

REPORT ON OIL ENGINE MACHINERY. No. 20437

Received at London Office

Date of writing Report 26th June 1941 When handed in at Local Office 28th June 1941 Port of Leith
Date, First Survey 13th Sept 1940 Last Survey 19th June 1941
No. in Survey held at Leith Number of Visits 31

No. in Reg. Book 0402 on the Motor "UNDERWOOD"
Screw vessel
Single Motor
Twin
Triple
Quadruple

Tons Gross 1990
Net 1359

Built at Leith By whom built Henry Robb Ltd. Yard No. 291 When built 1941
Engines made at Glasgow By whom made British Auxiliaries Ltd. Engine No. 302/3 When made 1941
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 1280 Owners Union Steamship Co of New Zealand Port belonging to London
Nom. Horse Power as per Rule 250 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes
Trade for which vessel is intended Ocean-going

IL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Mean Indicated Pressure Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, { Solid forged dia. of journals as per Rule
Semi built as fitted
All built } Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the screw shaft fitted with a continuous liner No

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per Rule as fitted Is the after end of the shaft made watertight in the propeller boss

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube

shaft yes If so, state type Bederwall Length of Bearing in Stern Bush next to and supporting propeller 2'-4"

Propeller, dia. 7'-0" Pitch 5'-6 1/2" No. of blades 4 Material Bronze whether Moveable Solid Total Developed Surface 16.4 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves 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 Exhaust up funnel

Cooling Water Pumps, No. 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. one Diameter 90"/m Stroke 140"/m Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size Drysdale "Centrex" Bilge Ballast; Drysdale "Centrex" General Service How driven each 55 tons/hr capacity, driven by electric motors

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping

Ballast Pumps, No. and size Drysdale "Centrex" 55 tons/hr Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2 off - 5 1/2 galls/min driven by main engs. 1 off - 3900 galls/hr driven by electric motor

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 Port ford 1-2 1/2" Star ford 1-2 1/2" aft. Well 1-2 1/2" & R Coffedam 1-2" In Pump Room Hold Coffedam 1-2 1/2"

In Holds, &c. No 1 Hold:—Port 1-2 1/2" Star 1-2 1/2" No 2 Hold Port 1-3 1/2" Star 1-3 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Port 1-4" from B. 103 pump Star 1-4" from S.S. pump

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 Both

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 above

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

What pipes pass through the bunkers None How are they protected

What pipes pass through the deep tanks None Have they been tested as per Rule

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 Is it fitted with a watertight door worked from

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

Main Air Compressors, No. See gls. No. of stages Rpt No. Diameters 60558 Stroke Driven by

Auxiliary Air Compressors, No. one No. of stages 2 stage Diameters Capacity Stroke 35 cubft/min driven by Elec. Motor

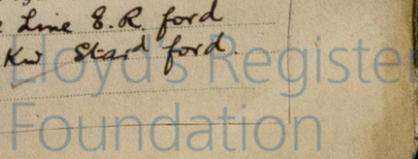
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

What provision is made for first Charging the Air Receivers. By electric power from 20kw machine, which can be started by hand.

Scavenging Air Pumps, No. See gls. Diameter Rpt No. Stroke 60558 Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted See glnisley Reports No. 3 off. 1-20kw on Centre Line & R. ford Position 1-100kw Port ford, 1-100kw Star ford

Are the Auxiliary Engines been constructed under special survey yes Is a report sent herewith yes



AIR RECEIVERS:—Have they been made under survey State No. of Report or Certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule

Can the internal surfaces of the receivers be examined and cleaned

Is a drain fitted at the lowest part of each receiver

Injection Air Receivers, No.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Range of tensile strength

Working pressure

by Rules

Actual

Starting Air Receivers, No.

Total cubic capacity

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure

by Rules

Actual

IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded?

Is the donkey boiler intended to be used for domestic purposes only

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

yes

Receivers

Separate Fuel Tanks

yes

Donkey Boilers

General Pumping Arrangements

With hull report

Pumping Arrangements in Machinery Space

yes

Oil Fuel Burning Arrangements

yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

yes. As per list

State the principal additional spare gear supplied

attached to Gls Rpt N° 60558.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building: During progress of work in shops, During erection on board vessel, Total No. of visits 31. 1941: Jan 8-15, Feb 10-20-21, Mar 3-11-12-24-29, Apr 7-14, May 1-12-21-29-31, June 3-7-11-18-19.

Dates of Examination of principal parts—Cylinders, Covers, Pistons, Rods, Connecting rods

Crank shaft, Flywheel shaft, Thrust shaft, Intermediate shafts, Tube shaft

Screw shafts in place 11/12/40, Propellers in place 11/12/40, Stern tubes in place 6/12/40, Engine seatings 20-11-40, Engines holding down bolts 20-2-41 Port, 24-3-41 Star

Completion of fitting sea connections 8-1-41, Completion of pumping arrangements 31-5-41, Engines tried under working conditions 29-5-41

Crank shaft, Material, Identification Mark, Flywheel shaft, Material, Identification Mark

Thrust shaft, Material, Identification Mark, Intermediate shafts, Material Steel, Identification Marks

Tube shaft, Material, Identification Mark, Screw shaft, Material Steel, Identification Mark

Identification Marks on Air Receivers See Gls Rpt N° 60558.

LLOYD'S N° E 291 27-8-40 J.H.

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

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with yes.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with

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

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

This Machinery - Gls Rpt N° 60558 on the Main Engines & Gensets Rpts Nos 21233 & 21237 on the Aux Engines - has been efficiently fitted on board, the materials workmanship being sound & good. The Main & Aux Machinery, when tried under full load & working conditions, was found satisfactory in all respects.

Manoeuvring tests were carried out, & the capacity of the air receivers was found to be considerably in excess of Rule requirements.

In my opinion the Machinery of this vessel is eligible to be classed in the Register Book, with the notation of + L.M.C. 6-41, & the records of Oil Eng. O.G.

The amount of Entry Fee £ : : When applied for, Special 1/3 L.M.C. £ 20 : 16 : 8 Charged by Gls. & credited to A.H. Donkey Boiler Fee £ : : Travelling Expenses (if any) £ : : 22/3/1939.

John Houston, Engineer Surveyor to Lloyd's Register of Shipping.



Committee's Minute Assigned to L.M.C. 6-41 Oil Eng. O.G.

FRI. 11 JUL 1941

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