

Rpt. 4b

## REPORT ON OIL ENGINE MACHINERY.

Bel. N° 8545

Gls No. 41086

Received at London Office

WED. MAY. 11 1921

Date of writing Report

6.5.21

When handed in at Local Office

6.5.21

Port of

Glasgow

No. in Survey held at  
Reg. Book.

81751

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

Date, First Survey

4th June 1919

Last Survey

29th April 1921

SOMERSETSHIRE

Tons <sup>Gross</sup> <sup>Net</sup>

Master

Built at Belfast

By whom built

Harland &amp; Wolff

Yard No. 579

When built 1921

Engines made at

Glasgow

By whom made

do.

Engine No. 579

When made 1921

Donkey Boilers made at

Annan

By whom made

Cochran &amp; Co

Boiler No. 8182

When made 1920

Brake Horse Power

3400

Owners

Wibby Line

Port belonging to

Liverpool

Nom. Horse Power as per Rule

858

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

OIL ENGINES, &amp;c.—Type of Engines

Diesel

2 or 4 stroke cycle 4 Single or double acting Simple

Maximum pressure in cylinders

500 lb

No. of cylinders

12

No. of cranks

12

Diameter of cylinders

740 in 29 1/8

Length of stroke

1150 in 45 1/4

Revolutions per minute

115

Means of ignition

Compression

Kind of fuel used

above 150° F

Is there a bearing between each crank

Yes

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

990 in

Distance between centres of main bearings

1500 in

Is a flywheel fitted

Yes

Diameter of crank shaft journals

as per Rule 442 in as fitted 456 in

Diameter of crank pins

456 in

Breadth of crank webs

as per Rule 588 in as fitted 695

Thickness of ditto

as per Rule 247 in as fitted 300

Diameter of flywheel shaft

as per Rule 442 in as fitted 456

Diameter of tunnel shaft

as per Rule 13.5 in as fitted 13.75

Diameter of thrust shaft

as per Rule 14.2 in as fitted 15

Diameter of screw shaft

as per Rule 14.45 in as fitted 15.25

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

fits whole length

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

wood lined Stern bush

Length of stern bush

5-7 1/2

Diameter of propeller

13-6

Pitch of propeller

13-0

No. of blades

3

state whether moveable

Yes

Total surface

434 square feet

Method of reversing

electric

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

Yes

Thickness of cylinder liners

60 in

Are the cylinders fitted with safety valves

Yes

Means of lubrication

Forced Sight feed

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

No. of cooling water pumps

4

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 engine

2 double

Diameter of ditto

6 in

Stroke

6 in

Can one be overhauled while the other is at work

Yes

No. of auxiliary pumps connected to the main bilge lines

3

How driven

Electric

Sizes of pumps

(2) 6x6 (1) 10x10

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

(3) 3 1/2 (2) 4 1/2

and in holds, etc.

(1) 3 1/2 (2) 3 1/2 (1) 2 1/2 (1) 3 (3) 3 1/2

No. of ballast pumps

1

How driven

Electric

Sizes of pumps

10x10

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

Yes

State size

5 in

Is a separate auxiliary pump suction fitted in

Engine Room and size

Bilge Ballast Pumps have separate suctions

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

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

Below

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 deck 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

2

No. of stages

3

Diameters

750-675-181

Stroke

350

Driven by

Electric

No. of auxiliary air compressors

2

No. of stages

2

Diameters

460-465

Stroke

260

Driven by

do.

No. of small auxiliary air compressors

1

No. of stages

2

Diameters

166-34

Stroke

80

Driven by

Steam

No. of scavenging air pumps

—

Diameter

—

Stroke

—

Driven by

—

Diameter of auxiliary Diesel Engine crank shafts

as per Rule 167 in as fitted 170

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

Yes

AIR RECEIVERS:—No of high pressure air receivers

8 (No 377-2-9-380-1-2-3-4)

Internal diameter

29 5/8 in

Cubic capacity of each

150 litres

material

Steel

Seamless, lap welded or riveted longitudinal joint

Seamless

Range of tensile strength

28/30 ton

thickness

.57 in

working pressure by Rules

1333 lb

No. of starting air receivers

3

Internal diameter

6.0-3/8

Total cubic capacity

1608 ft

Material

Steel

Seamless, lap welded or riveted longitudinal joint

Riveted

Range of tensile strength

28/30 ton

thickness

1 3/8 in

Working pressure by rules

398

Is each receiver, which can be isolated,

fitted with a safety valve as per Rule

Compression fitted with safety valves

Yes

What means are provided for cleaning their

inner surfaces

detachable heads for cleaning with Soda

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

Yes

W1653-0086

Lloyd's Register Foundation



*If so, is a report now forwarded?*

Yes, (No 40738)

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
" " COVERS <sup>water</sup> <del>Passage</del> .....	24.12.20 & 20.1.21	—	50 lb	TMNE.HC.	
" " JACKETS .....	16.2.20 & 17.1.21		"	JE.HC.	
" PISTON WATER PASSAGES .....	15.12.20 & 1.2.21			JETM.	
MAIN COMPRESSORS—1st STAGE .....					
" 2nd " .....					
" 3rd " .....	14.10.20 & 25.10.20	1000 lb	2000 lb	JE	
AIR RECEIVERS—STARTING .....		356 lb	712 lb	See separate Rpt-20.	
" INJECTION .....	2.2.21 & 7.2.21	1000 lb	2000 lb	JE	
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)

*Receivers*

~~Separate Tanks~~

SPARE GEAR See Separate list.

For HARLAND & WOLFF, LTD.

*Manufacturer.*

Dates of Survey while building	{	During progress of work in shops--	1919 June 4, 23 July 10, 1920 May 4, 24 June 2, 15, 23, 24 July 15 Sep 24 Oct 5, 13, 14, 25 Nov 3, 10, 11, 12, 15, 17, 19 Dec 15, 16, 17, 20, 21, 24, 28, 30
		During erection on board vessel--	1921 Jan 12, 13, 14, 17, 18, 19, 20, 21, 24, 26 Feb 1, 2, 3, 4, 7, 12, 16, 18, 21 Mar 4, 24 April 28
		Total No. of visits	52

Dates of Examination of principal parts—Cylinders 17.1.21 Covers 14.1.21 Pistons 1.2.21 Rods 1.2.21 Connecting rods 5.12.20

Crank shaft 17.11.20 Thrust shaft 20.12.20 Tunnel shafts 20.12.20 Screw shaft 20.12.20 Propeller 20.12.20 Stern tube 20.12.20 Engine seatings 14.2.21

Engines holding down bolts. 28-3-21 Completion of pumping arrangements 31-5-21 Engines tried under working conditions 18-5-21

Completion of fitting sea connections 2/-1-2/- Stern tube 1-2-2/- Screw shaft and propeller 14-2-2/-

Material of crank shaft Steel Identification Mark on Do. 11-30 JE Material of thrust shaft Steel Identification Mark on Do. A See below

Material of tunnel shafts Steel Identification Marks on Do. See below Material of screw shafts Steel Identification Marks on Do. See below

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

Is this machinery duplicate of a previous case Yes If so, state name of vessel Worsells line (Gls R) No 39990

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

Δ:-	2616 Lloyds 4730 J.P.	T2629 Lloyds 4649 J.P.	○:-	2449 Lloyds 4733 J.P.	2619 Lloyds 5048 J.P.	T2425 Lloyds 2037 WQH	T2426 Lloyds 2038 WQH	2448 Lloyds 2582 WQH	2448 Lloyds 2582 J.P.	2442 Lloyds 2036 WQH	2979 Lloyds 2238 WQH	T2978 Lloyds 2453 WQH
⊗:-	5752 Lloyds 426 J.P. 315A	1927 Lloyds 1753 WQH	Share	T658 Lloyds 3992 WQH								

The materials and workmanship are good. The Machinery has been constructed under special survey in accordance with the Rules and approved Plans and has been forwarded to Belfast where it is to be fitted to the Vessel, and when this has been done, and it has been tried to the satisfaction of the Society's Surveyors, it will in my opinion be eligible to be classed + LMC with date.

The amount of Entry Fee	£	0	:	:	When applied for,
Special	£	6	:	6	10.5. 1921
Donkey Boiler Fee	£	:	:	:	When received,
Travelling Expenses (if any)	£	:	:	:	7.7. 1921

*Engineer Surveyor to Lloyd's Register of Shipping*

Committee's Minute

Assigned      Deferred.

TUE. 28 JUN. 1921 TUE. 28 JUN. 1921

+ Lm 6.6.21  
oil engines