

# REPORT ON OIL ENGINE MACHINERY.

No. 19694

Received at London Office

Date of writing Report 1st May 1936 When handed in at Local Office 1.5.1936 Port of Grimsby  
Date, First Survey 3rd October 1935 Last Survey 30th April 1936  
Number of Visits 26

Survey held at Lincoln  
on the Single Screw vessel Sepia Tons <sup>Gross</sup>            <sub>Net</sub>             
Triple  
Quadruple

built at Newcastle By whom built Swan Hunter & W. Richardson Yard No. 1519 When built             
Engines made at Lincoln By whom made Kerton & Hornsby Ltd. Engine No. 78297 When made 1936  
Boilers made at            By whom made            Boiler No.            When made             
Indicated Horse Power 60 Owners            Port belonging to             
Net Horse Power as per Rule 18.6 Is Refrigerating Machinery fitted for cargo purposes            Is Electric Light fitted             
made for which vessel is intended [One Engine - Type 3 VCRZ]

**ENGINES, &c.** Type of Engines Airlers injection, cold starting 2 or 4 stroke cycle 4 Single or double acting single  
Maximum pressure in cylinders 400 lbs. Diameter of cylinders 8" Length of stroke 10 3/4" No. of cylinders 3 No. of cranks 3  
Indicated Pressure 81.5 lbs.  
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 9 1/8" Is there a bearing between each crank yes  
Revolutions per minute 450 Flywheel dia. 3'-4" Weight 19 cwt. Means of ignition compression Kind of fuel used crude oil  
Crank Shaft, dia. of journals as approved 6" Crank pin dia. 4 3/4" Crank Webs Mid. length breadth 8" Thickness parallel to axis             
as fitted Mid. length thickness 2 1/2" Thickness around eye-hole             
Wheel Shaft, diameter as approved 6" Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule  
as fitted            as fitted             
Crank Shaft, diameter as per Rule Screw Shaft, diameter as per Rule Is the            shaft fitted with a continuous liner             
as fitted            as fitted                                 

Is the after end of the liner made watertight in the             
bellows boss            If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner             
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             
two liners are fitted, is the shaft lapped or protected between the liners            Is an approved Oil Gland or other appliance fitted at the after end of the tube             
If so, state type            Length of Bearing in Stern Bush next to and supporting propeller           

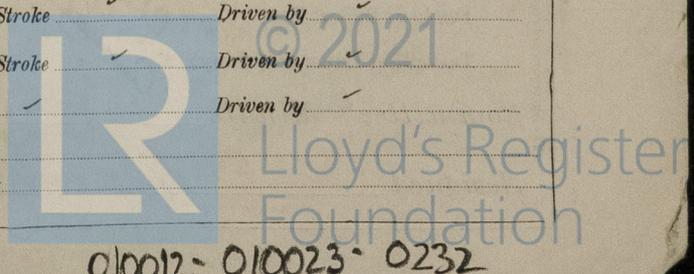
Propeller, dia.            Pitch            No. of blades            Material            whether Moveable            Total Developed Surface            sq. feet             
Method of reversing Engines            Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication             
Thickness of cylinder liners 3/4" Are the cylinders fitted with safety valves yes Are the exhaust pipes and silencers water cooled or lagged with             
conducting material water If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine           

Boiling Water Pumps, No. one Is the sea suction provided with an efficient strainer which can be cleared within the vessel             
Ge Pumps worked from the Main Engines, No.            Diameter            Stroke            Can one be overhauled while the other is at work             
Pumps connected to the Main Bilge Line            No. and Size             
           How driven             
If the cooling water led to the bilges            If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping             
arrangements           

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size one geared  
two independent means arranged for circulating water through the Oil Cooler            Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge             
Pumps, No. and size:—In Machinery Spaces            In Pump Room             
Holds, &c.           

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size             
all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes            Are the Bilge Suctions in the Machinery Spaces             
from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges             
all Sea Connections fitted direct on the skin of the ship            Are they fitted with Valves or Cocks             
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             
they each fitted with a Discharge Valve always accessible on the plating of the vessel            Are the Blow Off Cocks fitted with a spigot and brass covering plate             
at pipes pass through the bunkers            How are they protected             
at pipes pass through the deep tanks            Have they been tested as per Rule           

all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times             
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             
partment to another            Is the Shaft Tunnel watertight            Is it fitted with a watertight door            worked from             
wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork             
in Air Compressors, No.            No. of stages            Diameters            Stroke            Driven by             
Auxiliary Air Compressors, No.            No. of stages            Diameters            Stroke            Driven by             
all Auxiliary Air Compressors, No.            No. of stages            Diameters            Stroke            Driven by             
Reversing Air Pumps, No.            Diameter            Stroke            Driven by             
Auxiliary Engines crank shafts, diameter            as per Rule            No.             
           as fitted            Position           



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**AIR RECEIVERS:**—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  Is a drain fitted at the lowest part of each receiver

**High Pressure 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  Actual

**Starting Air Receivers, No.**  Total cubic capacity  Internal diameter  thickness

Seamless, lap welded or riveted longitudinal joint  Material  Range of tensile strength  Working pressure  by Rules  Actual

**IS A DONKEY BOILER FITTED?**  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  Receivers  Separate Fuel Tanks   
(If not, state date of approval) 7.9.31.

Donkey Boilers  General Pumping Arrangements  Pumping Arrangements in Machinery Space

Oil Fuel Burning Arrangements

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied  yes

State the principal additional spare gear supplied

**JUSTON & Hornsby, Limited,**

The foregoing is a correct description,

*J. Coyst* Manufacturer.

Dates of Survey while building: During progress of work in shops— 1935 Oct 3. 17. 24. 28. 31. Nov. 7. 11. 19. 28. 1936 Jan 8. Feb 13. 24. 27. Mar. 2. 12. 16. 19. 23. 26. 30. Apr. 2. 6. 16. 23. 27.  
During erection on board vessel—  
Total No. of visits 26

Dates of Examination of principal parts—Cylinders 27. 2. 36. Covers 24. 2. 36. Pistons 13. 2. 36. Rods  Connecting rods 28. 11. 3  
Crank shaft 8. 1. 36. Flywheel shaft 8. 1. 36. Thrust shaft  Intermediate shafts  Tube shaft   
Screw shaft  Propeller  Stern tube  Engine seatings  Engines holding down bolts   
Completion of fitting sea connections  Completion of pumping arrangements  Engines tried under working conditions 2. 4. 36  
Crank shaft, Material S.M. Steel Identification Mark No. 3229 C. Flywheel shaft, Material S.M. Steel Identification Mark No. 3229 C.  
Thrust shaft, Material  Identification Mark  Intermediate shafts, Material  Identification Marks   
Tube shaft, Material  Identification Mark  Screw shaft, Material  Identification Mark

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  Grinnell report no. 18653 "A" Inc.  
Is this machinery duplicate of a previous case  Yes If so, state name of vessel  Same type, now 3 instead of 5 cylinders

**General Remarks** (State quality of workmanship, opinions as to class, &c.) The workmanship & materials are good  
The engine has been built under Special Survey in accordance with the Rules and Approved plans.  
Running trials were carried out at the Makers' Works under Brake load with satisfactory results.

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

Request form attached Gms. rpt. no. 19687  
0/2270/P/V. 5651 - 36/IV. 2.

The amount of Entry Fee .. £	When applied for,
Special ... .. £	19.
Donkey Boiler Fee ... .. £	When received,
Travelling Expenses (if any) £	19.

Committee's Minute  
Assigned *See Note 76 94.319*

FRI. 30 OCT 1936

*H. L. Pilditch*  
Engineer Surveyor to Lloyd's Register of Shipping.  
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