

## REPORT ON OIL ENGINE MACHINERY.

No. 78237.

-1 SEP 1924

Received at London Office

ENCLOSURE  
No 154

Date of writing Report

10 24 When handed in at Local Office

Aug 18<sup>th</sup> 1924 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at WALKER WALLSEND

Date, First Survey

Last Survey

Number of Visits

Reg. Book.

90673 on the <sup>Single</sup> ~~Triple~~ Screw vessels

MOTOR SHIP "SILVERLARCH"

Tons { Gross 5122  
Net 3085

Master

Built at WALLSEND

By whom built S.H. W. R. L<sup>d</sup>

Yard No. 1233 When built 1924

Engines made at WALKER

By whom made SWAN HUNTER, W. RICHARDSON L<sup>d</sup>

Engine No. 1172 When made 1924

Donkey Boilers made at ANNAN

By whom made COCHRAN

PT Boiler No. 9299 When made 1924

Brake Horse Power

Owners Mount S.S. Co. Ltd  
Stanley & John Thompson Ltd

Port belonging to LONDON

Nom. Horse Power as per Rule 510

Is Refrigerating Machinery fitted for cargo purposes NO

Is Electric Light fitted YES

OIL ENGINES, &amp;c. Type of Engines NEPTUNE TWO CYCLE

OIL ENGINES 2 or 4 stroke cycle 2

Single ~~double~~ acting Single

Maximum pressure in cylinders 500 lbs

No. of cylinders 6

No. of cranks 6

Diameter of cylinders 22 1/2"

Length of stroke 45"

Revolutions per minute

Means of ignition AIR COMPRESSION

Kind of fuel used HEAVY OIL

Is there a bearing between each crank YES

Span of bearings (Page 92, Section 2, par. 7 of Rules) 33 7/8"

Distance between centres of main bearings 4' 1 1/8"

Is a flywheel fitted YES

Diameter of crank shaft journals as per Rule 15.07

Diameter of crank pins 15 5/8"

Breadth of crank webs as per Rule 28 5/8"

Thickness of ditto as per Rule 9.42"

Diameter of flywheel shaft as per Rule 15.07

as fitted 15 1/8"

Diameter of tunnel shaft as per Rule 11.58

as fitted 11 3/4"

Diameter of thrust shaft as per Rule 15.07

as fitted 15 1/8"

Diameter of screw shaft as per Rule 12.4

as fitted 13

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 4' 4"

Diameter of propeller 14' 0"

Pitch of propeller 11.9"

No. of blades 4

CAST IRON state whether moveable NO

Total surface 61 1/2 square feet

Method of reversing SERVO MOTORS

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

Thickness of cylinder liners 1 5/8"

Are the cylinders fitted with safety valves YES

Means of lubrication FORCED FEED BY ENGINE DRIVEN PUMPS

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

EXHAUST LED UP FUNNEL

2 FOR JACKETS. 1 FOR PISTONS

No. of cooling water pumps 3

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

within the vessel YES

No. of bilge pumps fitted to the main engines TWO

Diameter of ditto 5"

Stroke 27"

Can one be overhauled while the other is at work YES

No. of auxiliary pumps connected to the main bilge lines ONE

How driven STEAM

BALLAST 9x11x10 DUPLEX - G.S.P. 6x6x6 DUPLEX

Sizes of pumps 2, WEIRS, FEED. 6x4x12

No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 1.5", 4-2 1/2"

and in holds, etc. NO. 1. 2 OF 3" (2) 3 1/2" (2) - 3"

No. of ballast pumps 1

How driven STEAM.

Sizes of pumps 9x11x10

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

State size 5"

Is a separate auxiliary pump suction fitted in

Engine Room and size 200 5"

Are all the bilge suction pipes fitted with roses YES OR MUD

Are the roses in Engine Room always accessible YES

Are the sluices on Engine Room bulkheads always accessible

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 TOP 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 1

No. of stages 3

Diameters 24-28 3/4 - 4 5/8"

Stroke 22 1/2"

Driven by MAIN ENGINES

No. of auxiliary air compressors 1

No. of stages 3

Diameters 14 1/2 - 4"

Stroke 8"

Driven by STEAM ENGINE

No. of small auxiliary air compressors

No. of stages 1

Diameters 3 1/2 - 4 1/2"

Stroke 4"

Driven by

No. of scavenging air pumps 2

DOUBLE ACTING

Diameter 40"

Stroke 27"

Driven by MAIN ENGINE

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

AIR RECEIVERS:—No of high pressure air receivers 3

Internal diameter 17 3/4"

Cubic capacity of each 17.65 cu ft

material STEEL

Seamless, lap welded or riveted longitudinal joint SEAMLESS

Range of tensile strength 29/33 TONS

thickness 5/8"

working pressure by Rules 1000 LBS

No. of starting air receivers 2

Internal diameter 3' - 3"

Total cubic capacity 210 FT

Material S.M. STEEL

Seamless, lap welded or riveted longitudinal joint T.R.D.B.S.

Range of tensile strength SHELL BUTT STRAPS 38/34 TONS

ENDS FLANGED 26/30 TONS

Working pressure by rules 600 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 MANHOLE 16x12 AT ONE END

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

002568-002576-0065



IS A DONKEY BOILER FITTED? *Yes. 2 Lochran auxiliary boiler*  
HYDRAULIC TESTS:—

Glasgow Reports  
4367a + 43677  
with plans of boiler

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	EXHAUST ROYTES	15	30lb	LLOYDS TEST.	
" " COVERS .....	11 <sup>th</sup> February.	500	1000lb	LGS	
" " JACKETS.....	19. May '24 3.	15lb	30lb	LGS	
" PISTON WATER PASSAGES.....	4 April 24	50's	100lb	LGS	
MAIN COMPRESSORS—1st STAGE.....	March 1924	160lb	760lb	LGS	
" 2nd " .....	MP. L.P. 7.4.24 July 24	380lb	760lb	LGS/MR	
" 3rd " .....	April 1924	1000lb	2000lb	LGS	
AIR RECEIVERS—STARTING ..... 2	5 April 1924	600lb	800lb	LGS.	
INJECTION ..... 3		1000lb	2000lb		Chestfield tube Coy
AIR PIPES AND VALVES .....	April 24 June 1924. May. 24	1000lb	2000lb	LGS	Please see Sheffield survey
FUEL PIPES .....	June. 1924. 10.4.24	1000lb	2000lb		15.2.24 Signed J. principle
FUEL PUMPS .....	June 1924.				
SILENCER .....					
" WATER JACKET .....	at various dates	15lb	30lb		
SEPARATE FUEL TANKS .....	2 June 1924	5lb	10lb	LGS.	

PLANS. Are approved plans forwarded herewith for shafting *no* Receivers *no* Separate Tanks *no*  
(If not, state date of approval)  
SPARE GEAR In accordance with and in excess of the Rules requirements, please see  
appended lists of spare gear (a quantity of Engine Room Stores, and Tool Room)  
Spare gear for oil fuel installation supplied - ✓

The foregoing is a correct description.  
*G. J. Dwyer* Manufacturer.

Dates of Survey while building	During progress of work in shops - -	1924 July 22-25-28-29-30 Aug 7-12-14-15
Total No. of visits		72
Dates of Examination of principal parts—Cylinders	11.7.24	Covers 11.7.24
11.3.24	11.7.24	Pistons 17.6.24
15.4.24	1.2.24	Rods 11.7.24
Thrust shaft	21.5.24	Connecting rods 11.7.24
Tunnel shafts	21.5.24	Screw shaft 12.6.24
Engines holding down bolts	25.7.24	Propeller 26.5.24
Completion of fitting sea connections	3.7.24	Stern tube 3.7.24
Material of crank shaft	SMS	Identification Mark on Do. 6996 KL
Material of tunnel shafts	SMS	Identification Marks on Do. 6804
Is the flash point of the oil to be used over 150° F.	YES	
Is this machinery duplicate of a previous case	SISTER VESSEL. S/S SILVERPINE. 1231. ENGINES 1170.	

General Remarks (State quality of workmanship, opinions as to class, &c.) This vessel machinery has been examined during construction and the materials & workmanship are good & in accordance with the approved plans & the requirements of the rules. All parts subject to pressure have been water tested with satisfactory results, and on completion, shop tests & moving trial & sea tests have been carried out with satisfaction. The donkey boiler safety valves have been adjusted to the working pressure, and the machinery is eligible in our opinion to be classed, with the notations of Oil Engine + LMC 8.24 in the R. Book. The auxiliary machinery is steam driven supplied from 2 Lochran auxiliary boilers which are oil fired under natural draught. The requirements for burning oil have been carried out, flash point of oil fuel is above 150°.

The amount of Entry Fee	£ 6	When applied for, 10 AUG 1924
Special	£ 100	10
Donkey Boiler Fee	£ 4	18
Travelling Expenses (if any)	£	23 Aug 1924

Maurice Peterson L. G. Shallcross  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute  
Assigned  
+ L.M.C. 8.24. C.L.  
oil engine