

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

10 AUG 1920

Bel 9593

No. 457423

Received at London Office

24 FEB 1926

Date of writing Report 18 Feb. 1926. When handed in at Local Office

19.2.1926 Port of GLASGOW

No. in Survey held at GLASGOW

Date, First Survey 2.7.25

Last Survey 5th Feb. 1926

Reg. Book.

Number of Visits 42

Single
on the Twin
Triple

Screw vessels

New Steel M/V. Accra M/S No 616

AUXILIARY ENGINES (3)

Tons { Gross
Net

Master Built at BELFAST

By whom built HARLAND & WOLFF Ltd Yard No. 616 When built 1926

Engines made at GLASGOW

By whom made HARLAND & WOLFF LTD

Engine No. 616 When made 1926

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power 297 EACH

Owners Messrs Elder Dempster & Co. Ltd.

Port belonging to Liverpool.

Kwts. 200 EACH
Nom. Horse Power as per Rule 85 EACH

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted YES

AUX. DIESEL Engines Type of Engines 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 600 LBS/SQ IN. No. of cylinders 4 EACH No. of cranks 4 Diameter of cylinders 410 mm

Length of stroke 520 mm Revolutions per minute 200 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) 484 mm

Distance between centres of main bearings 830 mm Is a flywheel fitted YES Diameter of crank shaft journals as per Rule 235 mm

Diameter of crank pins 235 mm Breadth of crank webs as per Rule 103 mm as fitted 125 mm Thickness of ditto as per Rule 131.6 mm as fitted 117 mm

Diameter of flywheel shaft as per Rule 235 mm as fitted 235 mm Diameter of tunnel shaft as per Rule as fitted Diameter of thrust shaft as per Rule as fitted

Diameter of screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the joints burned

Does 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

Are two liners 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 Diameter of propeller

Pitch of propeller No. of blades state whether moveable Total surface square feet 34.5 mm

Method of starting COMPRESSED AIR Is a governor or other arrangement fitted to prevent racing of the engines when detached YES Thickness of cylinder liners 2.278 mm 30 mm

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 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 Is the sea suction provided with an efficient strainer which can be cleared

Is the pump in the vessel No. of bilge pumps fitted to the main engines Diameter of ditto Stroke

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

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

No. of ballast pumps How driven Sizes of pumps

Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in

Engine Room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible

Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship

Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates

Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel

Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any

Communication between the sea and the bilges Is the screw shaft tunnel watertight Is it fitted with a watertight door

Is the tunnel fitted from If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

AUX. ENGINE of main air compressors 1 EACH ENGINE No. of stages 3 (65 mm) Diameters 270 x 235 x 60 mm Stroke 270 mm Driven by AUX. ENGINE

of auxiliary air compressors 2 No. of stages 2 (35 mm) Diameters 460 x 405 mm Stroke 260 mm Driven by ELECTRIC MOTOR

of small auxiliary air compressors 1 No. of stages 2 65 mm Diameters 106 x 34 mm Stroke 80 mm Driven by STEAM CYLINDER

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 YES

RECEIVERS:—No. of high pressure air receivers 3 Internal diameter 295 mm Cubic capacity of each 88 LITRES

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

Thickness .58" MIN. Working pressure by Rules 1375 LBS/SQ IN. No. of starting air receivers 1 Internal diameter 295 mm

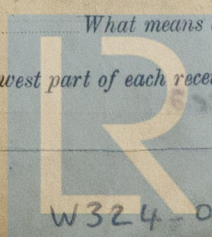
Starting cubic capacity 150 LITRES Material SOLID DRAWN STEEL Seamless, lap welded or riveted longitudinal joint SEAMLESS

Range of tensile strength 28/32 TONS thickness .57" MIN Working pressure by rules 1300 LBS/SQ IN. Is each receiver, which can be isolated,

with a safety valve as per Rule H.P. COMPRESSOR Can the internal surfaces of the receivers be examined YES

What means are provided for cleaning their

surfaces REMOVABLE ENDS Is there a drain arrangement fitted at the lowest part of each receiver YES

Lloyd's Register
Foundation

W324-0037

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
COVERS	4-11-25 to 24-11-25	15 LBS/SQ	50 LBS/SQ	Hmb.	
JACKETS	16-10-25 to 18-11-25	15 LBS/SQ	50 LBS/SQ	Hmb.	
PISTON WATER PASSAGES	TRUNK PISTONS				
MAIN COMPRESSORS—1st STAGE	26-10-25 to 23-11-25	71 LBS/SQ	500 LBS/SQ	Hmb. + J.D.B.	
2nd		220 LBS/SQ			
3rd	23-10-25 to 30-11-25	1000 LBS/SQ	2000 LBS/SQ	Hmb.	
AIR RECEIVERS—STARTING	21-10-25	1000 LBS/SQ	2000 LBS/SQ	Hmb.	A.V. N. 774
INJECTION	21-10-25	1000 LBS/SQ	2000 LBS/SQ	Hmb.	A.V. N. 775-6, 7
AIR PIPES SAFETY VALVES	31-12-25	ADJUSTED TO 1000 LBS/SQ		Hmb.	
FUEL PIPES					
FUEL PUMPS					
SILENCER					
WATER JACKET					
SEPARATE FUEL TANKS					

PLANS. Are approved plans forwarded herewith for shafting No
(If not, state date of approval)

Receivers. STANDARD

Separate Tanks SEE MAIN ENGINE R

SPARE GEAR

Will be supplied as per attached list.
Spare gear now fitted on board & all in order.

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

J. C. Green.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1925. July 2. Aug 4-24. Sept 2. 4. 10. 25. Oct 5. 9. 16. 21. 23. 26. 30. Nov 2. 4. 6. 9. 11. 12. 13. 19. 20. 23. 24. 26. 30. Dec 1. 4. 7. 16. 21. 30. 31. 1926. Feb 1. 4. 5.
During erection on board vessel --
Total No. of visits 42.

Dates of Examination of principal parts—Cylinders 16/10/25 to 18/11/25 Covers 4/11/25 to 24/11/25 Pistons 17.30/11/25 Rods Connecting rods 11/12/25
Crank shaft 1. 31/8/25 No 616
2. 5/10/25 Thrust shaft
3. 5/10/25 Hmb.
Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions
Completion of fitting sea connections Stern tube No 616
Material of crank shaft STEEL Identification Mark on Do. 440405 Hmb. Material of thrust shaft Identification Mark on Do.
Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

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 "GLENSHIEL" (AUXILIARY ENGINES)

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

These Auxiliary Engines have been built under Special Survey, the materials and workmanship are sound and good. They have now been shipped to Belfast for installation in the vessel there. Auxiliary engines & generators secured in place & tried under full working conditions

The amount of Entry Fee ... £

Special 3 ENGINES. £ 25 : 10/-

Donkey Boiler Fee ... £

Travelling Expenses (if any) £

When applied for.

When received.

Committee's Minute

Assigned Deferres.

FRI. 20 AUG 1926

Engine Surveyor to Lloyd's Register of Shipping.

