

REPORT ON OIL ENGINE MACHINERY.

No. 3234.
2 MAY 1930

Received at London Office

Date of writing Report **28 April 1930** When handed in at Local Office **19** Port of **Stockholm**
No. in Survey held at **Sickla, Skm. Distr.** Date, First Survey **1 Febr. 1929** Last Survey **7 April 1930**
Reg. Book. Number of Visits **7**

filled
On the **Single** Screw vessel **Danwood** Tons ^{Gross}
Triple
Quadruple
Built at **Fredrikstad** By whom built **Fredrikstad Mek. Vaerkst.** Yard No. **80248** When built **1930**
Engines made at **Stockholm** By whom made **Aktieb. Atlas-Diesel** Engine No. **80248** When made **1930**
Donkey Boilers made at **Stockholm** By whom made **Aktieb. Atlas-Diesel** Boiler No. **80248** When made **1930**
Brake Horse Power **100** Owners **A/s Danwood** Port belonging to **Oslo**
Nom. Horse Power as per Rule **46** Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **no**
Trade for which vessel is intended **no**

OIL ENGINES, &c.—Type of Engines **Stationary Diesel Oil Engine / type 2H29/** ^{2 or 4 stroke cycle} **Single or double acting**
Maximum pressure in cylinders **35 kg/cm²** Diameter of cylinders **290 mm.** Length of stroke **410 mm.** No. of cylinders **2** No. of cranks **2**
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge **984 mm.** Is there a bearing between each crank **no**
Revolutions per minute **275** Flywheel dia. **1400 mm.** Weight **1185 kg.** Means of ignition **Compression** Kind of fuel used **Crude oil**
Crank Shaft, dia. of journals ^{as per Rule} **178 mm.** Crank pin dia. **195 mm.** Crank Webs ^{Mid. length breadth} **260 mm.** Thickness parallel to axis **shrunk**
The flywheel is fitted on the crank shaft. ^{Mid. length thickness} **110-120 mm.** Thickness around eyehole **shrunk**
Flywheel Shaft, diameter ^{as per Rule} **200** ^{as fitted} **200** Intermediate Shafts, diameter ^{as per Rule} **as fitted** Thrust Shaft, diameter at collars ^{as per Rule} **as fitted**
Tube Shaft, diameter ^{as per Rule} **as fitted** Screw Shaft, diameter ^{as per Rule} **as fitted** Is the ^{tube} ^{screw} shaft fitted with a continuous liner **no**

Bronze Liners, thickness in way of bushes ^{as per Rule} **as fitted** Thickness between bushes ^{as per rule} **as fitted** Is the after end of the liner made watertight in the propeller boss **no**
If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **no**
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 **no**
If two liners are fitted, is the shaft lapped or protected between the liners **no** Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft **no**

^{9 1}
^{8 10 29}
Propeller, dia. **as fitted** Pitch **as fitted** No. of blades **as fitted** Material **as fitted** whether Moveable **no** Total Developed Surface **as fitted** sq. feet **as fitted**
Method of reversing Engines **Is a governor or other arrangement fitted to prevent racing of the engine when declutched** **yes** Means of lubrication **as fitted**
pumps **Thickness of cylinder liners** **none fitted** Are the cylinders fitted with safety valves **yes** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **no** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine **no**

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^{3 31}
Cooling Water Pumps, No. **1** 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** Diameter **as fitted** Stroke **as fitted** Can one be overhauled while the other is at work **no**
Pumps connected to the Main Bilge Line ^{No. and Size} **as fitted** ^{How driven} **as fitted**

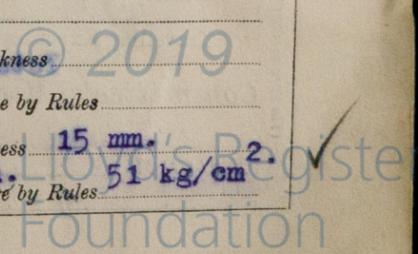
Ballast Pumps, No. and size **as fitted** Lubricating Oil Pumps, including Spare Pump, No. and size **as fitted**
Are two independent means arranged for circulating water through the Oil Cooler **no** Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces **as fitted**

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Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **as fitted**
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **no** Are the Bilge Suctions in the Machinery Spaces **as fitted**
Are they fitted from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges **no**
Are all Sea Connections fitted direct on the skin of the ship **no** Are they fitted with Valves or Cocks **no**
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates **no** Are the Overboard Discharges above or below the deep water line **no**
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel **no** Are the Blow Off Cocks fitted with a spigot and brass covering plate **no**
What pipes pass through the bunkers **as fitted** How are they protected **as fitted**
What pipes pass through the deep tanks **as fitted** Have they been tested as per Rule **no**

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **no**
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 **no** Is the Shaft Tunnel watertight **no** Is it fitted with a watertight door **no** worked from **no**
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork **no**
Main Air Compressors, No. **none fitted** No. of stages **as fitted** Diameters **as fitted** Stroke **as fitted** Driven by **as fitted**
Auxiliary Air Compressors, No. **as fitted** No. of stages **as fitted** Diameters **as fitted** Stroke **as fitted** Driven by **as fitted**
Small Auxiliary Air Compressors, No. **as fitted** No. of stages **as fitted** Diameters **as fitted** Stroke **as fitted** Driven by **as fitted**
Vacuuming Air Pumps, No. **as fitted** Diameter **as fitted** Stroke **as fitted** Driven by **as fitted**
Auxiliary Engines crank shafts, diameter ^{as per Rule} **as fitted** ^{as fitted} **as fitted**

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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 **yes** What means are provided for cleaning their inner surfaces **mudhole 120 mm.**
Is there a drain arrangement fitted at the lowest part of each receiver **yes**
High Pressure Air Receivers, No. **none fitted, solid injection** Cubic capacity of each **as fitted** Internal diameter **as fitted** thickness **as fitted**
Seamless, lap welded or riveted longitudinal joint **as fitted** Material **as fitted** Range of tensile strength **as fitted** Working pressure by Rules **as fitted**
Starting Air Receivers, No. **1** Total cubic capacity **100 litres** Internal diameter **340 mm.** thickness **15 mm.**
Seamless, lap welded or riveted longitudinal joint **lapwelded** Material **S.M. Steel** Range of tensile strength **38 Kg. mm² as a min.** Working pressure by Rules **51 kg/cm²**

W194-0066



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting **E.28.5.25** Receivers **25.10.26** Separate Tanks

Donkey Boilers. General Pumping Arrangements Oil Fuel Burning Arrangements

SPARE GEAR as per list, approved on the 4th Febr.1926, will be inspected when machinery is be fitted in ship.

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } **1/2, 18/3, 17/4, 25/9, 1&9/10 1929; 7/4 1930.**
 { During erection on board vessel - - }
 Total No. of visits **in shop 7.**

Dates of Examination of principal parts—Cylinders with Covers **1 & 9 29** Pistons **9 29** Rods Connecting rods **1, 17, 29 / 2, 4, 10**
 Crank shaft **18, 25, 9 29** Flywheel shaft 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 **in shop 1 2 10**

Crank shaft, Material **S.M. Steel** Identification Mark **Lloyd's N:o 5724 AI.25.9.29A** Flywheel shaft, Material Identification Mark
 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.
 Is this machinery duplicate of a previous case **yes** If so, state name of vessel **See Skm. report no.3175.**

General Remarks (State quality of workmanship, opinions as to class, &c. **I am of opinion, that this engine is of super material and workmanship, and as it has been designed and constructed under special survey, I have respectfully to submit that it be approved as auxiliary to a classed main engine.**

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

The amount of Entry Fee ... £	:	:	When applied for,
Special ... Kr 218;40	:	:	29.7.1930
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) * £ 28;00	:	:	30.6.1930
Total Kr. 246;40.			

Committee's Minute **FRI. 26 SEP 1930**

Assigned **See F.E. Rep**

A. Hakson
 Engineer Surveyor to Lloyd's Register of Shipping.
 Assisted by Mr. K.J. Andersson
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TUE. 12 MAY 1931