

28 JAN 1925

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 44332

Received at London Office  
 Date of writing Report 24<sup>th</sup> Jan 1925 When handed in at Local Office 24.1.25 Port of Glasgow  
 No. in Survey held at Glasgow Date, First Survey 22.11.24 Last Survey 22<sup>nd</sup> Jan 1925  
 Reg. Book. SUP. Number of Visits 67  
88265 on the Single Twin Triple Screw vessels "CLYDEBANK" Tons { Gross 5756  
 Master \_\_\_\_\_ Built at GLASGOW By whom built HARLAND & WOLFF LTD. No. 6644 When built 1925  
 Engines made at GLASGOW By whom made HARLAND & WOLFF LTD. Engine No. 684 When made 1925  
 Donkey Boilers made at BELFAST By whom made HARLAND & WOLFF LTD. Boiler No. 848 When made 1925  
 Brake Horse Power 2300 Owners MESSRS ANDREW WEIR & CO (BANK LINE LTD) Port belonging to Glasgow  
 Nom. Horse Power as per Rule 717 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 LBS/IN No. of cylinders 12 No. of cranks 12 Diameter of cylinders 630 M/M  
 Length of stroke 960 M/M Revolutions per minute 125 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) 872 M/M  
 Distance between centres of main bearings 1300 M/M Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 376 M/M  
 as fitted 384 M/M Diameter of crank pins 384 M/M METAL ROUND as per Rule 165 M/M Breadth of crank webs as fitted 175 M/M Thickness of ditto as per Rule 235 M/M  
 as fitted 250 M/M Diameter of flywheel shaft as per Rule 376 M/M as fitted 384 M/M Diameter of tunnel shaft as per Rule 9 3/4" as fitted 10" Diameter of thrust shaft as per Rule 10 1/4" as fitted 11 1/8"  
 Diameter of screw shaft as per Rule 10 3/4" as fitted 11" 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 YES  
 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 WOOD LINED NO O.G. Length of stern bush 50" Diameter of propeller 11'-9"  
 Pitch of propeller 0'-6" HERN, 9'-9" to 11'-3" No. of blades 3 EACH state whether moveable YES Total surface 84 square feet  
 Method of reversing COMPRESSED AIR Is a governor or other arrangement fitted to prevent racing of the engine YES Thickness of cylinder liners TOP 50 M/M  
 Are the cylinders fitted with safety valves YES Means of lubrication FORCED & SLIGHT 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 YES  
 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 3 Diameter of ditto 5" Stroke 10 1/2"  
 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 MOTOR  
 Sizes of pumps CIRCULATING 4 1/2" CENTRIFUGAL BALLAST 9" X 11" STRAKE BILGE 6" X 6" X 6" No. and sizes of suctions connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 3 @ 3 1/2" & 1 @ 2 1/2" TUNNEL  
 and in holds, etc. 4 @ 2 1/2" COFFEROAKS, 2 @ 2 1/2", 3 @ 3" & 4 @ 3 1/2" HULL No. of ballast pumps 1 How driven MOTOR Sizes of pumps 9" X 9" X 11" STRAKE  
 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 CIRC 4 1/2" 5" ON BILGE MAIN Are all the bilge suction pipes fitted with roses TO RULES Are the roses in Engine Room always accessible YES  
 Are the sluices on Engine Room bulkheads always accessible YES 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 & 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 SHELTER DECK If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork YES

No. of main air compressors 2 (65 KG/CM<sup>2</sup>) No. of stages 3 Diameters 600 x 540 x 148 M/M Stroke 350 M/M Driven by MAIN ENGINES  
 No. of auxiliary air compressors 1 (25 KG/CM<sup>2</sup>) No. of stages 2 Diameters 400 x 350 M/M Stroke 260 M/M Driven by ELECTRIC MOTOR  
 No. of small auxiliary air compressors 1 (65 KG/CM<sup>2</sup>) No. of stages 2 Diameters 106 x 34 M/M Stroke 80 M/M Driven by STEAM  
 No. of scavenging air pumps 1 Diameter 5" Stroke 10 1/2" Driven by STEAM  
 Diameter of auxiliary Diesel Engine crank shafts as per Rule 167 M/M as fitted 170 M/M Are the air compressors and their coolers made so as to be easy of access YES  
 AIR RECEIVERS:—No. of high pressure air receivers 7 Internal diameter 295 M/M Cubic capacity of each 5 @ 150 LITRES EACH  
 Material SOLID DRAWN STEEL Seamless, lap welded or riveted longitudinal joint SEAMLESS Range of tensile strength 28/32 TONS  
 Thickness MIN 58 Working pressure by Rules 1375 LBS/IN No. of starting air receivers TWO Internal diameter 6'-0 3/8"  
 Total cubic capacity 1076 CU. FT. Material STEEL Seamless, lap welded or riveted longitudinal joint T. R. D. B. S.  
 Range of tensile strength SHELL 28/32 thickness SHELL 1 1/32 Working pressure by rules 360.7 LBS/IN Is each receiver, which can be isolated,  
 fitted with a safety valve as per Rule YES & ON COMMON PIPE Can the internal surfaces of the receivers be examined YES What means are provided for cleaning their  
 inner surfaces LOOSE ENDS & MANHOLE DOORS Is there a drain arrangement fitted at the lowest part of each receiver YES

002639-002646-0317

Lloyd's Register  
Foundation

IS A DONKEY BOILER FITTED? YES

If so, is a report now forwarded? YES (BELFAST N° 9208)

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	✓	✓	✓	✓	
COVERS	31-7-24 to 30-10-24	15 LBS/□	50 LBS/□	NMB.	
JACKETS	14-7-24 to 13-8-24	15 LBS/□	50 LBS/□	NMB.	
PISTON WATER PASSAGES	18-8-24 to 25-8-24	15 LBS/□	50 LBS/□	NMB.	
MAIN COMPRESSORS—1st STAGE	L.P. 20-8-24 to 11-7-24	71 LBS/□	150 LBS/□	NMB.	
2nd	M.P. 23-6-24 to 24-6-24	220 LBS/□	600 LBS/□	NMB.	
3rd	H.P. 3-7-24 to 7-7-24	1000 LBS/□	2000 LBS/□	NMB.	
AIR RECEIVERS—STARTING	5-9-24 to 9-9-24	356 LBS/□	585 LBS/□	N.B.	BELFAST REPORT N° 9197.
INJECTION	4-9-24 to 26-9-24	1000 LBS/□	2000 LBS/□	NMB & A.D.M.	A.V. N° 613, 4, 5, 6, 7, 8, 9.
AIR PIPES ETC. STARTING	11-4-24 to 22-12-24	356 LBS/□	712 LBS/□	NMB.	
FUEL PIPES FILLING & SUCTIONS	18-12-24	✓	30 LBS/□	✓	
FUEL PUMPS	✓	✓	✓	✓	
SILENCER	✓	✓	✓	✓	
WATER JACKET	✓	✓	✓	✓	
SEPARATE FUEL TANKS	10-10-24	✓	10 LBS/□	NMB.	

PLANS. Are approved plans forwarded herewith for shafting Sent with M. 6435 Receivers YES

Separate Tanks Retained at Glasgow

SPARE GEAR

Supplied as per attached list

The foregoing is a correct description,  
For HARLAND & WOLFF, LTD.

J. C. Green

Manufacturer.

MANAGER FINNIESTON WORKS per ak

Dates of Survey while building  
During progress of work in shops -- 1924. Apr 22-May 13-23-30 June 2-3-6-12-13-16-17-20-22-24-25 July 3-4-7-10-11-14-15-16-29  
During erection on board vessel -- Aug 1-4-5-7-8-12-13-15-16-19-20-21-22-25-26-27 Sept. 1-4-9-22-24-26 Oct 1-2-3-6-9-10  
Total No. of visits 67

Dates of Examination of principal parts—Cylinders 4/7/24 to 13/7/24 Covers 31/7/24 to 30/10/24 Pistons 13/8/24 to 25/12/24 Rods 24/6/24 Connecting rods 21/8/24  
Crank shaft 5-10/7/24 Thrust shafts 27/8/24 Tunnel shafts 27/8/24 Screw shafts 18/10/24 to 27/8/24 Propeller 20/8/24 Stern tube 25/6/24 to 27/8/24 Engine seatings 29/7/24

Engines holding down bolts 1/12/24 Completion of pumping arrangements 20/1/25 Engines tried under working conditions 22/1/25

Completion of fitting sea connections 1/10/24 Stern tube 22/9/24 Screw shaft and propeller 3/10/24

Material of crank shaft STEEL Identification Mark on Do. 18/8/24 H.M.C Material of thrust shaft STEEL Identification Mark on Do. 19/8/24 5/276

Material of tunnel shafts STEEL Identification Marks on Do. SEE UNDER Material of screw shafts STEEL Identification Marks on Do. 19/8/24 5/276

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 N/S "INVERBANK" N° 6436

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

TUNNEL SHAFTS:—  
PORT  
N°1 320 LLOYDS 195 T.H.  
N°2 554 LLOYDS 205 T.H.  
N°3 566 LLOYDS 227 T.H.  
N°4 608 LLOYDS 250 T.H.  
N°5 691 LLOYDS 250 T.H.  
N°6 254 LLOYDS 125 T.H.  
STARBOARD  
N°1 192 LLOYDS 104 T.H.  
N°2 430 LLOYDS 217 T.H.  
N°3 555 LLOYDS 205 T.H.  
N°4 607 LLOYDS 217 T.H.  
N°5 658 LLOYDS 228 T.H.  
N°6 193 LLOYDS 118 T.H.

This machinery has been constructed under special survey in accordance with the rules and approved plans. The materials and workmanship are sound and good, it has been fitted on board the vessel in an efficient manner, tried under full power working conditions and everything found satisfactory and is in my opinion eligible to be classed with record of L.M.C. 1-25.

The amount of Entry Fee ... £ 6 : 0 :  
Special ... £ 110 : 16 :  
Donkey Boiler Fee ... £ ✓ :  
Travelling Expenses (if any) £ ✓ :  
When applied for, 26-1-1925  
When received, 26-2-25

At m: Crinick  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 JAN 1925

Assigned + L M C 1,25

CERTIFICATE WRITTEN



© 2020

Lloyd's Register Foundation