

## REPORT ON OIL ENGINE MACHINERY.

No. 58006

Received at London Office

17 FEB 1937

Date of writing Report

19

When handed in at Local Office

13. 2. 1937

Port of

Glasgow

No. in Survey held at  
Reg. Book.

Glasgow

Date, First Survey

17. 6. 36

Last Survey

3. 2. 1937

Number of Visits

40

Single  
on the ~~Deck~~  
Triple  
Quadruple

Screw vessel

"CAMEO"

Tons { Gross 945.51  
Net 504.34

Built at

Glasgow

By whom built

A &amp; J. Inglis Ltd.

Yard No. 979P. When built 1937

Engines made at

Glasgow

By whom made

Harland &amp; Wolff Ltd.

Engine No. 979. When made 1937

Donkey Boilers made at

By whom made

Boiler No. - When made -

Brake Horse Power

725

Owners

Wm. Robertson

Port belonging to

Glasgow.

Nom. Horse Power as per Rule

169

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

yes

Trade for which vessel is intended

Coasting

OIL ENGINES, &c.—Type of Engines Endless trunk type, airless injection 2 or 4 stroke cycle 2 Single or double acting S.A.

Maximum pressure in cylinders

697 lb/sq. in.

Diameter of cylinders

280 mm.

Length of stroke

500 mm.

No. of cylinders

8

No. of cranks

8

Mean Indicated Pressure

100 lb/sq. in.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge

378 mm

Is there a bearing between each crank

yes

Revolutions per minute

250

Flywheel dia.

782 mm.

Weight

215 Kp.

Means of ignition

Compression

Kind of fuel used

Diesel oil

Crank Shaft, dia. of journals

as per Rule 182.5 mm

as fitted 220 mm.

Crank pin dia.

200 mm.

Crank Webs

Mid. length breadth 270 mm.

Thickness parallel to axis

Mid. length thickness 108 mm.

Thickness around eye hole

Flywheel Shaft, diameter

as per Rule 182.5 mm

as fitted

Intermediate Shafts, diameter

as per Rule 5.76"

as fitted 5 3/8"

Thrust Shaft, diameter at collars

as per Rule 6.07"

as fitted 220 mm. = 8.66"

Tube Shaft, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 6.42"

as fitted 7"

Is the

screw

shaft fitted with a continuous liner

yes

Bronze Liners, thickness in way of bushes

as per Rule

as fitted .49"

Thickness between bushes

as per rule .367"

as fitted 15/32"

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

-

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

If so, state type

5-6 lb

Length of Bearing in Stern Bush next to and supporting propeller

2-4"

Propeller, dia.

8'-0"

Pitch

4'-6"

No. of blades

4

Material

Brass

whether Moveable

no

Total Developed Surface

18 sq. feet

Method of reversing Engines

Direct

Is a governor or other arrangement fitted to prevent racing of the engine when declatched

yes

Means of lubrication

forced

Thickness of cylinder liners

22-15 mm.

Are the cylinders fitted with safety valves

yes

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

-

Cooling Water Pumps, No.

Two @ 30 ton per hr.

Is the sea suction provided with an efficient strainer which can be cleared within the vessel

yes

Bilge Pumps worked from the Main Engines, No.

1

Diameter

142 mm.

Stroke

160 mm.

Can one be overhauled while the other is at work

-

Pumps connected to the Main Bilge Line

No. and Size

1 Ballast &amp; General Service pump

How driven

Electric motor

1 Bilge pump, 25 ton/hr.

Driven by

Auxiliary engine

Is the cooling water led to the bilges

no

If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size

One 130 ton per hr.

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

2 @ 20 ton per hr.

1 @ 14 " " "

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

yes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

Engine room fwd. 2 1/4" dia.

Engine room aft. 2 1/4" dia.

In Pump Room

In Holds, &amp;c.

Hold, port 3" dia.

Hold, starboard 3" dia.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Two @ 3" dia. &amp; one 2" hose connection

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

yes

Are the Bilge Suctions in the Machinery Spaces

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

look

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

-

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

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

-

Is it fitted with a watertight door

-

worked from

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

-

Main Air Compressors, No.

One

No. of stages

2

Diameters

220 + 195 mm.

Stroke

150 mm.

Driven by

Main engine

Auxiliary Air Compressors, No.

-

No. of stages

-

Diameters

-

Stroke

-

Driven by

-

Small Auxiliary Air Compressors, No.

One

No. of stages

2

Diameters

-

Stroke

2 1/4" dia. Driven by

National Oil engine

Scavenging Air Pumps, No.

One

Diameter

Rotary

Stroke

4 1/4" dia.

Driven by

Main engine

Auxiliary Engines crank shafts, diameter

as per Rule

81.3 mm.

as fitted

110 mm.

No.

One

Position

Engine room port side fwd.



AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned *yes* Is a drain fitted at the lowest part of each receiver *yes*  
Starting High Pressure Air Receivers, No. *One* Cubic capacity of each *80 cu. ft.* Internal diameter *3-6"* thickness *5/8"*  
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *28/32 ton* Working pressure *356 lb. sq. in.*  
Starting Air Receivers, No. *One* Total cubic capacity *88 litres* Internal diameter *1-6"* thickness *3/8"*  
Seamless, lap welded or riveted longitudinal joint *Riveted* Material *Steel* Range of tensile strength *28/32 ton* Working pressure *356 lb. sq. in.*

IS A DONKEY BOILER FITTED?

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

PLANS. Are approved plans forwarded herewith for Shaftering (If not, state date of approval)

Donkey Boilers *yes* General Pumping Arrangements *yes* Receivers *yes* Separate Fuel Tanks *yes*  
Oil Fuel Burning Arrangements *yes* Pumping Arrangements in Machinery Space *yes*

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

*See attached list.*

The foregoing is a correct description,  
For HARLAND AND WOLFF, LIMITED.

Manufacturer.

Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits *140*

Dates of Examination of principal parts—Cylinders *18-11-36* Covers *18-11-36* Pistons *27-11-36* Rods *27-11-36* Connecting rods *27-11-36*  
Crank shaft *23-9-36* Flywheel shaft *23-9-36* Thrust shaft *23-9-36* Intermediate shafts *23-9-36* Tube shaft *23-9-36*  
Screw shaft *23-9-36* Propeller *9-9-36* Stern tube *9-9-36* Engine seatings *29-10-36* Engines holding down bolts *12-1-37*  
Completion of fitting sea connections *29-10-36* Completion of pumping arrangements *3-2-37* Engines tried under working conditions *3-2-37*  
Crank shaft, Material *Steel* Identification Mark *6946 P.7* Flywheel shaft, Material *Steel* Identification Mark *756 P.9*  
Thrust shaft, Material *Steel* Identification Mark *6375 P.9* Intermediate shafts, Material *Steel* Identification Marks *755 P.9*  
Tube shaft, Material *Steel* Identification Mark *755 P.9*

Is the flash point of the oil to be used over 150° F. *yes*  
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *yes*  
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 *yes*  
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with *yes*  
Is this machinery duplicate of a previous case *no* If so, state name of vessel *yes*

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

This machinery has been built under special survey & in accordance with the approved plans & the Rules of this Society.

The materials and workmanship are good.

The machinery has been efficiently secured in position on board the vessel and afterwards tried under full working conditions with satisfactory results.

The machinery is eligible in our opinion to be classed in the Register Book with the notation *-1 LMC 2.37 C.L.*

*13/2/37*

The amount of Entry Fee .. £ 3 : 0 : 0 When applied for, *16 FEB 1937*  
Special ... £ 42 : 5 : 0  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : *3-3 37 4/3*

Committee's Minute GLASGOW 16 FEB 1937

Assigned + L.M.C. 2.37

P. Fitzgerald. Sh. Davis. H. Campbell.  
Engineer Surveyors to Lloyd's Register of Shipping.



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