have been found, to denote that any parts, including crank & thrust shafting, had been subjected to any form of test. Each set of engines supplied by the Admiralty & accepted by the Contractors as a complete working unit.

Auxiliary machinery comprises, — two gear-driven cargo oil pumps, each pump being driven from one of the main engines by means of shafting having a flexible coupling & a friction clutch; electric generating machinery made up of two sets of oil engines of the hot bulb type coupled direct to continuous current dynamos working at 105 volts — one set 100 BHP & one set 50 BHP.; & two ballast & bilge pumps & a fresh water pump — each of these 3 pumps being electrically driven.

Steering gear & windlass are also electrically driven

It is submitted that
this vessel is eligible for
THE RECORD. LMC 5,18.

Oil Engines. 25C.S.A. 8Cy. 16 1/2" - 18 1/16" DB.
J & C.G. Bolinders Co. Ltd. Skm. (Annual En)

The amount of Entry Fee ... £ : : When applied for, 18/6/18
Special ... £ 29 : 5 -
Donkey Boiler Fee ... £ : : When received, 26/10/18
Travelling Expenses (if any) £ : : 29/10/18

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

TUE. 18 JUN. 1918

MACHINERY CERTIFICATE

WRITTEN

R.M.C. 5:18

Oil Engines



© 2019

Lloyd's Register
Foundation