

## REPORT ON OIL ENGINE MACHINERY.

No. 97350.

23 JUL 1930

21 JULY 1930

Received at London Office

Date of writing Report

19

When handed in at Local Office

19

Port of

No. in Survey held at *Saltney, Chester*Date, First Survey *1/6/30* *LIVERPOOL*

11/7/1930

Reg. Book.

Number of Visits

84528 on the *Single* *Twin* *Triple* *Quadruple* Screw vessel *"Sir Charles Orr"*Tons *Gross 24.58*  
*Net 9.26*Built at *Saltney, Chester*By whom built *Messrs J. Crichton & Co. Ltd.*Yard No. *497* When built *1930*Engines made at *Stockholm*By whom made *Aktieb. Atlas Diesel*Engine No. *8545* When made *1930*Donkey Boilers made at *✓*By whom made *✓*Boiler No. *✓* When made *✓*Brake Horse Power *400*Owners *Eleuthera Shipping Co. Ltd.*Port belonging to *Nassau, N.P.*Nom. Horse Power as per Rule *136*Is Refrigerating Machinery fitted for cargo purposes *no*Is Electric Light fitted *yes*Trade for which vessel is intended *"In service around the coasts between islands of Trinidad, Tobago"*OIL ENGINES, &c.—Type of Engines *Polar Diesel Oil Engine, type M42* stroke cycle *4* Single or double acting *yes*Maximum pressure in cylinders *35 kg/cm<sup>2</sup>* Diameter of cylinders *250 mm* Length of stroke *420 mm* No. of cylinders *4* No. of cranks *4*Span of bearings, adjacent to the Crank, measured from inner edge to inner edge *368 mm* Is there a bearing between each crank *yes*Revolutions per minute *300* Flywheel dia. *1150 mm* Weight *1200 kg* Means of ignition *Diesel* Kind of fuel used *crude oil*Crank Shaft, dia. of journals *as per Rule* *160 mm* Crank pin dia. *160 mm* Crank Webs *Mid. length breadth 214 mm* Thickness parallel to axis *shrunk* Thickness around eyehole *✓*Flywheel Shaft, diameter *as per Rule* *✓* Intermediate Shafts, diameter *as per Rule* *3 1/4"* Thrust Shaft, diameter at collars *as per Rule* *160 mm*Tube Shaft, diameter *as per Rule* *4 1/8"* Screw Shaft, diameter *as per Rule* *4 1/4"* Is the tube screw shaft fitted with a continuous liner *no*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 thepropeller boss *✓* 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 *no liners* Is an approved Oil Gland or other appliance fitted at the afterend of the tube shaft *yes* Length of Bearing in Stern Bush next to and supporting propeller *1' 8"*Propeller, dia. *4' 7 1/2"* Pitch *4' 9"* No. of blades *3* Material *Manila Ropes* whether Moveable *no* Total Developed Surface *7.0* sq. feetMethod of reversing Engines *Compressed air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubricationpumps *✓* Thickness of cylinder liners *✓* Are the cylinders fitted with safety valves *yes* Are the exhaust pipes and silencers water cooled or lagged withnon-conducting 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 *well above*Cooling Water Pumps, No. *1. Each Engine* 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. *1 Each Engine* Diameter *90 mm* Stroke *100 mm* Can one be overhauled while the other is at work *✓*Pumps connected to the Main Bilge Line { No. and Size *one rotary, Inquest type, 3" bore. Capacity 30 tons per hour.* How driven *Semi-Diesel Engine*Ballast Pumps, No. and size *one, rotary* Lubricating Oil Pumps, including Spare Pump, No. and size *as per Stockholm Rpt 3273-A*Are two independent means arranged for circulating water through the Oil Cooler *yes* Suctions, connected to both Main Bilge Pumps and Auxiliary BilgePumps, No. and size:—In Machinery Spaces *Two 2" at aft end of Engine Room.*In Holds, &c. *For recommendations see 2" cargo hold one 2" aft accommodation one 2" aft hold one 2"*Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size *one 3" at forward.*Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes *yes* Are the Bilge Suctions in the Machinery Spacesled 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 *both*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 *✓*What pipes pass through the bunkers *forward bilge suction* How are they protected *✓*What pipes pass through the deep tanks *✓* 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 *hottanned* Is it fitted with a watertight door *✓* worked from *✓*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. *as per Stockholm Rpt 3273-A* Diameters *✓* Stroke *✓* Driven by *✓*Auxiliary Air Compressors, No. *one* No. of stages *two* Diameters *3 1/2" 1 1/2"* Stroke *3 1/4"* Driven by *60 HP Semi-Diesel Engine*Small Auxiliary Air Compressors, No. *✓* No. of stages *✓* Diameters *✓* Stroke *✓* Driven by *✓*Scavenging Air Pumps, No. *as per Stockholm Rpt 3273-A* Stroke *✓* Driven by *✓*Auxiliary Engines crank shafts, diameter *as per Rule* *✓*IR 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 *✓* What means are provided for cleaning their inner surfaces *✓*Is there a drain arrangement fitted at the lowest part of each receiver *Rpts 3273-A*High Pressure Air Receivers, No. *See Stockholm Rpt 3273-A* 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. *See Stockholm Rpt 3273-A* Total cubic capacity *Internal diameter* thickness *Working pressure by Rules*Seamless, lap welded or riveted longitudinal joint *Material* Range of tensile strength *Working pressure by Rules*



IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded? ☒

PLANS  
(4 in all)

Are approved plans forwarded herewith for Shafting  
(If not, state date of approval)

Yes

Receivers

Separate Tanks

Yes

Donkey Boilers

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

Yes

SPARE GEAR 1 Cyl. Cover, 1 fuel valve, 1 atomiser, 1 sprayer, 1 starting valve, 1 piston & ring, 2 top & 2 bottom end bolts, 2 main bearing bolts, 6 coupling bolts, 1 fuel pump, 1 safety valve, 8/pump & various sizes of nuts & bolts, 3 rubber sleeves for stern tube oil gland, and in addition many other spares in accordance with spare gear list attached.

The foregoing is a correct description,

For J. CRIGHTON & CO., LTD.

Managing Director

Manufacturer.

Dates of Survey while building  
During progress of work in shops -  
During erection on board vessel -  
Total No. of visits

May 1. 12. 27. June 11. 24. 27. July 3. 10. 11.

9.

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓

Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts 1.5.30 14/5 Tube shaft 1.5.20

Screw shaft 1.5.30 Propeller 1/5.30 14/5 Stern tube 1/5.30 Engine seatings 1/5.30 Engines holding down bolts 1/5.30

Completion of fitting sea connections 12/5.30 Completion of pumping arrangements 1/6.30 Engines tried under working conditions 27/6.

Crank shaft, Material steel Identification Mark ✓ Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material steel Identification Mark ✓ Intermediate shafts, Material steel Identification Marks 703/4 JH

Tube shaft, Material steel Identification Mark 70 1/2 HER Screw shaft, Material steel Identification Mark 70 1/2 HER

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

Is this machinery duplicate of a previous case ☒ If so, state name of vessel

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

This Machinery, the main Engines of which were constructed at Stockholm under special Survey (Skm Rpb No 3273 & 4), has been satisfactorily installed in accordance with the Rules & the approved plans. It has been examined under full working conditions during River trials and found satisfactory and is eligible in my opinion for Classification in Register book with record of 4 LMC 7.30.

Subsequent to the trials, this vessel was placed in Dry Dock on account of slight damage to hull, and propellers & fastenings examined & found satisfactory.

Oil Engines 2 SCSA 85 9 13/16 - 16 9/16 NHP 136

The amount of Entry Fee £ 3 : :  
Special £ 7 : 0 :  
Donkey Boiler Fee £ : :  
Travelling Expenses (if any) £ 1 : 9 : 6

Committee's Minute LIVERPOOL 22 JULY 1930

Assigned + LMC 7.30.

CERTIFICATE WRITTEN Oil Engines . O.C. Elec. Light INVS

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register Foundation