

REPORT ON OIL ENGINE MACHINERY.

No. 45480
24 MAR 1926

Received at London Office

Date of writing Report 12th March 1926 When handed in at Local Office 13. 3. 1926 Port of GLASGOW

No. in Survey held at GLASGOW Date, First Survey 16. 10. 25 Last Survey 11th March 1926

Reg. Book. SUPP. 382 on the Single } Screw vessels "OAKBANK" Tons { Gross 5154
Twin } Net 3174
Triple }

Master Built at GLASGOW By whom built HARLAND & WOLFF LTD. Yard No. 6859 When built 1926

Engines made at GLASGOW By whom made HARLAND & WOLFF LTD. Engine No. 685 When made 1926

Monkey Boilers made at BELFAST By whom made HARLAND & WOLFF LTD. Boiler No. 879 When made 1926

Brake Horse Power 2300 Owners MESSRS ANDREW WEIR & CO (BANK LINE) Port belonging to GLASGOW

Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted YES

Is Electric Light fitted YES

ENGINES, &c.—Type of Engines DIESEL 2 or 4 stroke cycle SINGLE

Maximum pressure in cylinders 500 LBS/SQ IN. No. of cylinders 12 No. of cranks 12 Diameter of cylinders 630 mm

Length of stroke 960 mm 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 mm

Distance between centres of main bearings 1300 mm Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 376 mm as fitted 384 mm

Diameter of crank pins 384 mm METAL ROUND as per Rule 165 mm Breadth of crank webs as fitted 175 mm Thickness of ditto as per Rule 235 mm as fitted 250 mm

Diameter of flywheel shaft as per Rule 376 mm as fitted 384 mm Diameter of tunnel shaft as per Rule 9 3/4" as fitted 10" Diameter of thrust shaft as per Rule 10 1/2" 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 liner 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

Does the liner do 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

Are no liners fitted, is the shaft lapped or protected between the liners If without liners, is the shaft arranged to run in oil

Is the end of outer gland fitted to stern tube WOOD LINED No O.G. Length of stern bush 50" Diameter of propeller 11' 9"

Number of propeller 9' 9" to 11' 3" SET 11' 3" No. of blades 3 EACH state whether moveable YES Total surface 84 square feet TOP 50 mm

Method of reversing COMPRESSED AIR Is a governor or other arrangement fitted to prevent racing of the engine when disengaged YES Thickness of cylinder liners 307.35 mm

Are the cylinders fitted with safety valves YES Means of lubrication FORCED & SLIGHT FEED Are the exhaust pipes and silencers water cooled & lagged with 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 TWO Is the sea suction provided with an efficient strainer which can be cleared in the vessel YES

No. of bilge pumps fitted to the main engines NONE Diameter of ditto Stroke

Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines THREE How driven ELECTRIC MOTOR

Sizes of pumps CIRCULATING 4 1/2 CENT. BALLAST 9" x 9" x 10" STRIKE BILGE 8" x 8" x 6" No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 30 3/2" + 10 2 1/2" IN TUNNEL

Is a ballast pump fitted with a direct suction from the engine room bilges YES State size 5" DIA OR TRAIL PIPES. Is a separate auxiliary pump suction fitted in the Engine Room and size CIRC 5" ON BILGE MAIN

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 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

Is the screw shaft tunnel sheltered 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

No. of main air compressors TWO (65 kg/cm²) No. of stages 3 Diameters 600 x 540 x 148 mm Stroke 350 mm Driven by MAIN ENGINE

No. of auxiliary air compressors ONE (25 kg/cm²) No. of stages 2 Diameters 400 x 350 mm Stroke 260 mm Driven by ELECTRIC MOTOR

No. of small auxiliary air compressors ONE (65 kg/cm²) No. of stages 2 Diameters 106 x 34 mm Stroke 80 mm Driven by STEAM CYLINDER

No. of scavenging air pumps Diameter Stroke Driven by

Diameter of auxiliary Diesel Engine crank shafts as per Rule 167 mm as fitted 170 mm Are the air compressors and their coolers made so as to be easy of access YES

RECEIVERS:—No. of high pressure air receivers 7 Internal diameter 295 mm Cubic capacity of each 20 88 50/150 LITRES EACH

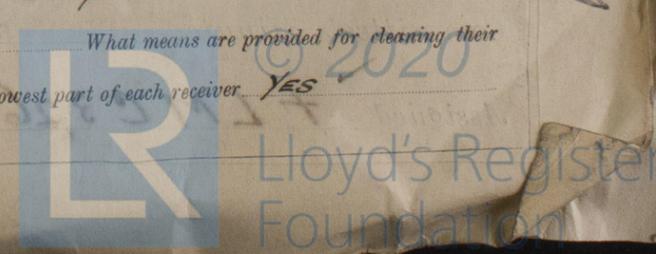
Material SOLID DRAWN STEEL Seamless, lap welded or riveted longitudinal joint SEAMLESS Range of tensile strength 28/32 TONS

Thickness 57" working pressure by Rules 1350 LBS/SQ IN. No. of starting air receivers 2 Internal diameter 6'-0 7/8"

Total cubic capacity 1076 CU FT. Material STEEL Seamless, lap welded or riveted longitudinal joint T.R.D.B.S.

Range of tensile strength 28/32 TONS thickness SHELL 1 1/32" ENDS 1 3/32" + 1 9/32" Working pressure by rules ENDS 360.75 LBS/SQ IN. Is each receiver, which can be isolated, fitted with a safety valve as per Rule ONE ON COMMON PIPE Can the internal surfaces of the receivers be examined YES What means are provided for clearing their surfaces LOOSE ENDS & MANHOLE DOORS Is there a drain arrangement fitted at the lowest part of each receiver YES

W191 - 0007



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IS A DONKEY BOILER FITTED? YES

If so, is a report now forwarded? YES, BELFAST N° 94

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
COVERS	23-11-25 & 7-12-25	15 LBS/SQ	50 LBS/SQ	Nmb. J.D.B.	
JACKETS	6-11-25 & 19-11-25	15 LBS/SQ	50 LBS/SQ	Nmb.	
PISTON WATER PASSAGES	9-11-25 & 24-11-25	15 LBS/SQ	50 LBS/SQ	Nmb.	
MAIN COMPRESSORS—1st STAGE	L.P. 17-11-25 to 20-11-25	71 LBS/SQ	150 LBS/SQ	Nmb. J.D.B.	
2nd	M.P. 26-11-25 & 30-11-25	220 LBS/SQ	500 LBS/SQ	Nmb.	
3rd	H.P. 17-11-25 & 19-11-25	1000 LBS/SQ	2000 LBS/SQ	Nmb.	
AIR RECEIVERS—STARTING	30-11-25	356 LBS/SQ	585 LBS/SQ	W.B.	BELFAST REPORT N°
INJECTION	30-12-25 & 14-1-26	1000 LBS/SQ	2000 LBS/SQ	Nmb.	A.V. N° 824/5/6/7/8/9
AIR PIPES ETC. STARTING	30-11-25 to 17-2-26	356 LBS/SQ	712 LBS/SQ	Nmb.	
FUEL PIPES FILLING & SUCTIONS	17-2-26 to 23-2-26		30 LBS/SQ		
FUEL PUMPS					
SILENCER					
WATER JACKET					
SEPARATE FUEL TANKS	14-1-26		10 LBS/SQ	Nmb.	

PLANS. Are approved plans forwarded herewith for shafting SENT WITH M/S INVERBANK Receivers No
(If not, state date of approval) APPROVED 15/5/23

Separate Tanks STANDARD.

SPARE GEAR

Supplied as per attached list.

The foregoing is a correct description,

For **HARLAND & WOLFF, LTD.**

J. C. Green

Manufacturer.

MANAGER FINNISTON WORKS

Dates of Survey while building

- During progress of work in shops: 1925 Oct 16, 22, 23, 26, 28. Nov 3, 4, 6, 9, 10, 11, 12, 13, 16, 17, 18, 19, 20, 23, 24, 25, 26, 27, 30. Dec 1, 2, 3, 4, 7, 9, 10, 28, 30, 31.
- During erection on board vessel: 1926 July 11, 12, 13, 14, 15, 18, 19. July 20, 27, 28. Aug 11.
- Total No. of visits: 49.

Dates of Examination of principal parts—Cylinder: 6/11/25 & 19/11/25 Covers: 23/11/25 & 7/12/25 Pistons: 9/11/25 & 24/11/25 Rods: 17/11/25 Connecting rods: 12/11/25
 Crank shafts: 5/9/25 Thrust shafts: 9/12/25 Tunnel shafts: 4/12/25 Screw shafts: 22/10/25 & 3/12/25 Propeller: 25/11/25 Stern tube: 4/11/25 Engine seating: 25/11/25
 Engines holding down bolts: 12/2/26 & 17/2/26 Completion of pumping arrangements: 26/2/26 Engines tried under working conditions: 11/3/26.
 Completion of fitting sea connections: 15/1/26 Stern tubes: 28/12/25 & 11/1/26 Screw shaft and propellers: 1/3/26.

Material of crank shaft STEEL Identification Mark on Do. P.N. 555 5.555 Material of thrust shaft STEEL Identification Mark on Do. 985 985
 Material of tunnel shafts STEEL Identification Marks on Do. SEE UNDER Material of screw shafts STEEL Identification Marks on Do. P.3590 8.34

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 M/S INVERBANK

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

TUNNEL SHAFTS:—

<u>PORT</u>	<u>3842</u> LLOYDS 984 T.H. 22/9/25	<u>3564</u> LLOYDS 984 T.H. 4/9/25	<u>3567</u> LLOYDS 985 T.H. 14/9/25	<u>3642</u> LLOYDS 952 T.H. 8/9/25	<u>3645</u> LLOYDS 970 T.H. 15/9/25	<u>3613</u> LLOYDS 983 T.H. 23
<u>STARBOARD</u>	<u>3841</u> LLOYDS 970 T.H. 13/9/25	<u>3565</u> LLOYDS 983 T.H. 28/9/25	<u>3566</u> LLOYDS 984 T.H. 22/9/25	<u>3643</u> LLOYDS 879 T.H. 4/9/25	<u>3644</u> LLOYDS 984 T.H. 14/9/25	<u>3612</u> LLOYDS 965 T.H. 11/9/25

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 3-26.

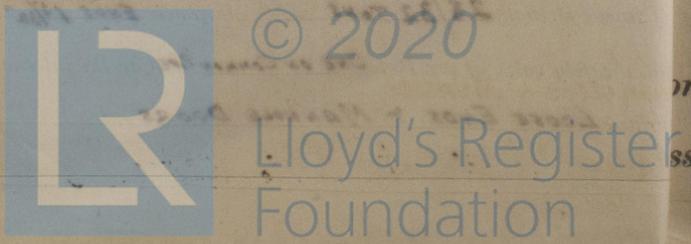
The amount of Entry Fee ... £ 6 : 0 : 0 When applied for, 18/3/26.
 Special ... £ 110 : 16 : 0
 Donkey Boiler Fee ... £ ✓ : 0 : 0
 Travelling Expenses (if any) £ ✓ : 0 : 0 When received, 12-4-26

A. W. Cruick
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 23 MAR 1926

Assigned + L.M.C 3,26

CERTIFICATE WRITTEN



a.l.g. 13/3/26

Certificate (if required) to be sent to the Registrar of Shipping, Glasgow