

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

-4 JUL 1925

Date of writing Report 30th June 1925, When handed in at Local Office 2 July 1925 Port of

No. in Survey held at West Hartlepool Date, First Survey 13 June Last Survey 29 June 1925.

Reg. Book. 526 on the S.S. "CAIRNHILL" ex "NITEDAL" (Number of Visits 7) Gross 3901

Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 961 When built 1924

Engines made at West Hartlepool By whom made Central Max. Eng. Works Engine No. 961 when made 1924

Boilers made at ditto By whom made ditto Boiler No. 961 when made 1924

Registered Horse Power Owners Macbeth Lammie & Blackwood, Ltd. Port belonging to Glasgow.

Nom. Horse Power as per Rule 415 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 Triple expansion Revs. per minute

Dia. of Cylinders 25-40½-67 Length of Stroke 45 No. of Cylinders 3 No. of Cranks 3

Crank shaft, dia. of journals as per Rule 12.87" Crank pin dia. 13½" Crank webs Mid. length breadth 19" Mid. length thickness 7½" Thickness parallel to axis 7½" Thickness around eye-hole 5½"

Intermediate Shafts, diameter as per Rule 12.26" Thrust shaft, diameter at collars as per Rule 12.87"

Tube Shafts, diameter as fitted 12½" Screw Shaft, diameter as per Rule 13.67" Is the shaft fitted with a continuous liner yes

Bronze Liners, thickness in way of bushes as per Rule 23" Thickness between bushes as fitted 14½" 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

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 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 5-1½"

Propeller, dia. 17-0" Pitch 16-0" No. of Blades 4 Material Bronze whether Moveable no Total Developed Surface 91 sq. feet

Feed Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 28" Can one be overhauled while the other is at work yes

Bilge Pumps worked from the Main Engines, No. 2 Diameter 3½" Stroke 28" Can one be overhauled while the other is at work yes

How driven 1. 7½" x 5" Dup. 1. 7½" x 5" 12" Single Pumps connected to the Main Bilge Line No. and size 2 Main 3½" x 28" 1 8" x 9" Duplex

Ballast Pumps, No. and size 1 8" x 9" Duplex 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 3 of 3½" 1 of 2½" & 1 of 2" in tunnel

In Holds, &c. 2 of 3½" in each

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1-6" Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 3½" Are all the Bilge Suction Pipes in holds and tunnel well fitted with stram-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 yes

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 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 none How are they protected

What pipes pass through the deep tanks 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 Cylinder grating

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 6085 sq. ft.

Is Forced Draft fitted yes No. and Description of Boilers 2 Main S.E. 1 Aux S.E. Working Pressure 180 lbs

IS A REPORT ON MAIN BOILERS NOW FORWARDED? yes

IS A DONKEY BOILER FITTED? no If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting Main Boilers yes Auxiliary Boilers yes Donkey Boilers

Superheaters General Pumping Arrangements yes Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:— 2 Bolts Nuts for connecting rods top ends.

2 ditto bottom ends 2 ditto main bearings 1 set coupling

bolts-nuts. 1 set feed pump valves 1 set bilge pump valves.

1 set H.P. piston springs. 4 feed check valves 1 set air pump

valves. 1 propeller shaft 1 propeller. Various spare parts

for fan engine. Assorted bolts, nuts, and iron.

The foregoing is a correct description,
For THE CENTRAL MARINE ENGINE WORKS,
(W. Gray & Co. Ltd.)

MANAGING DIRECTOR, C.M.E.W.

Manufacturer.



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Total No. of visits

Dates of Examination of principal parts—Cylinders

Slides

Covers

Pistons

Piston Rods

Connecting rods

Crank shaft

Thrust shaft

Intermediate shafts

Tube shaft

Screw shaft

Propeller

Stern tube

Engine and boiler seatings

Engines holding down bolts

Completion of pumping arrangements

Boilers fixed

Engines tried under steam

Main boiler safety valves adjusted

Thickness of adjusting washers

PP $\frac{1}{32}$ S $\frac{1}{32}$ S P $\frac{1}{32}$ S $\frac{1}{32}$ Aux P $\frac{3}{8}$ S $\frac{5}{16}$

Crank shaft material *Ingot steel* Identification Mark

Thrust shaft material *Ingot steel* Identification Mark

Intermediate shafts, material *Ingot steel* Identification Marks

Tube shaft, material Identification Mark

Screw shaft, material *Ingot steel* Identification Mark

Steam Pipes, material *L.W. Steel* Test pressure 540 lbs

Date of Test 27.6.2

Is an installation fitted for burning oil fuel *no*

Is the flash point of the oil to be used over 150°F. *by N.V. Bureau*

Have the requirements of the Rules for carrying and burning oil fuel been complied with

Is this machinery duplicate of a previous case

If so, state name of vessel

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

This vessel's machinery which was built under the survey of the Norwegian Veritas Surveyors has been examined throughout.

The dimensions and particulars are as stated in this and accompanying boiler reports.

The steel of the boilers was tested by the Surveyors of Lloyds Register.

See also accompanying condition report.

Certificate to be sent to
The Surveyors are requested not to write up or below the space for Committee's Minute.

The amount of Entry Fee ... £	:	:	When applied for,
Special ... £	:	:	19
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	19

Committee's Minute

TUES. 14 JUL 1925

Assigned

R.D. Shilston.

Engineer Surveyor to Lloyd's Register of Shipping.



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