

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 42900

WED. JUL 25 1923

Received at London Office

Date of writing Report

When handed in at Local Office

Port of Glasgow

No. in Survey held at Reg. Book.

Date, First Survey

Last Survey

 26772 on the <sup>Single</sup> Twin <sup>Triple</sup> Screw vessels

MARGRETIAN

Number of Visits 50

 Tons { Gross 2577  
Net 1536

Master

Built at Bristol

By whom built G. Hall &amp; Sons

Yard No. 148. When built 1923

Engines made at

Coatbridge

By whom made

Wm Beardmore &amp; Co. Ltd.

Engine No. 2101 When made 1923

Donkey Boilers made at

Hutchinson

By whom made

James Beckett &amp; Co. Ltd.

Boiler No. 8729 When made 1923

Brake Horse Power 1300

Owners G &amp; W. Williams &amp; Co.

Port belonging to London

Nom. Horse Power as per Rule 238

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted Yes

OIL ENGINES, &amp;c.—Type of Engines Semi Diesel Twin screw 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders

450

No. of cylinders

6 each Eng

No. of cranks

6 each Eng

Diameter of cylinders 18"

Length of stroke 24"

Revolutions per minute 180

Means of ignition Compression

Kind of fuel used Diesel Oil

Is there a bearing between each crank

Yes

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

1' 11 3/4"

Distance between centres of main bearings

2' 8 3/4"

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule approved 9 3/4"

Diameter of crank pins

9 3/4"

Breadth of crank webs

as per Rule approved 15 3/4"

Thickness of ditto

as per Rule approved 5"

Diameter of flywheel shaft

as per Rule approved 8"

Diameter of tunnel shaft

as per Rule approved 4 1/2"

Diameter of thrust shaft

as per Rule approved 8"

Diameter of screw shaft

as per Rule approved 8 1/2"

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

Yes

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

2' 10"

Diameter of propeller 8' 0"

Pitch of propeller

7' 0"

No. of blades

4

state whether moveable

No

Total surface

24

square feet

Method of reversing

Air

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

Yes

Thickness of cylinder liners

✓

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

✓

No. of cooling water pumps

2

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

One each Eng

Diameter of ditto

4 1/2"

Stroke

6"

Can one be overhauled while the other is at work

No. of auxiliary pumps connected to the main bilge lines

One (ballast)

How driven

Steam

Sizes of pumps

6 x 7 x 7

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

4 - 3 1/2"

and in holds, etc.

3 - 3 1/2" and 3 - 3 1/2" 4" etc.

No. of ballast pumps

How driven

Sizes of pumps

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

Yes

State size

3 1/2"

Is a separate auxiliary pump suction fitted in

Engine Room and size

2 1/2"

Are all the bilge suction pipes fitted with roses

Yes

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

Valves &amp; cocks

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

✓

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

No. of main air compressors

No. of stages

Diameters

Stroke

Driven by

No. of auxiliary air compressors

One

No. of stages

Three

Diameters

Stroke

Driven by

Steam

No. of small auxiliary air compressors

One

No. of stages

Diameters

Stroke

Driven by

No. of scavenging air pumps

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 easy of access

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

4

Internal diameter

3-0

Total cubic capacity

215 Cu. Ft.

Material

M. S.

Seamless, lap welded or riveted longitudinal joint

Riveted.

Range of tensile strength

28 to 32 tons.

Thickness

1/16

Working pressure by rules

500 lb/sq. in.

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

internal surfaces

Manhole.

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

Yes

IS A DONKEY BOILER FITTED?

HYDRAULIC TESTS:-

One Cochran  
If so, report now forward.  
One Waste Heat

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	13-11-22. 14-11-22.	450 lbs	645 lbs.	(H3)	
" " COVERS	28-12-22.	"	"	(H3)	
" " JACKETS	4-2-23.		50 lbs.		
" " PISTON WATER PASSAGES	13-11-22.				
MAIN COMPRESSORS—1st STAGE					
" 2nd "					
" 3rd "					
AIR RECEIVERS—STARTING	31-10-21. 11-11-21.	500 lbs	400 lbs	15939. 15944 (H3)	
" INJECTION	8-11-21. 23-11-21.			15945. 15960	
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" WATER JACKET					
SEPARATE FUEL TANKS					

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

Amst shaft.

Receivers

Yes

Separate Tanks

SPARE GEAR

As per rule & as per list attached

The foregoing is a correct description,

WILLIAM BEARDMORE & CO., LIMITED

W. J. Morrison per R

Manufacturer.

Dates of Survey while building	During progress of work in shops--	1921 May 5. 9. 17. 27 Aug 31 Sep 6. 14. 28 Oct 7. 12. 21 Nov 4 Dec 21 1922 May 11 Oct 10. 31 Nov 2. 8. 13. 14 Dec 1. 4. 11. 18. 27. 28 1923 Jan 1. 8. 30. Mar 6. 8. June 20 July 9. 12. 27. 30. 31 Aug 3. 8. 27. Sept. 7. 14. Sept 29. Oct 16. 23 24. 26. 27. 29. 30 Nov 1. 14									
	During erection on board vessel--	1922 Jan 1. 8. 30. Mar 6. 8. June 20 July 9. 12. 27. 30. 31 Aug 3. 8. 27. Sept. 7. 14. Sept 29. Oct 16. 23 24. 26. 27. 29. 30 Nov 1. 14									
	Total No. of visits	50. + 25.									
Dates of Examination of principal parts—Cylinders		14. 11. 22.	13. 11. 22	27. 12. 22.	27. 12. 22.						
		5. 2. 23.	Covers 6. 3. 23.	Pistons 1. 3. 23.	Rods ✓	Connecting rods	1. 3. 23.				
Crank shaft		14. 11. 22.	Thrust shaft 14. 2. 23.	Tunnel shafts 14. 2. 23.	Screw shaft 14. 12. 22	Propellers 14. 2. 23.	Stern tube 14. 2. 23.	Engine seatings	30. 7. 23		
Engines holding down bolts		30. 7. 23	Completion of pumping arrangements		14. 11. 23	Engines tried under working conditions		14. 11. 23.			
Completion of fitting sea connections		18. 5. 23.	Stern tube		18. 5. 23	Screw shaft and propeller		29. 6. 23			
Material of crank shaft		M. S.	Identification Mark on Do.		6028 6029. EEB 8438 8439 (H3)	Material of thrust shaft		M. S.	Identification Mark on Do. 8438 8439. (H3)		
Material of tunnel shafts		M. S.	Identification Marks on Do.		8438 8439	Material of screw shafts		M. S.	Identification Marks on Do. 8438 8439. (H3)		

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.

These engines have been constructed under special survey in accordance with the rules and approved plans, and have been seen running satisfactorily under load on test bench. Materials workmanship are good. They have been forwarded to Bristol to be fitted on board; when this has been done and they have been satisfactorily tested under service condition they will be eligible in our opinion to be classed +LMC with date. oil engines These engines have now been fitted & secured on board, tried for hours hours under light & loaded conditions with very satisfactory results & are now eligible in my opinion for service + L.M.C. 11-23.

The amount of Entry Fee ... £ 4 : 0

Special ... £ 47 : 12

Donkey Boiler Fee ... £ 11 : 18

Travelling Expenses (if any) £

When applied for,

23/7/23

When received,

24 JUL 1923

Harry Clarke.

John Barr.

Amos Gwynne

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned Deferred.

TUE. 11 DEC. 1923

+ Lamb. 11. 23.

Lloyd's Register Foundation