

REPORT ON OIL ENGINE MACHINERY.

No. 9282

12 FEB 1942

Received at London Office

Date of writing Report 4th Feb^y 1942 When handed in at Local Office 5th Feb^y 1942 Port of Dundee
 No. in Survey held at Dundee Date, First Survey 14th July 1941 Last Survey 29th Jan^y 1942
 Reg. Book. Number of Visits 28
 24638 on the Single ^{MOTOR} ~~Triple~~ Screw vessel R.F.A. "GREEN RANGER" Tons ^{Gross} 3313 ^{Net} 1506
 Built at Dundee By whom built Baledon S.B. & E. Co. Ltd Yard No. 391 When built 1942
 Engines made at Dundee By whom made Wm. Duxford & Sons Ltd Engine No. 219 When made 1942
 Donkey Boilers made at Dundee By whom made Baledon S.B. & E. Co. Ltd Boiler No. 591 When made 1942
 Brake Horse Power 2800 Owners The Admiralty Port belonging to London
 Nom. Horse Power as per Rule 598 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
 Trade for which vessel is intended Admiralty Oilers

OIL 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.

Means of ignition

Kind of fuel used

Crank Shaft,

Solid forged
Semi built dia. of journals
All builtas per Rule
as fitted

Crank pin dia.

Crank Webs

Mid. length breadth
Mid. length thicknessThickness parallel to axis
Thickness around eyehole

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 tube screw

shaft fitted with a continuous liner

yes

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 liner made watertight in the

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

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

shaft No If so, state type

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

Propeller, dia. 14'-0"

Pitch 12'-1"

No. of blades 4

Material Bronze

Whether Moveable Solid

Total Developed Surface 48

sq. feet

Method of reversing Engines

Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched

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

yes

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. 1-10"x10"x10", 1-10"x11"x10"

1-Main Eng. driven 120 tons/hr.

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. None

Diameter

Stroke

Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line

No. and Size

1-10 1/2" X 7 1/2" X 10"

1-10" X 11" X 10"

How driven

Steam-driven

Steam-driven

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

arrangements

yes

Ballast Pumps, No. and size 1-10" X 11" X 10" Steam-driven

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 1-7' X 8" X 18" steam driven

both 32 tons/hr.

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 1-2 1/2" P. 1-2 1/2" S. aft. 1-2 1/2" S. fwd. 1-2 1/2" tunnel well, 1-2" aft. cofferdam. In Pump Room 1-2" fwd. cofferdam

In Holds, &c. 1-3" in W/T Comp. Port. 1-3" in W/T Comp. Star. In fwd. hold 1-2 1/2" port. 1-2 1/2" star. In fwd. pump room & in aft. pump room 2" ejectors

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1-4 1/2" from bilge pump star. 1-4 1/2" from ballast pump port.

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. with tail pipes as straight & portable as possible

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

Piped thro' buoyancy spaces Are they fitted with Valves or Cocks

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

Are the Overboard Discharges above or below the deep water line below

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

yes

Is it fitted with a watertight door

yes

worked from tops platform

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. 2 off-

No. of stages tandem

Diameters 11 1/2" X 6 1/2"

Stroke

Driven by Steam

Auxiliary Air Compressors, No. 1

No. of stages

Diameters

Stroke

Driven by

Small Auxiliary Air Compressors, No. 1

No. of stages

Diameters

Stroke

Driven by

What provision is made for first Charging the Air Receivers

Compressors are steam driven

Scavenging Air Pumps, No. one

Diameter 14 10 1/4"

Stroke 11 00 1/4"

Driven by Main Engine

Auxiliary Engines crank shafts, diameter

as per Rule
as fitted

Steam-driven

No. 2-off.

Position Fwd. End of Eng. Room 1 Port. 1 Star.

Have the Auxiliary Engines been constructed under special survey

No

Is a report sent herewith

yes

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AIR RECEIVERS:—Have they been made under survey

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

Injection Air Receivers, No. *None* Cubic capacity of each
Seamless, lap welded or riveted longitudinal joint

Starting Air Receivers, No. *2 off*

Seamless, lap welded or riveted longitudinal joint

IS A DONKEY BOILER FITTED?

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)

Donkey Boilers

Oil Fuel Burning Arrangements

General Pumping Arrangements *With hull report*

Pumping Arrangements in Machinery Space

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

In addition 1 set of coupling bolts of each size required, assorted studs, bolts, iron etc. Spares for the auxiliary compressors & pumps as agreed upon in the Specⁿ. between Builders & Owners have also been supplied.

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

Dates of Examination of principal parts—Cylinders

Crank shaft

Flywheel shaft

Thrust shaft

Pistons

Rods

Connecting rods

Screw shaft in place 13/8/41

Propeller in place 13/8/41

Stern tube in place 29/7/41

Engine seatings 13/8/41

Intermediate shafts

Tube shaft

Completion of fitting sea connections 13/8/41

Completion of pumping arrangements 28/11/41

Engines holding down bolts 9/10/41

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

Identification Marks on Air Receivers

LOYD'S TEST
800 lbs
W.P. 600 lbs
4-9-41 J.H.

LOYD'S
N^o 8994 8995
G.A.I. 27/8/41
LOYD'S
N^o 8992 8993
G.A.I. 27/8/41

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

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

If so, state name of vessel *"Gold Ranger"*

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

This Machinery — Eld Rpt N^o 33178 on the Main Engines, & Dundee Rpts Nos 9284 & 9285 on the Donkey & Composite Boilers — has been efficiently fitted on board, the materials & workmanship being sound & good. The Main & Aux^y Machinery were tried out under full power & working conditions, & were 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.1-42, & the records of Oil Eng. C.L. & 2 D.B. 150 lbs.

The amount of Entry Fee .. £

Special 1/3 L.M.C. £ 35 : 0 : 0

Donkey Boiler Fee ... £ 26 : 0 : 0

Travelling Expenses (if any) £

air Receivers Committee's Minute 4 : 4 : 0

When applied for,

5/2/1942

When received,

19

GLASGOW 10 FEB 1942

Assigned -/- L.M.C. 1.42

Oil Eng
2 D.B. 150 lbs

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



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GLASGOW

Certificate (if required) to be sent to

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