

REPORT ON OIL ENGINE MACHINERY.

Sld No 33083

APR 21 1941

Received at London Office

19 APR 1941 Port of Sunderland.

Date of writing Report

When handed in at Local Office

No. in Survey held at Sunderland

Date, First Survey Jan 8 '41 Last Survey Dundee 19

eg. Book.

2530 on the Single Screw vessel

built at Dundee

Engines made at Sunderland

Monkey Boilers made at Dundee

Brake Horse Power 2800

Com. Horse Power as per Rule 598.579

Trade for which vessel is intended Admiralty Diler

CLASS ENGINES, &c. Type of Engines Opposed piston airless injection 2 or 4 stroke cycle 2

Maximum pressure in cylinders 568 lbs/sq. in.

Mean Indicated Pressure 81 lbs/sq. in.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 880 in.

Revolutions per minute 120

Crank Shaft, Solid forged dia. of journals 400 in.

Intermediate Shafts, diameter 420 in.

Thrust Shaft, diameter at collars 420 in.

Tube Shaft, diameter 420 in.

Bronze Liners, thickness in way of bushes 25 in.

Propeller boss

Propeller, dia. 120 in.

Method of reversing Engines Hand lever.

Thickness of cylinder liners 25 in.

Non-conducting material

Cooling Water Pumps, No. None

Bilge Pumps worked from the Main Engines, No. None

Pumps connected to the Main Bilge Line

Ballast Pumps, No. and size

Oil Cooler

Oil Pumps, No. and size

Oil Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes

Are they fitted with Valves or Cocks

Are all Sea Connections fitted direct on the skin of the ship

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

How are they protected

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

Is the Shaft Tunnel watertight

Is it fitted with a watertight door

Are the Bilge Suctions in the Machinery Spaces

Are the Overboard Discharges above or below the deep water line

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Are the Auxiliary Engines been constructed under special survey

"GRAY RANGER"

By whom built Caledon S & B. Ltd.

By whom made Wm. Leitch & Sons Ltd.

By whom made Caledon S & B. Ltd.

Owners The Admiralty

Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes

Is there a bearing between each crank Between each

Kind of fuel used Compassion

Temperature Temperature

Mid. length breadth 610 in.

Mid. length thickness 240 in.

Thrust Shaft, diameter at collars 420 in.

Is the tube shaft fitted with a continuous liner

Is the after end of the liner made watertight in the

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

Is the space charged with a plastic material insoluble in water and non-corrosive

Is an approved Oil Gland or other appliance fitted at the after end of the tube

Length of Bearing in Stern Bush next to and supporting propeller

Is a governor or other arrangement fitted to prevent racing of the engine when detached

Are the cylinders fitted with safety valves

Are the exhaust pipes and silencers water cooled or lagged with

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

Can one be overhauled while the other is at work

How driven

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Is the Shaft Tunnel watertight

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Yard No. 390 When built 1941

Engine No. 218 When made 1941

Boiler No. 590 When made 1941

Port belonging to London

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes

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Gross 3373

Net 1506

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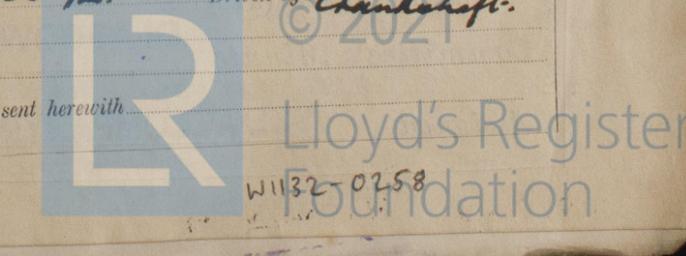
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W1132-0258

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 Material 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? 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 23/9/39. Receivers Separate Fuel Tanks
Donkey Boilers General Pumping Arrangements Pumping Arrangements in Machinery Space
Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes (no top & bottom end Connecting rod bearings supplied)

State the principal additional spare gear supplied 1 Cylinder liner & pack Complete, 1 main piston head & 24 rings,
4 Fuel valves Complete, 8 Spray pumps, 1 N.R. air starting valve, 1 Cyl. relief valve, 2 fuel pumps
leadies Complete with x Hds, Struts & tappets, Delivery Chambers & full crank levers, 1 set thrust-rod
1 roller chain for Camshaft drive, 12 hoses for upper piston cooling, 12 ditto for transverse lubrication
1 cyl. lubricator, 8 discs for Scavenge pump, 1 set valve discs for main engine pumps.

The foregoing is a correct description, Limited.

J. W. Keller Manufacturer.

Dates of Survey while building During progress of work in shops - - - 1941. Jan. 8, 16, 20, 28, 27, 30. Feb. 5, 7, 10, 11, 12, 17, 19, 25, 27, 28. Mch. 2, 4, 5, 6, 7, 10, 11, 12, 13, 14, 17, 19, 20, 24, 25, 26, 27, 28, 31.
During erection on board vessel - - - 3, 4, 7, 8, 9, 17. Sld 43
Total No. of visits
Dates of Examination of principal parts - Cylinders 30/1/41 14/2/41 Covers 25/2/41 4/3/41 Pistons 14/3/41 24/3/41 1/4/41 Rods 14/3/41 24/3/41 Connecting rods 25/3/41
Crank shaft G.L.S. 11/2/41 4/2/41 Flywheel shaft as crank. Thrust shaft as crank Intermediate shafts Tube shaft
Screw shaft Propeller Stern tube Engine seatings Engines holding down bolts
Completion of fitting sea connections Completion of pumping arrangements Engines tried under working conditions ON TEST BED 14/4/41
Crank shaft, Material Ingot Steel FOR SECT: N° 9641 B AFT SECT: N° 9641 B G.E.M. 4/2/41 Identification Mark L.C.D. 11/2/41 Flywheel shaft, Material as crank. Identification Mark as crank
Thrust shaft, Material as crank. Identification Mark as crank. Intermediate shafts, Material Identification Marks
Tube shaft, Material Identification Mark Screw shaft, Material Identification Mark
Identification Marks on Air Receivers

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

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

Description of fire extinguishing apparatus fitted

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo 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 Yes If so, state name of vessel M/V "GOLD RANGER."

General Remarks (State quality of workmanship, opinions as to class, &c.) This machinery has been built under
Special Survey in accordance with the approved Plans & the rules of the Society.
The materials & workmanship are good.
The engine has been tried under full load conditions on the test bed with
Satisfactory results & has been despatched to Messrs Calson Shipbuilding
Eng: Co Ltd for installation on board the vessel, after which it will be kept
in my opinion to have notation as to M.C. (with date) oil Eng. in the R. B.

The amount of Entry Fee .. £ 6 : - : When applied for,
2/3 Special £ 40 : - : 19
Donkey Boiler Fee welded const. 12 : 12 : When received,
Travelling Expenses (if any) £ : : 19

J. W. Keller
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 14 OCT 1941

Assigned SEE ACCOMPANYING MACHINERY REPORT.

SUNDERLAND

(The Surveyors are requested not to write on or before the space for Committee's Minute.)

