

REPORT ON OIL ENGINE MACHINERY.

No. 28940

Received at London Office

25 OCT 1924

Date of writing Report

19

When handed in at Local Office

24 OCT 1924

Port of

SUNDERLAND

No. in Survey held at
Reg. Book.

SUNDERLAND

Date, First Survey

May 22

Last Survey

Oct 20 1924

Number of Visits

31

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

"WESTMOOR"

Tons { Gross 14369
Net 2646

Master

Built at

Sunderland

By whom built

W. Dwyer & Sons

Yard No.

584

When built

1924

Engines made at

Sunderland

By whom made

W. Dwyer & Sons

Engine No.

584

When made

1924

Donkey Boilers made at

Aurion

By whom made

Cochran & Co

Boiler No.

9393

When made

1924

Brake Horse Power

1760

Owners

Morrison & Co

Port belonging to

London

Nom. Horse Power as per Rule

312

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

YES

OIL ENGINES, &c.—Type of Engines

Sixfold 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

5.40 in

Length of stroke

2 x 10.80 in = 8.5 in

Revolutions per minute

90

Means of ignition

Jump. of compression

Kind of fuel used

oil fuel F.P. atom 150

Is there a bearing between each crank

YES

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

9.80 in

Distance between centres of main bearings

12.40 in side cm. rods

Is a flywheel fitted

YES

Diameter of crank shaft journals

as per Rule 373 in

as fitted 4.00 in approx

Diameter of crank pins

4.30 in

Breadth of crank webs

as per Rule 373 in

as fitted 6.10 in approx

Thickness of ditto

as per Rule 373 in

as fitted 2.45 in approx

Diameter of flywheel shaft

as per Rule 373 in

as fitted 4.00 in

Diameter of tunnel shaft

as per Rule 373 in

as fitted 3.14 in

Diameter of thrust shaft

as per Rule 373 in

as fitted 4.00 in

Diameter of screw shaft

as per Rule 373 in

as fitted 3.40 in

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

YES

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

YES

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

YES

Type of outer gland fitted to stern tube

YES

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

76

square feet

Method of reversing

Compressed air

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

governor

Thickness of cylinder liners

2 in improved

Are the cylinders fitted with safety valves

YES

Means of lubrication

Forced

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

See water not No. jacket

No. of cooling water pumps

2

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

within the vessel

NO

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 act.?

Sizes of pumps

2 2 6 x 5 1/2 x 14 = 40 Gals P.H.

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

4 2 1/2 x 12 1/2, 12 1/2 x 12 1/2

and in holds, etc.

2 1/2 x 12 1/2, 2 2 3/4 x 14, 2 2 3/4 x 14, 1 2 3/4 x 14

No. of ballast pumps

1

How driven

Steam

direct act.?

Sizes of pumps

13 x 10 1/2 x 14

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

TAIL PIPES

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 If 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

12 1/2 x 9 3/4 x 3 1/2

Stroke

✓

Driven by

✓

No. of auxiliary air compressors

2

No. of stages

3

Diameters

12 9 x 7 3/4 x 2 1/2

Stroke

7 1/2"

Driven by

Steam

No. of small auxiliary air compressors

✓

No. of stages

✓

Diameters

✓

Stroke

✓

Driven by

✓

No. of scavenging air pumps

1

Diameter

15.40 in

Stroke

6.10 in

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

NONE

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 cub. 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

Man hole 16 x 12"

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

YES

If so, is a report now forwarded? **YES**

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	29.7.6 19.9.24	-	30 lbs	-	
" " COVERS	✓	-	-	-	
" " JACKETS.....	29.7.6 19.9.24	34 lbs	30 lbs	No 584 LLOYDS TEST 30 lbs G.A.H.	
" " PISTON ^{HGA DS} WATER PASSAGES.....	19.9.24	30 lbs	100 lbs	584 LLOYDS TEST 100 lbs G.A.H.	
MAIN COMPRESSORS—1st STAGE.....	NONE				
" 2nd	✓				
" 3rd	✓				
AIR RECEIVERS—STARTING	21.8.24	600 lbs	800 lbs	No 584 LLOYDS TEST 600 lbs G.A.H.	
" INJECTION	✓	✓	✓	No 584 LLOYDS TEST 1000 lbs G.A.H.	
AIR PIPES	1-10.6 13.10.24	600 lbs	1000 lbs	LLOYDS TEST 12000 lbs G.A.H.	
FUEL PIPES	3-10.24	8000 lbs	12000 lbs	LLOYDS TEST 11000 lbs G.A.H.	
FUEL PUMPS	17.10.24	8000 lbs	11000 lbs		
SILENCER	Lagged with asbestos, open to atmosphere				414 03042
" WATER JACKET	NONE			No 584 LLOYDS TEST 10 lbs G.A.H.	
SEPARATE FUEL TANKS	28.8.6 1.9.24	NIL	10 lbs		

SPARE GEAR, 1 main piston complete with skirt, 1 rings, 6 main piston rings, 2 center cm. rod top end bolts + nuts, 2 center cm. rod bottom end bolts + nuts, 2 side cross head bolts + nuts, 2 side cm. rod bottom end bolts + nuts, 2 side rod bolts + nuts, 2 main bearing studs + nuts, 1st crank coupling bolts + nuts, 1st tunnel shaft coupling bolts + nuts, 1 bevel wheel for cam shaft drive, 1 spur wheel for cam drive, 4 fuel valves complete, 1 starting valve complete, 1 relief valve complete, 2 scavenging pump valves complete, 1 fuel pump body complete, 1 propeller shaft + propeller, 1 straight length shaft for crank shaft, 1 cyl. liner + jacket complete, assorted bolts + nuts. Some various sizes.

R Maxwell Secretary

Manufacturer.

Total No. of visits 5
 Dates of Examination of principal parts—Cylinders 15.9.24 Covers ☒ Pistons 19.9.24 Rods 19.9.24 Connecting rods 15.9.24
 Crank shaft 10.7.24 Thrust shaft 1.10.24 Tunnel shafts 1.10.24 Screw shaft 1.10.24 Propeller 15.9.24 Stern tube 15.9.24 Engine seatings 8.10.24
 Engines holding down bolts 16.10.24 Completion of pumping arrangements 10.10.24 Engines tried under working conditions 17.10.24
 Completion of fitting sea connections 29.9.24 Stern tube 29.9.24 Screw shaft and propeller 8.10.24
 Material of crank shaft Steel Identification Mark on Do. 2058 JSC. Material of thrust shaft Steel Identification Mark on Do. 584 GAH
 Material of tunnel shafts Steel Identification Marks on Do. 584 GAH Material of screw shafts Steel Identification Marks on Do. 584 GAH
 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 "VINEMOOR"

The machinery of this vessel has been built under special survey, the materials and workmanship are sound and good, the main and auxiliary engines have been tried under working conditions with satisfactory results. The machinery renders the vessel eligible in my opinion to have the record of 1- L.M.C. 10.24 OIL ENGINE

It is submitted that

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 10. 24. CL.
Oil Engines. 2SC.SA.
3 Cy. 2 1/4" - 85." 417. NHP.
2 DB. 120 1/2. 9 1-2

Committee's Minute

FRI. 31 OCT 1924

Assigned

+ Lm b. 1024 C.L.
oil engines

TUES. 11 NOV 1924

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register
Foundation