

REPORT ON OIL ENGINE MACHINERY.

No. 44324

31 OCT 1936

Received at London Office

30 OCT 1936

Date of writing Report

When handed in at Local Office

Port of

Date, First Survey

Number of Visits

No. in Survey held at Reg. Book.

Goole

24th Aug 1936 Last Survey 23rd Oct 1936

67422 on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel

CRESCENCE

Tons { Gross 255. Net 127.

Built at Goole By whom built Goole Shipbuilding & Reps Co Yard No. 319 When built 1936
 Engines made at Cologne By whom made Humboldt, Deutz, and A.G. Engine No. 382099 When made 1936
 Donkey Boilers made at None By whom made None Boiler No. None When made None
 Brake Horse Power 300 Owners London & Rochester Trading Co Ltd Port belonging to Rochester
 Nom. Horse Power as per Rule 70 Is Refrigerating Machinery fitted for cargo purposes None Is Electric Light fitted Yes
 Trade for which vessel is intended Coasting

OIL ENGINES, &c.—Type of Engines Heavy Oil (R.V.C. M 345) 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 700 lbs/sq in Diameter of cylinders 280 mm Length of stroke 450 mm No. of cylinders 6 No. of cranks 6
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 307.5 mm Is there a bearing between each crank Yes
 Revolutions per minute 300 Flywheel dia. 1250 mm Weight 2600 Kgs Means of ignition Solid Kind of fuel used Heavy oil
 Crank Shaft, dia. of journals as per Rule 163 Crank pin dia. 170 mm Crank Webs Mid. length breadth 325 mm Thickness parallel to axis shrunk
 Flywheel Shaft, diameter as per Rule 67 Intermediate Shafts, diameter as per Rule 4.42 Thrust Shaft, diameter at collars as per Rule 118 mm
 Tube Shaft, diameter as per Rule 5.06 Screw Shaft, diameter as fitted 5 1/8 Is the tube screw shaft fitted with a continuous liner None
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per rule Is the after end of the liner made watertight in the propeller boss Yes

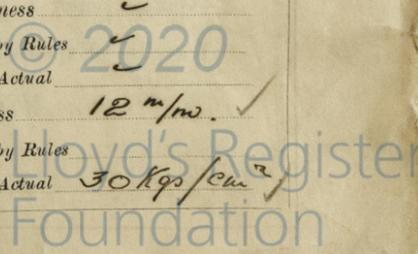
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes
 If two liners 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 shaft Yes If so, state type Stewart Length of Bearing in Stern Bush next to and supporting propeller 20 1/2"
 Propeller, dia. 64" Pitch 46" No. of blades 4 Material C.I. whether Moveable Solid Total Developed Surface 9 1/4" sq. feet
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Lubricated
 Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes 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 Up funnel

Cooling Water Pumps, No. One & Cross Connecting to bilge pumps the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 What special arrangements are made for dealing with cooling water if discharged into bilges all overboard
 Bilge Pumps worked from the Main Engines, No. One Diameter 100 mm Stroke 85 mm Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line No. and Size One 100 mm x 85 mm How driven Main Engine One Rotary 50 tons/hr & One Rotary 40 tons/hr
 Ballast Pumps, No. and size 2 Rotary See above. Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One & one spare (port wheel)
 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 2 @ 2" dia & 2 @ 2 1/2" dia In Pump Room 1

In Holds, &c. F.P. One @ 3" dia. Hold. 2 @ 2 1/2" dia. A.P. 1 @ 3" dia. Tanks No. 1 3 @ 3" dia. No. 2 3 @ 3" dia.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 2 1/2" dia (included above)
 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 Yes
 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 None
 What pipes pass through the bunkers None How are they protected None
 What pipes pass through the deep tanks None Have they been tested as per Rule Yes

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 None Is it fitted with a watertight door Yes worked from None
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork None
 Main Air Compressors, No. One No. of stages 2 Diameters 145 x 60 mm Stroke 85 mm Driven by Main Engines
 Auxiliary Air Compressors, No. One No. of stages One Diameters 3 1/4" Stroke 3 1/4" Driven by Aux. Engine (hand starting)
 Small Auxiliary Air Compressors, No. One No. of stages One Diameters See above Stroke See above Driven by See above
 Scavenging Air Pumps, No. None Diameter None Stroke None Driven by None
 Auxiliary Engines crank shafts, diameter as per Rule See Son Rpt D. 1509 No. One Position Star Side Engine Room

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes
 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 None Internal diameter None thickness None
 Seamless, lap welded or riveted longitudinal joint None Material None Range of tensile strength None Working pressure None
 Starting Air Receivers, No. 2 Total cubic capacity 1000 litres Internal diameter 450 mm thickness 12 mm
 Seamless, lap welded or riveted longitudinal joint lap welded Material Steel Range of tensile strength 38.4 kg/mm Working pressure 30 kg/cm



IS A DONKEY BOILER FITTED? None 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 13-2-35 & 15-4-36, Receivers 21-7-32, Separate Tanks 16-4-36
(If not, state date of approval)
Donkey Boilers None, General Pumping Arrangements 1-5-36, Oil Fuel Burning Arrangements

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes
State the principal additional spare gear supplied 1. Main bearing, 1 Crank bearing, 1 Judson bearing, 1 Complete Fuel pump valve, 2 sets of suction & delivery valves for fuel pumps. Various valve springs & fuel needles.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1936: - Aug 27-31 Sept 5-10-25-26-28 Oct 9-14-15-23
{ During erection on board vessel - - - }
Total No. of visits 11

Dates of Examination of principal parts—Cylinders Des Rpt Covers Des Rpt Pistons Des Rpt Rods Connecting rods Des Rpt
Crank shaft Des Rpt Flywheel shaft Thrust shaft Des Rpt Intermediate shafts 28-9-36 Tube shaft
Screw shaft 31-8-36 Propeller 31-8-36 Stern tube 31-8-36 Engine seatings 31-8-36 Engines holding down bolts 28-9-36
Completion of fitting sea connections 5-9-36 Completion of pumping arrangements 15-10-36 Engines tried under working conditions 15-10-36
Crank shaft, Material Steel Identification Mark 12016 M.B. 1/36 Flywheel shaft, Material Identification Mark
Thrust shaft, Material Steel Identification Mark 180 H.R. 1/36 Intermediate shafts, Material Steel Identification Marks 16300. K.H. 545. C.S.P.
Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark 345. C.S.P. 29/6/36

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 Not required
Is this machinery duplicate of a previous case Yes If so, state name of vessel KESTOR - Hull Rpt No 47223.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been satisfactorily fitted on board under Special Survey & is in accordance with the Rules & the approved plans and is eligible, in my opinion to be classed with the record of 1291 M.C. 10-36-06 and to have the notations of Oil Eng. 4-S.C.S.A. 11" x 17 1/16" & Cy 70 NHP.

A new piston & liner has been received from Dusseldorf & fitted in place of the piston & liner used for the "Kestor" and this & the whole main & auxiliary machinery was found satisfactory when tried under working conditions

The amount of Entry Fee .. £ 3 : 10 : 30 OCT 1936 When applied for,
Special £ 3 : 10 : 30 OCT 1936
Donkey Boiler Fee £ : : :
Travelling Expenses (if any) £ : : 27-45-37 28/45 When received,
FRI. 6 NOV 1936

D. J. Johnson
Engineer Surveyor to Lloyd's Register of Shipping.



Committee's Minute
Assigned + L.M.C. 10.36
Oil Engine
O.G.

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