

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 28918
29 SEP 1924

Received at London Office

Date of writing Report

19

When handed in at Local Office

27 SEP 1924

Port of

SUNDERLAND.

No. in Survey held at
Reg. Book.

SUNDERLAND.

Date, First Survey

24 Apr

Last Survey

19 Sep 1924

Number of Visits

28

on the ^{Single}
~~Double~~
~~Triple~~ Screw vessels

"VINE MOOR"

Tons ^{Gross} 4369
^{Net} 2646

Master

Built at

Sunderland

By whom built

Messrs W. D. Dryden

Yard No. 582

When built 1924

Engines made at

Sunderland

By whom made

Messrs W. D. Dryden & Co

Engine No. 582

When made 1924

Donkey Boilers made at

Aunan

By whom made

Cochran & Co

Boiler No. 9353

When made 1924

Brake Horse Power

1760

Owners

Moore Line, Ltd

Port belonging to

London

Nom. Horse Power as per Rule

(312) 1835

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

YES

OIL ENGINES, &c.—Type of Engines

Dorland opposed Piston

2 or 4 stroke cycle

2 Single or double acting

single

Maximum pressure in cylinders

568

No. of cylinders

3

No. of cranks

3, 3 throw

Diameter of cylinders

21 1/2" 540 mm

Length of stroke

21 1/2" 540 mm

Revolutions per minute

90

Means of ignition

Temp. of compression

Kind of fuel used

oil / fuel F.P. atom

Is there a bearing between each crank

YES

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

980 mm

Distance between centres of main bearings

1240 mm

Is a flywheel fitted

YES

Diameter of crank shaft journals

as per Rule 373 mm
as fitted 400 mm

Diameter of crank pins

430 mm

Breadth of crank webs

as per Rule 373 mm
as fitted 400 mm

Thickness of ditto

as per Rule 373 mm
as fitted 245 mm

Diameter of flywheel shaft

as per Rule 373 mm
as fitted 400 mm

Diameter of tunnel shaft

as per Rule 314 mm
as fitted 330 mm

Diameter of thrust shaft

as per Rule 373 mm
as fitted 400 mm

Diameter of screw shaft

as per Rule 340 mm
as fitted 350 mm

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

YES

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 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

If without liners, is the shaft arranged to run in oil

Type of outer gland fitted to stern tube

Length of stern bush

5'-10"

Diameter of propeller

15'-6"

Pitch of propeller

13'-9"

No. of blades

4

state whether moveable

NO

Total surface

769 square feet

Method of reversing

Compound air

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

YES

Thickness of cylinder liners

2 1/2" 63 mm

Are the cylinders fitted with safety valves

YES

Means of lubrication

Fuel

Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material

YES

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

Funnel

within the vessel

No. of cooling water pumps

2

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

YES

No. of bilge pumps fitted to the main engines

none

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

YES

No. of auxiliary pumps connected to the main bilge lines

3

How driven

Steam, direct acting

Sizes of pumps

2 @ 13 x 10 1/2 x 24 = 200 T.P.H.

No. and sizes of suction connections to both main bilge pumps and auxiliary bilge pumps:—In engine room

4 @ 2 1/2", 1 @ 4 1/2"

and in holds, etc.

2 @ 1 1/2", 2 @ 3 1/2", 2 @ 3 1/4", 1 @ 3 1/2" depth 2 @ 5"

No. of ballast pumps

1

How driven

Steam, direct acting

Sizes of pumps

13 x 10 1/2 x 24

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

YES

State size

8"

Is a separate auxiliary pump suction fitted in

Engine Room and size

YES 4 1/2"

Are all the bilge suction pipes fitted with roses

N

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

Both

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

YES

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 vessel

YES

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 prevent any

communication between the sea and the bilges

YES

Is the screw shaft tunnel watertight

YES

Is it fitted with a watertight door

YES

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

No. of main air compressors

NONE

No. of stages

Diameters

Stroke

Driven by

No. of auxiliary air compressors

2

No. of stages

3

Diameters

Stroke

Driven by

Steam

No. of small auxiliary air compressors

1

No. of stages

Diameters

Stroke

Driven by

Pump driven

No. of scavenging air pumps

1

Diameter

1540 mm

Stroke

610 mm

Driven by

Pump driven

Diameter of auxiliary Diesel Engine crank shafts

as per Rule

as fitted

Are the air compressors and their coolers made so as to be easy of access

YES

AIR RECEIVERS:—No. of high pressure air receivers

Internal diameter

Cubic capacity of each

material

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

thickness

working pressure by Rules

No. of starting air receivers

2

Internal diameter

3'-6"

Total cubic capacity

220 cu. ft.

Material

Steel plate

Seamless, lap welded or riveted longitudinal joint

Riveted

Range of tensile strength

28-32

thickness

1 1/4"

Working pressure by rules

610 lbs.

Is each receiver, which can be isolated,

fitted with a safety valve as per Rule

YES

Can the internal surfaces of the receivers be examined

YES

What means are provided for cleaning their

inner surfaces

Main hole 16" x 12"

Is there a drain arrangement fitted at the lowest part of each receiver

YES

IS A DONKEY BOILER FITTED? YES TWO.

If so, is a report now forwarded? YES

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	23.6.24 to 17.7.24	—	30 lbs		
" " COVERS	✓	✓	✓		
" " JACKETS.....	23.6.24 to 17.7.24	4 lbs	30 lbs	NO 582 LLOYD'S TEST 30 lbs G.A.H.	
" " HEADS	29.7.24 to 31.7.24	30 lbs	100 lbs	582 LLOYD'S TEST 100 lbs G.A.H.	
" PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....	NONE	—	—		
" 2nd "	✓	✓	✓		
" 3rd "	✓	✓	✓		
AIR RECEIVERS—STARTING	18.7.24	600 lbs	800 lbs	582 LLOYD'S TEST 800 lbs G.A.H.	
" INJECTION	✓	✓	✓		
AIR PIPES	15.8.24 to 15.9.24	600 lbs	1000 lbs	582 LLOYD'S TEST 1000 lbs G.A.H.	
FUEL PIPES	23.7.24	8000 lbs	12000 lbs	582 LLOYD'S TEST 12000 lbs G.A.H.	
FUEL PUMPS	19.9.24	8000 lbs	11,000	582 LLOYD'S TEST 11000 lbs G.A.H.	
SILENCER	Lagged with asbestos, open to atmosphere				
" WATER JACKET	NONE	✓	✓		
SEPARATE FUEL TANKS	28.7.24 to 31.7.24	NIL	10 lbs	582 LLOYD'S TEST 10 lbs G.A.H.	

PLANS. Are approved plans forwarded herewith for shafting DOP OF 579/80/81 Receivers DOP OF 578/9/80/81 Separate Tanks DOP OF 579/80/81
(If not, state date of approval)

SPARE GEAR: Main Piston complete with skirt, rings, 2 Piston rings, 2 top end + 2 bottom end centre cm. rod bolts, nuts 2 side cover end bolts, nuts, 2 side cm. rod bottom end bolts, nuts, 2 side rod bolts, nuts, 2 main bearing studs nuts 1 set crank shaft connecting bolts, 1 set tunnel shaft connecting bolts, 1 fuel wheel for cam shaft drive, 1 spur wheel for cam shaft drive, 4 fuel valves complete, 1 starting valve + 1 relief valve complete, delivery, suction valves for scavenge pump, 1 fuel pump body complete, 1 propeller shaft 1 propeller, 1 straight length shafting for crank shaft, assorted bolts + nuts, brass + iron various sizes.

WILLIAM DOXFORD & SONS Limited,
The foregoing is a correct description.

A. Newell
Secretary

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1924 Apr. 24, 30 May, 1, 22, 27 June 11, 13, 18, 28 July 3, 15, 17, 18, 23, 28, 29, 31 Aug. 12, 14, 15, 18, 21, 27 Sep. 1, 8, 15, 18, 19
During erection on board vessel - 1, 8, 15, 18, 19
Total No. of visits 28

Dates of Examination of principal parts—Cylinders 17.7.24 Covers ✓ Pistons 28.7.24 Rods 15.7.24 Connecting rods 18.8.24
Crank shaft 31.5.24, 10.7.24 Thrust shaft 18.8.24 Tunnel shafts 18.8.24 Screw shaft 12.9.24 Propeller 18.7.24 Stern tube 17.7.24 Engine seatings 8.9.24
Engines holding down bolts 8.9.24 Completion of pumping arrangements 1.9.24 Engines tried under working conditions 19.9.24
Completion of fitting sea connections 23.7.24 Stern tube 23.7.24 Screw shaft and propeller 8.9.24
Material of crank shaft J. Hull Identification Mark on Do. 2058 J.S.C. Material of thrust shaft J. Hull Identification Mark on Do. 582 G.A.H.
Material of tunnel shafts J. Hull Identification Marks on Do. 582 G.A.H. Material of screw shafts J. Hull Identification Marks on Do. 3526 L.C.D.
Is the flash point of the oil to be used over 150° F. YES ✓

Is this machinery duplicate of a previous case YES ✓ If so, state name of vessel "Silvercedar"

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

The machinery of this vessel has been built under special survey, the materials and workmanship are sound and good, the main + auxiliary engines have been tried under working conditions with satisfactory results. The machinery under the vessel eligible in my opinion to have record of -1-L.M.C. 9.24 OIL ENGINE.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 9.24. CL.
Oil Engines, 2SC.SA. 417.NHP
3 Cy. 21 1/4" - 85" 2DB.120 lb.

The amount of Entry Fee ... £ 5 : : When applied for.
Special ... £ 71 : 19 : 27 SEP 1924
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : When received.
24

Committee's Minute

Assigned

+ L.M.C. 9.24. C.L.
oil engine

FRI. 10 OCT 1924

FRI. 10 OCT 1924

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation