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Rpt. 4b

REPORT ON OIL ENGINE MACHINERY.

No. 19100

Received at London Office

9 OCT 1929

Date of writing Report 25/1/29 When handed in at Local Office 3rd October 1929 Port of Liverpool

No. in Survey held at Liverpool Date, First Survey 16th October 1929 Last Survey 1st October 1929
Reg. Book. Number of Visits 97

on the Single Twin Triple } Screw vessel M/S "Athelwiscourt" Tons Gross 8882.30
Net 5259.31

Built at Glasgow By whom built R. Dumeau & Co. Ltd. Yard No. 391 When built 1929

Engines made at Liverpool By whom made John & Kneass Ltd. Engine No. 1134 When made 1929

Boilers made at Liverpool By whom made John & Kneass Ltd. Boiler No. 1137 When made 1929

Brake Horse Power 3200 Owners United Oil Companies Ltd. Port belonging to Liverpool

Nom. Horse Power as per Rule 709 Is Refrigerating Machinery fitted for cargo purposes 910 Is Electric Light fitted yes

Trade for which vessel is intended Foreign

OIL ENGINES, &c.—Type of Engines Overhead Valve (2 sets) 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 500 Diameter of cylinders 630 mm Length of stroke 1300 mm No. of cylinders 12 No. of cranks 12

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mm Is there a bearing between each crank yes

Revolutions per minute 110 Flywheel dia. 2620 mm Weight 13750 kg Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 403.3 mm Crank pin dia. 415 mm Crank Webs shrunk Mid. length breadth 240 mm Thickness parallel to axis 184.4 mm
as fitted 415 mm Mid. length thickness shrunk Thickness around eye-hole 184.4 mm

Flywheel Shaft, diameter as per Rule 163/8" Intermediate Shafts, diameter as per Rule 11.26" Thrust Shaft, diameter at collars as per Rule 11.8"
as fitted 163/8" as fitted 11 3/4" as fitted 12 3/8"

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 12.38" Is the tube shaft fitted with a continuous liner yes
as fitted as fitted 13" screw

Bronze Liners, thickness in way of bushes as per Rule .65" Thickness between bushes as per rule .56" Is the after end of the liner made watertight in the
as fitted 3/4" as fitted 5/8" propeller boss yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft 910

Length of Bearing in Stern Bush next to and supporting propeller 52"

Propeller, dia. 13.3" Pitch 11.0" No. of blades 4 Material Bronze whether Moveable 910 Total Developed Surface 52 sq. feet

Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when disengaged yes Means of lubrication Forced

Thickness of cylinder liners 36/46 mm Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine yes

Cooling Water Pumps, No. 3 (ou bottom) (2-10+8) Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes

Bilge Pumps worked from the Main Engines, No. yes Diameter yes Stroke yes Can one be overhauled while the other is at work yes

Pumps connected to the Main Bilge Line { No. and Size 2. 8+9+10 4+7 1/2+9
How driven steam

Ballast Pumps, No. and size one 8+9+10 Lubricating Oil Pumps, including Spare Pump, No. and size 3 (ou bottom) (2. 4+8)

Are two independent means arranged for circulating water through the Oil Cooler yes Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size In Machinery Spaces 2. 3 1/2 2. 3 2. 2 2. 2 2. 2 2. 2

In Holds, &c. (2. 10" in each) Pump Room 2. 3"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2. 5 1/2"

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes

Are all Sea Connections fitted direct on the skin of the ship yes Are they fitted with Valves or Cocks not

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates yes Are the Overboard Discharges 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 the Blow Off Cocks fitted with a spigot and brass covering plate yes

What pipes pass through the bunkers yes How are they protected yes

What pipes pass through the deep tanks yes Have they been tested as per Rule yes

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes

Is 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 one compartment to another yes Is the Shaft Tunnel watertight None Is it fitted with a watertight door yes worked from yes

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

Main Air Compressors, No. 2 No. of stages 3 Diameters 600-540-120 mm Stroke 480 mm Driven by Main Engine

Auxiliary Air Compressors, No. one No. of stages 3 Diameters 400-350-82 mm Stroke 260 mm Driven by Steam

Small Auxiliary Air Compressors, No. yes No. of stages yes Diameters yes Stroke yes Driven by yes

Scavenging Air Pumps, No. yes Diameter yes Stroke yes Driven by yes

Auxiliary Engines crank shafts, diameter as per Rule
as fitted

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yes

Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Manhole

Is there a drain arrangement fitted at the lowest part of each receiver yes

High Pressure Air Receivers, No. 4 Cubic capacity of each 150 litres Internal diameter 12" thickness 1/2"

Seamless, lap welded or riveted longitudinal joint seamless Material S Range of tensile strength 29.33 Working pressure by Rules 1000 lb

Starting Air Receivers, No. 2 Total cubic capacity 1300 CF Internal diameter 6.4 1/16" thickness 1 1/16" 1 1/32"

Seamless, lap welded or riveted longitudinal joint riveted Material S Range of tensile strength 28.32 Working pressure by Rules 356

Lloyds Register Foundation

002215-002221-0034

IS A ~~STEEL~~ ^{Aluminum} BOILERS FITTED? *yes* If so, is a report now forwarded? *yes*
 PLANS. Are approved plans forwarded herewith for Shafting *yes* Receivers *yes* Separate Tanks *yes*
Alum Boilers *yes* General Pumping Arrangements *yes* Oil Fuel Burning Arrangements *yes*

SPARE GEAR

see separate list attached

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

J. G. Kincaid Manufacturer.

Dates of Survey while building
 During progress of work in shops - (1928) Oct 16-23 Nov 1-5-15-21-23-30 Dec 6-11-14-21-24-28-31 (1929) Jan 25 Feb 4-11-18-24 Mar 5-11-25 Apr 3-5-12-19-26 May 3-6-13-17-21-22-23-24-27-28-29-30
 During erection on board vessel - June 3-4-6-12-13-18-19-20-21-24-25-27-28 July 1-2-4-9-11-12-15-17-18-19-23-24-25-26-29-31 Aug 1-5-6-8-9-12-13-14-15-16-19-20-21-23-27-29 Sept 1-5-8-19-20-29-30 Oct 1-2-3-4-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-31
 Total No. of visits *94*

Dates of Examination of principal parts - *Levers* 24-5-29 Covers 27-5-29 Pistons 6-8-29 Rods 6-8-29 Connecting rods 6-8-29
 Crank shaft 5-8-29 Flywheel shaft 24-7-29 Thrust shaft 24-7-29 Intermediate shafts 24-7-29 Tube shaft ✓
 Screw shaft 2-4-29 Propeller 2-4-29 Stern tube 1-7-29 Engine seatings 19-7-29 Engines holding down bolts 17-9-29
 Completion of fitting sea connections 19-7-29 Completion of pumping arrangements 30-9-29 Engines tried under working conditions 1-10-29
 Crank shaft, Material \$ Identification Mark LR K34 WGM. Flywheel shaft, Material \$ Identification Mark LR 5260, 3657 WGM
 Thrust shaft, Material \$ Identification Mark LR 5260, 3657 WGM Intermediate shafts, Material \$ Identification Marks LR 13659, 2130 WGM
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material \$ Identification Mark LR 2129, 13653 WGM

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 Atulducken Ent Regd 9° 19017*

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 are of good quality, they are now securely fitted on board, tried under working conditions, found satisfactory. The machinery is eligible in my opinion for the record of LMC 10-29 (Notation of Donkey Boilers 180lb)*

It is submitted that this vessel is eligible for THE RECORD. + LMC 10-29.

oil Leunis 45C5A
 124 24 1/16 - 51 3/16
 200 180 lb. CL. 709 N 11
J. G. Kincaid
 10/10

The amount of Entry Fee ... £ 6 : - : When applied for,
 Special ... £ 110 : 9 : 1st OCTOBER 1929.
 Boiler Fee ... £ 25 : 3 : When received,
Alum *John Kincaid* Travelling Expenses (if any) £ 8 : 8 : 1st OCTOBER 1929.

Committee's Minute GLASGOW 8 OCT 1929
 Assigned + L.M.C. 10, 29 2DB-180lb.

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



Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)