

# REPORT ON OIL ENGINE MACHINERY.

Bel. N<sup>o</sup> 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 Glasgow Date, First Survey 4th June 1919 Last Survey 4th April 1921  
 Reg. Book. 81751 on the Single Twin } Screw vessels SOMERSETSHIRE Tons } Gross \_\_\_\_\_  
 Master \_\_\_\_\_ Built at Belfast By whom built Harland & 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 & 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, &c.—Type of Engines Diesel 2 or 4 stroke cycle 4 Single or double acting Single  
 Maximum pressure in cylinders 500 lb No. of cylinders 12 No. of cranks 12 Diameter of cylinders 740 29 1/8  
 Length of stroke 1150 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  
 Distance between centres of main bearings 1500 Is a flywheel fitted yes Diameter of crank shaft journals 442 456  
 Diameter of crank pins 456 Breadth of crank webs 588 695 Thickness of ditto 247 300  
 Diameter of flywheel shaft 442 456 Diameter of tunnel shaft 13.5 13.75 Diameter of thrust shaft 14.2 15  
 Diameter of screw shaft 14.45 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  
 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 Stroke 6  
 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 suction 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. do 1 (3) 3 1/2 do 2 (3) 3 1/2 (1) 2 1/2 do 3 (3) 3 1/2 do 4 (2) 3 1/2 (2) 2 1/2 do 5 (2) 3 1/2 (2) 3 Tunnel well (1) 3 1/2 No. of ballast pumps 1 double 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 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 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 (Nos 377-2-9-380-1-2-3-4) Internal diameter 295 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 working pressure by Rules 1333 lb No. of starting air receivers 3 Internal diameter 6.0 3/8  
 Total cubic capacity 1608 Material Steel Seamless, lap welded or riveted longitudinal joint Riveted  
 Range of tensile strength 28/30 ton thickness 1 3/32 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 Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces attachable heads for cleaning with Soda Is there a drain arrangement fitted at the lowest part of each receiver yes

IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded?

*Yes, No 40738*

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
COVERS <i>water</i>	24.12.20 & 20.1.21		50 lb	TMDE.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 list no.	
INJECTION	2.2.21 & 7.2.21	1000 lb	2000 lb	JE	
AIR PIPES	✓				
FUEL PIPES	✓				
FUEL PUMPS	✓				
SILENCER	✓		211		
WATER JACKET	✓				
SEPARATE FUEL TANKS	✓				

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

Receivers *Yes*

Separate Tanks *Yes*

SPARE GEAR *See Separate list.*

The foregoing is a correct description,

HARLAND & WOLFF, LTD.

*Harland & Wolff*

Manufacturer.

Dates of Survey while building  
 During progress of work in shops - 1919 June 14, 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 - 1920, Nov 29, Dec 9, Jan 25 - up to 9<sup>th</sup> June 1921  
 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 5.1.20  
 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 21-1-21 Stern tube 1-2-21 Screw shaft and propeller 14.2.21  
 Material of crank shaft *Steel* Identification Mark on Do. *JE* Material of thrust shaft *Steel* Identification Mark on Do. *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. *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *Corsetts Line (93 R) No 3990*

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

Δ:- 2616 T2629 Lloyds Lloyds J.P. J.P.  
 4730 4649 J.P. J.P.  
 ⊗:- 1927 Lloyds Lloyds spare Lloyds Lloyds  
 426 J.P. 1753 3992 WQH.  
 315A 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 ... £ : :  
 Special Glasgow of 94 : 6 6  
 Belfast of 23 : 11 6  
 Donkey Boiler Fee ... £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, 10.5.1921  
 When received, 7.7.1921

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 MAY 1921

Assigned Defered

TUE. 28 JUN. 1921

Lloyd's Register of Shipping  
oil engine foundation

CERTIFICATE WRITER