

REPORT ON OIL ENGINE MACHINERY.

No. 31780

Received at London Office

27 FEB 1936

Date of writing Report

19

When handed in at Local Office

25 FEB 1936

Port of

Sunderland.

To. in Survey held at
eg. Book.

Sunderland.

Date, First Survey

8th Oct. '35

Last Survey

22nd Feb 1936

Number of Visits

64

Single
on the ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel.

"RUGELEY"

Tons Gross 4985
Net 3061.

Built at Sunderland

By whom built Wm. Delford & Sons Ltd

Yard No. 618

When built 1936.

Engines made at Sunderland

By whom made Wm. Delford & Sons Ltd

Enging No. 618

When made 1936.

Machinery Boilers made at Stockton

By whom made Stockton Chemical Eng Co & Riley Bros Ltd

Boiler No. 6144

When made 1936.

Horse Power 1800.

Owners The Red R Steamship Co Ltd

Port belonging to Newcastle.

Horse Power as per Rule 388.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

Made for which vessel is intended

20 1/2

Combined 81 1/2"

ENGINES, &c.—Type of Engines

Opposed piston airless injection 2 or 4 stroke cycle 2

Single or double acting Single

Maximum pressure in cylinders

540 lb/sq in

Diameter of cylinders

520 mm

Length of stroke

Lower 1200 mm

No. of cylinders

3

No. of cranks 3 (3 throws)

Indicated Pressure

88 lb/sq in

In of bearings, adjacent to the Crank, measured from inner edge to inner edge

820 mm

Is there a bearing between each crank

Compression

3 throw.

Revolutions per minute

115

Crank Shaft, dia. of journals

as per Rule 356 mm

Crank pin dia.

410 mm

Crank Webs

Mid. length breadth 580 mm

Thickness parallel to axis

230 mm

Wheel Shaft, diameter

as per Rule 356 mm

Intermediate Shafts, diameter

as per Rule 305 mm

Thrust Shaft, diameter at collars

as per Rule 410 mm

Is the

tube

shaft fitted with a continuous liner

Yes.

Main Shaft, diameter

as per Rule 300 mm

Screw Shaft, diameter

as per Rule 314 mm

Is the

tube

shaft fitted with a continuous liner

Yes.

Liners, thickness in way of bushes

as per Rule 16.4 mm

Thickness between bushes

as per Rule 18 mm

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

Yes.

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.

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

Yes.

propeller, dia. 14'-0"

Pitch 10'-6"

No. of blades 4

Material Bronze

whether Moveable

No.

Total Developed Surface

80 sq. feet

Method of reversing Engines

Hand lever

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

Yes.

Means of lubrication

Yes.

End. Thickness of cylinder liners

20 mm

Are the cylinders fitted with safety valves

Yes.

Are the exhaust pipes and silencers water cooled or lagged with

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

Yes.

Cooling Water Pumps, No.

2 one engine driven

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

Yes.

ge 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 2, 6" x 5 1/2" x 15"

How driven

Steam

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

Main Pumps, No. and size

1 12" x 10 1/2" x 24"

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size

1 main engine 80 mm x 520 mm

Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Machinery Spaces

4 @ 3" in E.R.

1 @ 3" Tunnel well.

In Pump Room

Holds, &c.

N°1. 3 1/2" p.s.

N°2. 3 1/2" p.s.

N°3. 3" p.s.

N°4. 3 1/2" p.s.

Leup Tank 3 1/2" p.s.

1 @ 8" (Ballast pump)

1 @ 5"

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

Yes.

Are the Bilge Suctions in the Machinery Spaces

Yes.

from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Yes.

Are they fitted with Valves or Cocks

Both.

all Sea Connections fitted direct on the skin of the ship

Yes.

Are the Overboard Discharges above or below the deep water line

Yes.

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

Yes.

How are they protected

Yes.

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

Yes.

Is the Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from

Grating.

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.

Two.

No. of stages

Three

Diameters

Stroke

Driven by

Auxiliary Air Compressors, No.

none

No. of stages

Diameters

Stroke

Driven by

Steam engine

11 1/2" x 6" stroke

Small Auxiliary Air Compressors, No.

none

No. of stages

Diameters

Stroke

Driven by

Steam engine

11 1/2" x 6" stroke

Savenging Air Pumps, No.

one

Diameter

1510 mm

Stroke

520 mm

Driven by

main engine

Auxiliary Engines crank shafts, diameter

as per Rule

as fitted

No.

Position

No.

Position

No.

Position

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes on discharge from Compressor*

Can the internal surfaces of the receivers be examined and cleaned *Yes* Is a drain fitted at the lowest part of each receiver *Yes*

High Pressure Air Receivers, No. *none* 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. *Two* Total cubic capacity *180 cuft.* Internal diameter *3'-6"* thickness *1"*

Seamless, lap welded or riveted longitudinal joint *Welded* Material *Mild Steel* Range of tensile strength *28/32* Working pressure by Rules *603* Actual *600*

IS A DONKEY BOILER FITTED? *Yes* (✓) If so, is a report now forwarded? *Yes*

Is the donkey boiler intended to be used for domestic purposes only *no*

PLANS. Are approved plans forwarded herewith for Shuffling *Yes* (If not, state date of approval) *as "KIRRIEMOOR"* Receivers *Yes* Separate Fuel Tanks *as "KIRRIEMOOR"*

Donkey Boilers *Yes* General Pumping Arrangements *as "KIRRIEMOOR"* Pumping Arrangements in Machinery Space *as "KIRRIEMOOR"*

Oil Fuel Burning Arrangements *as "KIRRIEMOOR"* SPARE GEAR.

Has the spare gear required by the Rules been supplied *Yes*

State the principal additional spare gear supplied *1 Cast iron Propeller, 1 Propeller shaft, 2 Front fuel valves Complete, 2 Back fuel valves Complete, 8 Spray plugs, 1 Starting valve Complete, 1 Cylinder valve Complete, 4 Scavenge pump Suct. & Del. Valve discs, 1 Fuel pump body Complete, 1 roller for Camshaft, 1 upper piston rod & skirt, 1 lower piston rod & skirt, 3 main piston heads Complete, 1 Cylinder liner Complete.*

WILLIAM DOXFORD & SONS, LIMITED.
The foregoing is a correct description,

W. H. Miller

Manager.

Manufacturer.

Dates of Survey while building { During progress of work in shops-- *35/ Oct. 8, 9, 11, 14, 17, 18, 21, 23, 24, 25, 28, 29, Nov. 1, 4, 6, 7, 12, 13, 14, 15, 18, 19, 21, 22, 26, 27, 28, Dec. 3, 4, 5, 6, 9, 10, 11*
During erection on board vessel-- *16, 17, 18, 20, 23, 24, 31, Jan. 3, 6, 8, 13, 14, 15, 16, 17, 20, 21, 22, 24, 27, 29, 30, Feb. 5, 11, 19, 20, 21, 22*
Total No. of visits *64*

Dates of Examination of principal parts—Cylinders *16/10/35* Covers *✓* Pistons *5/12/35* Rods *5/12/35* Connecting rods *19/11/35*

Crank shaft *14/12/35* Flywheel shaft *as crank.* Thrust shaft *as crank.* Intermediate shafts *14/12/35* Tube shaft *✓*

Screw shaft *17/2/35* Propeller *3/1/36* Stern tube *18/12/35* Engine seatings *Tank top.* Engines holding down bolts *24/1/36*

Completion of fitting sea connections *18/12/35* Completion of pumping arrangements *20/2/36* Engines tried under working conditions *20/2/36*

Crank shaft, Material *Import Steel* Identification Mark *S.O. 3946* Flywheel shaft, Material *as crank.* Identification Mark *as crank.*

Thrust shaft, Material *"* Identification Mark *as crank.* Intermediate shafts, Material *Import Steel* Identification Marks *Nº 5912, 2963, 2964, 2946, 2947*

Tube shaft, Material *"* Identification Mark *"* Screw shaft, Material *Import Steel* Identification Mark *2945, 2946, W.N.F.*

Is the flash point of the oil to be used over 150° F. *Yes* *Nº 2959 W.N.F. 3.1.36.*

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 *not decided.*

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *M.V. "KIRRIEMOOR"*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been*

built under Special Survey in accordance with the Rules of the Society & the Secretary's letter E 25/4/34.

The materials & workmanship are good. The machinery has been Securely fitted on board the vessel & tried under full working conditions at Sea including rule requirements for starting, with Satisfactory results. The donkey boilers have also been securely fixed on board & fitted to burn oil fuel (F.P. above 150° F.) Section 20 of the Rules has been complied with, safety valves of boilers adjusted to working pressure & the accumulation test carried out Satisfactorily. The machinery is eligible in my opinion to have notation L.M.C. 2.36 oil & T.S. (C), 2 D.B. 120 lbs/sq. in.

The amount of Entry Fee .. £ 5 : - : When applied for, *25 FEB 1936*

Special ... £ 83 : 4 : When received, *16 FEB 1936*

Donkey Boiler Fee ... £ 12 : 12 : *When received, 16 FEB 1936*

Travelling Expenses (if any) £ : : *When received, 16 FEB 1936*

Committee's Minute *TUE. 3 MAR 1936*

Assigned *to L.M.C. 2.36 Oil Inf. 205-120*

J. H. Fraser

Engineer Surveyor to Lloyd's Register of Shipping.

