

REPORT ON OIL ENGINE MACHINERY.

No 36141

DEC - 1 1953

Received at London Office

22 DEC 1953

Writing Report

When handed in at Local Office

19

Port of Sunderland.

Survey held at

Sunderland.Date, First Survey 27 October 1952 Last Survey 22 November 1953Number of Visits 94

ook.

on the Triple Screw vessel

M/V "SHEAF ROYAL"

Tons Gross 2305
Net 4348at Sunderland.By whom built J.L. Thompson & Sons LtdYard No. 677 When built 1953.Boilers made at Sunderland.By whom made W. Daxford & Sons LtdEngine No. 285 When made 1953.Boilers made at Sunderland.By whom made Geo Clark (1938) LtdBoiler No. 1502 When made 1953.Horse Power 4450.Owners Sheaf Steam Shipping Co Ltd

Port belonging to

Horse Power as per Rule NEW. MN 1550

Is Refrigerating Machinery fitted for cargo purposes

No. Is Electric Light fitted Yes.for which vessel is intended Tanker.ENGINES, &c.—Type of Engines Daxford opposed piston 2 or 4 stroke cycle 2. Single or double acting Singleum pressure in cylinders 640 lbo. Diameter of cylinders 750 in Length of stroke U. 1050 No. of cylinders Six No. of cranks 6—three throw.indicated pressure 84 lbo. Flywheel dia. 2865.5 in Weight 1.8 tons Means of ignition Compression Kind of fuel used Diesel oil.bearings, adjacent to the Crank, measured from inner edge to inner edge 1100 in Is there a bearing between each crank Between each three.ions per minute 103. Crank pin dia. 580 in Crank Webs Mid. length breadth 840 in Thickness parallel to axis 320 inft. Solid forged as per Rule 580 in as fitted 580 in Mid. length thickness 320 in Thickness around eye hole 260 ineel Shaft, diameter as per Rule 460 in Intermediate Shafts, diameter as per Rule 409 in Thrust Shaft, diameter at collars as per Rule 500 inShaft, diameter as per Rule 441 in as fitted 483 in Is the shaft shaft fitted with a continuous liner Yes.e Liners, thickness in way of bushes as per Rule 22 in Thickness between bushes as per Rule 14 in Is the after end of the liner made watertight in ther 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.iner 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.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 tubeNo. If so, state type yes. Length of Bearing in Stern Bush next to and supporting propeller 6'-2"ller, dia. 19'-3" Pitch 15-4 1/2 M No. of blades 4. Material Brass whether Moveable No Total Developed Surface 152 sq. feetd of reversing Engines Hand lever Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes. Means of lubricationed Thickness of cylinder liners 25 in Are the cylinders fitted with safety valves yes. Are the exhaust pipes and silencers water cooled or lagged withducting 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.g Water Pumps, No. 1. Drysdale 2 Stage 2 1/2 H each Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes.Pumps worked from the Main Engines, No. NONE Diameter 10" x 11" x 10" Stroke 10" x 11" x 10" Can one be overhauled while the other is at work yes.s connected to the Main Bilge Line No. and Size Bilge Pump. 10" x 11" x 10" How driven Steamcooling 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 pumpingments yes. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size 2. Weir - 80 THo independent means arranged for circulating water through the Oil Cooler yes. Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge, No. and size:—In Machinery Spaces 1-8" direct aft; 4" aft well; 3" Coff; 4" p.s.; 10" direct; 2-2 1/2 oily bilge Pump Roomds, &c. 4" Coffordam of X bunker; 3" hold 2 1/2 p.s.; Store 2 1/2 p.s.; Aux pump 3" Coff 6" p.s.; 10" main p room; 2-3" aft main p room 2-3"endent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 10" (Sw. Circ pump); 8" direct bilge pump.l the Bilge Suction pipes in Hold and Tunnel Well fitted with strum-boxes yes. Are the Bilge Suctions in the Machinery Spacesm easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes.Sea Connections fitted direct on the skin of the ship yes. Are they fitted with Valves or Cocks yes.y 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.y 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.ipes pass through the bunkers yes. How are they protected yes.ipes pass through the deep tanks yes. Have they been tested as per Rule yes.Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes.

rrangement 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

partment to another yes. Is the Shaft Tunnel watertight NO TUNNEL Is it fitted with a watertight door yes. worked from yes.ood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes.Air Compressors, No. 2. Weir No. of stages 3. Diameters 250 Cft Stroke each. Driven by Steam.

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

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

provision is made for first Charging the Air Receivers

nging Air Pumps, No. 3. Diameter 1800 in Stroke 610 in Driven by Revers on main engines.ary Engines crank shafts, diameter as per Rule 2. Position on flat above intermediate shafting.the Auxiliary Engines been constructed under special survey yes. Is a report sent herewith yes.Lloyd's Register
Foundation

0 117 57-011765-0216

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.

Cubic capacity of each

Internal diameter

thickness

Seamless, lap welded or riveted longitudinal joint

Material

Range of tensile strength

Working pressure by Rules

Starting Air Receivers, No.

Two.

Total cubic capacity

500 Cuft.

Internal diameter

5'0"

thickness

1 3/8"

Seamless, lap welded or riveted longitudinal joint

Fusion Weld

Material

M. Steel

Range of tensile strength

28-32 T.T.

Working pressure by Rules

Actual

IS A DONKEY BOILER FITTED?

Yes.

Two.

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 Shifting

(If not, state date of approval)

Receivers

Separate Fuel Tanks

Donkey Boilers

Yes.

General Pumping Arrangements

Yes.

Pumping Arrangements in Machinery Space

Yes.

Oil Fuel Burning Arrangements

Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes.

State the principal additional spare gear supplied

1. V. E. L. du Linc Complete, 2 piston heads Complete, 1 upper piston skirt, 1 lower piston rod & skirt, 6 fuel valve bodies, 2 spray plugs, 1 relief valve, 1 C.I. propeller, 1 R. shaft, 22 hoses for piston water service, 13 hoses for transverse, 50 ft hoses for transverse, 2 centre top end & units, 2 centre bottom end bolts & nuts, 2 side conn top bolts & nuts. 1 NR. Starting valve complete, 1-12 fuel pipe, 2 fuel valve pilot rams, 1 fuel pump suction valve, 1 fuel valve lever, 2 fuel pump relief & 1 ram & guide for priming pump, 1-6 ft. T.K. lubricator and Sundry small items.

The foregoing is a correct description.

For and on behalf of

WILLIAM DOXFORD & SONS, LIMITED.

Manufacturer.

Director.

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

after Section

21/4/53

before Section

24/4/53

Screw shaft

W 3/4/53

S 6/1/53

Completion of fitting sea connections

10/7/53

Crank shaft, Material

S.M. Steel

Thrust shaft, Material

S.M. Steel

Tube shaft, Material

✓

Identification Marks on Air Receivers

1269 & 1270

TEST 950 160"

WP 600 160"

H.W. 9/4/53.

Identification Mark

285. H.

Identification Mark

974.3. H.

Identification Mark

✓

Identification Mark

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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.

Description of fire extinguishing apparatus fitted

As per sketch 13680. accompanying this report.

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

Tanker

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 required.

Is this machinery duplicate of a previous case

No.

If so, state name of vessel

✓

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 Secretary's letter, & the rules of the Society. The materials & workmanship are good. It has been securely fitted on board the vessel & tried under full working conditions with satisfactory results. The two donkey boilers have also been securely fixed on board, fitted to burn oil fuel (FP above 150° F) & the Safety Valves adjusted under steam to the working pressure. The requirements of Chap E, Section 3 have been complied with. The machinery is now eligible in our opinion to have notation LMC 11-53 (oil Eng), TS (CL) 2-DB 150 lbs. Main Engines not to be operated continuously between 42 & 50 rpm. A notice fixed at controls & tachometer was accordingly. (HO letter 24/8/52)

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

Committee's Minute

Assigned

+ LMC 11.53 (oil Eng (Torsional Endorsement))
2 DB 150 lb. CL.

When applied for,

DEC - 1 1953

When received,

TUESDAY 25 DEC 1953

John Lundgren for Self & H. Iron
Engineer Surveyor to Lloyd's Register of Shipping



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