

REPORT ON OIL ENGINE MACHINERY.

No. 18795
JAN 1927

Received at London Office

Date of writing Report 29. 10. 24 When handed in at Local Office 14 November 1927

Port of GreenockNo. in Survey held at Greenock
Reg. Book.Date, First Survey 15th February 1924 Last Survey 2nd November 1924

Number of Visits 70.

39794 Sup. Single on the Twin Screw vesselsM/V. "Athelqueen"Tons: Gross 8790
Net 5150Built at MiddlesbroughBy whom built Furness & Co. Ltd.

Yard No. 117 When built 1927

Engines made at GreenockBy whom made John & Kinnear & Co. Ltd.

Engine No. 1121 When made 1927

Donkey Boilers made at GreenockBy whom made ditto

Boiler No. 1121 When made 1927

Brake Horse Power 3200Owners British Indiam. Co. Ltd.Port belonging to LiverpoolNom. Horse Power as per Rule 409Is Refrigerating Machinery fitted for cargo purposes -Is Electric Light fitted -

OIL ENGINES, &c.

Type of Engines Burnmaster Steam (2 Stk)4 stroke cycleSingle acting SingleMaximum pressure in cylinders 500No. of cylinders 12Diameter of cylinders 620 mmNo. of cranks 12Length of stroke 1300 mmSpan of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mmIs there a bearing between each crank yesRevolutions per minute 110Flywheel dia. 2620 mmWeight 13450 kgsMeans of ignition CompressionKind of fuel used DieselCrank Shaft, dia. of journals as per Rule 403.5as fitted 415 mmCrank pin dia. 415 mmCrank Webs Mid. length breadthMid. length thicknessshrunkThickness parallel to axis 270 mmThickness around eye hole 184.5 mmFlywheel Shafts, diameter as per Rule 103/8as fitted 103/8Intermediate Shafts, diameter as per Rule 11.26as fitted 11 3/4"Thrust Shaft, diameter at collars as per Rule 11.8as fitted 12 3/8"Tube Shafts, diameter as per Ruleas fittedScrew Shaft, diameter as per Rule 12.38as fitted 13"Is the shaft fitted with a continuous liner yesIs theafter end of the liner made watertight in thepropeller bossBronze Liners, thickness in way of bushes as per Rule 6.5as fitted 3/4"Thickness between bushes as per Rule 5.6as fitted 5/8"

Is the after end of the liner made watertight in the

propeller bossIf the liner is in more than one length are the junctions made by fusion through the whole thickness of the lineryesIf 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 yesIf two liners are fitted, is the shaft lapped or protected between the linersyesIs an approved Oil Gland or other appliance fitted at the afterend of the tube shaftyesLength of Bearing in Stern Bush next to and supporting propeller52"Propeller, dia. 3' 3"Pitch 11' 0"No. of blades 4Material BronzeWhether Moveable SolidTotal Developed Surface 52 sq. feetMethod of reversing EnginesairIs a governor or other arrangement fitted to prevent racing of the engine yesMeans of lubricationforcedThickness of cylinder liners36/46 mmAre the cylinders fitted with safety valvesyesAre the exhaust pipes and silencerslaggedthe exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engineFunnelIs the sea suction provided with an efficient strainer which can be cleared within the vesselyesIs the after end of the liner made watertight in thepropeller bossyesCooling Water Pumps, No. Two Centrifugal 6" diaIs the sea suction provided with an efficient strainer which can be cleared within the vesselyesIs the after end of the liner made watertight in thepropeller bossyesIs the after end of the liner made watertight in thepropeller bossBilge Pumps fitted to the Main Engines, No. Two 8" x 10"Stroke 7" x 7 1/2" x 9"Can one be overhauled while the other is at workyesIs the after end of the liner made watertight in thepropeller bossyesIs the after end of the liner made watertight in thePumps connected to the Main Bilge Line No. and SizeTwo 8" x 10"How drivenSteamLubricating Oil Pumps, including Spare Pump, No. and sizeTwo 60 ltr per hour (each)Are two independent means arranged for circulating water through the Oil Cooleryes

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

3 - 3 1/2" and 3 - 2 1/2"Are the Bilge Suctions in the Machinery SpaceyesAre they fitted with Valves or CocksBothAre the Overboard Discharges above or below the deep water lineaboveAre they each fitted with a Discharge Valve always accessible on the plating of the vessel yesHow are they protectedyesHave they been tested as per RuleyesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all timesyesIs the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from oneapartment to anotheryesIs the Shaft Tunnel watertightyesIs it fitted with a watertight doorworked fromIs a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodworkyesMain Air Compressors, No. TwoNo. of stagesThreeDiameters600-640-120 mmStroke480 mmDriven byMain EngineAuxiliary Air Compressors, No. oneNo. of stagesTwoDiameters400-350 mmStroke260 mmDriven bySteamSmall Auxiliary Air Compressors, No. oneNo. of stagesThreeDiameters2 1/8-7 1/4-9"Stroke4"Driven bySteamExhausting Air Pumps, No. oneDiameterStrokeDriven byyesAuxiliary Engines crank shafts, diameter as per Ruleas fittedRECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per RuleyesWhat means are provided for cleaning their inner surfacesMauholeAre the internal surfaces of the receivers examinedyesIs there a drain arrangement fitted at the lowest part of each receiver yesHigh Pressure Air Receivers, No. 4Cubic capacity of each150 ltrInternal diameter12"Thickness1/2"Unless, lap welded or riveted longitudinal jointSeamless MaterialRange of tensile strength29/33Working pressure by Rules1000 lbStarting Air Receivers, No. 2Total cubic capacity1300 CFInternal diameter6' 4 1/16"Thickness1/16"Working pressure by Rules356Unless, lap welded or riveted longitudinal jointRiveted MaterialRange of tensile strength28/32Working pressure by Rules356Shipping.12.27Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-5 1/2" 6 Bilge Pump and 1-5 1/2" 6 Bilge PumpAre all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxesyesAre the Bilge Suctions in the Machinery SpaceyesAre they fitted with Valves or CocksBothAre the Overboard Discharges above or below the deep water lineaboveAre they each fitted with a Discharge Valve always accessible on the plating of the vesselyesHow are they protectedyesHave they been tested as per RuleyesAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all timesyesIs the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from oneapartment to anotheryesIs the Shaft Tunnel watertightyesIs it fitted with a watertight doorworked fromIs a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodworkyesMain Air Compressors, No. TwoNo. of stagesThreeDiameters600-640-120 mmStroke480 mmDriven byMain EngineAuxiliary Air Compressors, No. oneNo. of stagesTwoDiameters400-350 mmStroke260 mmDriven bySteamSmall Auxiliary Air Compressors, No. oneNo. of stagesThreeDiameters2 1/8-7 1/4-9"Stroke4"Driven bySteamExhausting Air Pumps, No. oneDiameterStrokeDriven byyesAuxiliary Engines crank shafts, diameteras per Ruleas fittedRECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per RuleyesWhat means are provided for cleaning their inner surfacesMauholeAre the internal surfaces of the receivers examinedyesIs there a drain arrangement fitted at the lowest part of each receiveryesHigh Pressure Air Receivers, No. 4Cubic capacity of each150 ltrInternal diameter12"Thickness1/2"Unless, lap welded or riveted longitudinal jointSeamless Material

IS A DONEY BOILER FITTED?
HYDRAULIC TESTS:—

yes

If so, is a report now forwarded? yes

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS <i>liners</i>	22-3-27		500	LR WGM	Satisfactory
" " COVERS	25-4-27		1000	" "	"
" " JACKETS	17-5-27		50	" "	"
" " PISTON WATER PASSAGES	17-8-27		50	" "	"
MAIN COMPRESSORS—1st STAGE	8-6-27		2000	" "	"
" 2nd "	3-8-27		500	" "	"
" 3rd "	8-6-27		150	" "	"
AIR RECEIVERS—STARTING	<i>see Sheffield Rpt.</i>		2000	✓	✓
" INJECTION			2000	✓	✓
AIR PIPES	13-9-27		2000	LR WGM	Satisfactory
FUEL PIPES	29-9-27		2000	✓	✓
FUEL PUMPS	1-8-27		2000	"	"
SILENCER			✓	✓	✓
" WATER JACKET			✓	✓	✓
SEPARATE FUEL TANKS	20-10-27		10	LR WGM	Satisfactory

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

yes

Receivers

yes

Separate Tanks

yes

Donkey Boilers

✓

General Pumping Arrangements

✓

Oil Fuel Burning Arrangements

✓

SPARE GEAR

FOR JOHN G. KINCAID & COY. LIMITED
The foregoing is a correct description,

J. G. Kincaid
DIRECTOR

Manufacturer.

Dates of Survey while building
(1927) Feb. 15-21 Mar. 3-9 22-23 Apr. 1-25 26-27 29 May 1-5 9-13 14 18-23 24 June 3-6 8-10 13-14 17-23 24 28 July 12-13 18-19 26 27 28 Aug. 1-3 9-11 12-14
Sept. 5-13 14-16 20-26 28 29-30 Oct. 3-5 6-10 11-13 14-17 19-26 27 28 31 Nov. 2
Total No. of visits 40

Dates of Examination of principal parts—Cylinders 22-3-27 Covers 25-4-27 Pistons 6-10-27 Rods 6-10-27 Connecting rods 6-10-27

Crank shaft 6-10-27 Flywheel shaft 15-9-27 Thrust shaft 15-9-27 Intermediate shafts 27-10-27 Tube shaft

Screw shaft 21-10-27 Propeller 26-9-27 Stern tube Engines sealings Engines holding down bolts

Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions

Crank shaft, Material S Identification Mark LR 121 WGM Flywheel shaft, Material S Identification Mark LR 994 688 WGM

Thrust shaft, Material S Identification Mark 994 588 LR WGM Intermediate shafts, Material S Identification Marks 2773 2420 LR

Tube shaft, Material S Identification Mark Screw shaft, Material S Identification Mark 4531 587 WGM

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

Is this machinery duplicate of a previous case 910 If so, state name of vessel

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

These engines have been built under

Special Survey in accordance with the approved plans & the workmanship

material and of good quality. These engines have been tried on the trial

found satisfactory. They have now been shipped to Middlesbrough

at which port they will be fitted on board.

The machinery when fitted on board, tried under working

conditions will be entered in my opinion for the record of

✱ LMC with date

The amount of Entry Fee ... £ 6 : -

Special ... £ 110 : 9

Boiler Fee ... £ 25 : 3

Travelling Expenses (if any) ... £ 8 : 8

Committee's Minute GLASGOW 8 NOV 1927

Assigned Deferred

W. Gordon Maclellan
Engineer Surveyor to Lloyd's Register of Shipping.

FEB 21 FEB 1928

Lloyd's Register
Foundation