

## REPORT ON OIL ENGINE MACHINERY.

No. 81858  
WED FEB 9 1921

Date of writing Report

19

When handed in at Local Office

8 FEB 1921

Received at London Office

Port of

No. in  
Reg. Book.

Survey held at

Queensferry

Date, First Survey

Feb 19<sup>th</sup> / 20. Last Survey 2-2-1921

Number of Visits

22

Single  
on the ~~Even~~ } Screw vessels  
Triple

"Indorita"

Tons

Gross 201.21

Net 99.22

Master

Built at

Queensferry

By whom built

J. Abdel Mitchell &amp; Co. Ltd. No. 408 When built 1921

Engines made at

Stockholm

By whom made

J. G. Bolinder &amp; Co. Ltd.

Engine No.

When made

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power

160

Owners

J. Summers Sons &amp; Co.

Port belonging to

Chester

Nom. Horse Power as per Rule

60

46

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

OIL ENGINES, &amp;c.—Type of Engines

Cylinder reversible

2 or 4 stroke cycle 2

Maximum pressure in cylinders

250 lbs

No. of cylinders

2

No. of cranks

2

Length of stroke

18 29/32

18 15/16

Revolutions per minute

220

Means of ignition

hot bulb

Is there a bearing between each crank

yes

Span of bearings (Page 92, Section 2, par. 7 of Rules)

Distance between centres of main bearings

32"

Is a flywheel fitted

yes

Diameter of crank shaft

Diameter of crank pins

6 29/32"

Breadth of crank webs

as per Rule

as fitted

9 3/4"

Diameter of flywheel shaft

as per Rule

6 9/16"

Diameter of tunnel shaft

as per Rule

as fitted

5 3/4"

Diameter of stern tube

Diameter of screw shaft

as per Rule

as fitted

5 3/4"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

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 joints riveted

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 oil and water

If two liners are fitted, is the shaft lapped or protected between the liners

yes

If without liners, is the shaft arranged to run in a sleeve

Type of outer gland fitted to stern tube

none

Length of stern bush

22 1/4"

Diameter of propeller

Pitch of propeller

49"

No. of blades

3

state whether moveable

no

Method of reversing

Cylinder Valve gear

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

Are the cylinders fitted with safety valves

no

Means of lubrication

forced oil

Are the exhaust pipes

non-conducting material

yes

If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being sucked back into the engine

No. of cooling water pumps

one

Is the sea suction provided with an air valve

within the vessel

yes

No. of bilge pumps fitted to the main engines

one

Diameter of ditto

4"

Can one be overhauled while the other is at work

yes

No. of auxiliary pumps connected to the main bilge lines

One (propeller)

Sizes of pumps

5" x 5"

No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps

and in holds, etc.

Hold 2-2" Cabin 1-2" P.P. 1-3" A.P. 1-3" No. of ballast pumps

1 as above

Is the ballast pump fitted with a direct suction from the engine room bilges

yes

When installed state size

1-3"

Engine Room and size

1-3"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine Room

Are the sluices on Engine Room bulkheads always accessible

none

Are all connections with the sea direct on the skin of the ship

Are they valves or cocks

both

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

Are the discharge pipes above or below the deep water line

above

Are they each fitted with a discharge valve always accessible on the plating of the ship

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times

yes

Are the bilge suction pipes, cocks and valves arranged so as to be accessible

communication between the sea and the bilges

yes

Is the screw shaft tunnel watertight

none

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 entering the working spaces

No. of main air compressors

No. of stages

Diameters

Stroke

Driven by

No. of auxiliary air compressors

Engine cylinders

No. of stages

Connection to

Air starting

Stroke

Driven by

No. of small auxiliary air compressors

none

No. of stages

Diameters

Stroke

Driven by

No. of scavenging air pumps

none

Diameter

Stroke

Driven by

Diameter of auxiliary Diesel Engine crank shafts

as per Rule

as fitted

Are the air compressors and their coolers made so as to be easily accessible

AIR RECEIVERS:—No. of high pressure air receivers

Internal diameter

material

Seamless, lap welded or riveted longitudinal joint

Range of test pressure

thickness

working pressure by Rules

No. of starting air receivers

Internal diameter

Total cubic capacity

7 cu ft

Material

steel

(STANDARD AYESTA)

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

thickness

9 3/4"

Working pressure by rules

15 ATMOS.

Fitted with a safety valve as per Rule

yes

Can the internal surfaces of the receivers be examined

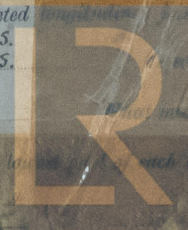
yes

inner surfaces

flange bolted top

Is there a drain arrangement fitted at the bottom of each receiver

007434-007447-0127

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Foundation



IS A DONKEY BOILER FITTED? *no.*

If so, is a report now *yes*?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
"    "    COVERS .....					
"    "    JACKETS .....					
"    "    PISTON WATER PASSAGES .....					
MAIN COMPRESSORS—1st STAGE .....					
"    2nd .....					
"    3rd .....					
AIR RECEIVERS—STARTING .....					
"    INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
"    WATER JACKET .....					
SEPARATE FUEL TANKS .....	<i>14-4-20.</i>		<i>15 ft head.</i>	<i>A.M.</i>	

PLANS. Are approved plans forwarded herewith for shafting *App. Nov. 8. 3. 20.* Receivers. —

Separate Tanks. *Yes.*

SPARE GEAR One hot bulk head, set of lamps, 2 sets of piston rings, 2 injection nozzles, 1 suction + 2 pressure valves, 2 oil pp. valves, sets of springs for fuel pump, speed regulator, 1 bronze plate for governor, details of valves + springs, washers, tools etc.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - *1920*  
During erection on board vessel - *Feb 19. Mar 12. 31. Apr 19. May 14. 26. June 20. July 12. 16. Aug 11. Sept 7. 23. 27. Oct 13. Nov 8. 24. Dec 9. 23. Jan 4. 6. 20. Feb 2.*  
Total No. of visits *22.*

Dates of Examination of principal parts—Cylinders *19. 2. 20.* Covers *19. 2. 20.* Pistons *19. 2. 20.* Rods *19. 2. 20.* Connecting rods *19. 2. 20.*  
Crank shaft *19. 2. 20.* Thrust shaft *19. 2. 20.* Tunnel shafts *19. 2. 20.* Screw shaft *19. 2. 20.* Propeller *19. 2. 20.* Stern tube *19. 2. 20.* Engine seatings *19. 2. 20.*  
Engines holding down bolts *19. 4. 20.* Completion of pumping arrangements *21. 2. 21.* Engines tried under working conditions *23. 12. 20 + 21. 2. 21.*  
Completion of fitting sea connections *19. 2. 20.* Stern tube *19. 2. 20.* Screw shaft and propeller *19. 2. 20.*

Material of crank shaft *App.* Identification Mark on Do. — Material of thrust shaft — Identification Mark on Do. —  
Material of tunnel shafts *App.* Identification Marks on Do. — Material of screw shafts — Identification Marks on Do. —

Is the flash point of the oil to be used over 150° F. *yes.*

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 machinery which was not constructed under special survey, has been opened up, examined & found to be in good condition, it has been fitted on board in accordance with the requirements of the Rules and Secretary's letters of approval dated *8. 17. 3. 20.* (E). *23. 4. 18* (E). *21. 8. 16* (E). The propelling engines have been satisfactorily tried under working conditions, & the bilge pump tried on all bilges and peak tanks with satisfactory results. A paraffin motor driven independent pump fitted on deck & connected up for bilge & ballast purposes is to be fitted by the owners when delivered. In my opinion this vessel's machinery is eligible for classification & to have record of Sub 2. 21. Subject to an independent bilge & ballast pump being satisfactorily fitted on board.

Amount of Entry Fee ... £ 2 : 0 : When applied for,  
Special ... £ 15 : 0 : *- 8 FEB 1921*  
Donkey Boiler Fee ... £ : : When received,  
Travelling Expenses (if any) £ 2 : 18/11 : *22. 2. 21*

Committee's Minute

Assigned

*A. J. Barnett*  
Engineer Surveyor to Lloyd's Register of Shipping.

CERTIFICATE WRITTEN

FRI. 23 SEP 1921

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