

# REPORT ON OIL ENGINE MACHINERY.

No. 3378

Received at London Office

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4b

Writing Report *6th Feb. 1931* When handed in at Local Office

Port of *Stockholm*

Survey held at *Sickla*

Date, First Survey *6th June, 1930* Last Survey *13th Feb. 1931*

Number of Visits *6*

on the *Single* Screw vessel  
*Twin*  
*Triple*  
*Quadruple*

Tons *Gross*  
*Net*

at *Hong Kong* By whom built *Hong Kong & Vancouver Trade Co* Yard No. *691* When built

made at *Stockholm* By whom made *Messrs. E.-B. Atlas Diesel* Engine No. *85120* When made *1931*

Boilers made at By whom made Boiler No. When made

Horse Power *200* Owners *Messrs. North Vegas Sugar Co., Inc.* Port belonging to *Floids*

Horse Power as per Rule *68* Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

for which vessel is intended

ENGINES, &c.—Type of Engines *Diesel Oil Engine (Type M43)* *2 or 4* stroke cycle *Single or double* acting

Mean pressure in cylinders *35 kg/cm<sup>2</sup>* Diameter of cylinders *250 mm* Length of stroke *490 mm* No. of cylinders *4* No. of cranks *4*

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 *Compression* Kind of fuel used *Crude Oil*

Shaft, dia. of journals *158 mm* as per Rule *158 mm* Crank pin dia. *160 mm* Crank Webs *Mid. length breadth 214 mm* Thickness parallel to axis *shrunk*

Wheel is fitted *Yes* as per Rule *160 mm* Intermediate Shafts, diameter *362 mm* as per Rule *362 mm* Thrust Shaft, diameter at collars *shrunk* Thickness around eyehole *shrunk*

Shaft, diameter *as fitted* as per Rule *as fitted* Is the *tube* shaft fitted with a continuous liner *screw*

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

boss *as fitted* If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner

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

liners are fitted, is the shaft lapped or protected between the liners *as fitted* Is an approved **Oil Gland** or other appliance fitted at the after

the tube shaft Length of Bearing in **Stern Bush** next to and supporting propeller

Number, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines *by compressed air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Means of lubrication

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

conducting material If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Number of Water Pumps, No. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Pumps worked from the Main Engines, No. *1* Diameter *90 mm* Stroke *100 mm* Can one be overhauled while the other is at work

connected to the Main Bilge Line { No. and Size How driven

Number of Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size *of gear wheel type* *one for pumping to a daily supply*

independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Number, No. and size:—In Machinery Spaces

Direct Suctions, No. and size

Are the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes. Are the Bilge Suctions in the Machinery Spaces

Are they easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Sea Connections fitted direct on the skin of the ship. Are they fitted with Valves or Cocks

Are 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

Are 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

How are they protected. Have they been tested as per Rule

Are the pipes pass through the bunkers. Have they been tested as per Rule

Are the pipes pass through the deep tanks. Have they been tested as per Rule

Are the Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

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. Is the Shaft Tunnel watertight. Is it fitted with a watertight door. worked from

Is the vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. *1* No. of stages *2* Diameters *175/20 mm* Stroke *150 mm* Driven by *main engine*

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

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

Engining Air Pumps, No. *2* Diameter *390 mm* Stroke *190 mm* Driven by *main engine*

Auxiliary Engines crank shafts, diameter *as per Rule* as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes*

Are the internal surfaces of the receivers be examined *Yes* What means are provided for cleaning their inner surfaces *mudhole 250 mm*

Are there a drain arrangement fitted at the lowest part of each receiver *Yes*

Pressure Air Receivers, No. *filled solid* Cubic capacity of each Internal diameter thickness

Are they lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules

Engining Air Receivers, No. *2* Total cubic capacity *800 litres* Internal diameter *500 mm* thickness *11.5 mm*

Are they lap welded or riveted longitudinal joint *lap welded* Material *S.S. Steel* Range of tensile strength *38 kg/mm<sup>2</sup>* Working pressure by Rules *25.6 kg/cm<sup>2</sup>*

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

PLANS. Are approved plans forwarded herewith for Shafting *E 22.4.26*  
(If not, state date of approval)

Receivers *6.5.27* Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

*to be supplied and inspected, when machinery is being fitted in ship*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
 During progress of work in shops - *6/12/30, 1/13/31, 9/8/31*  
 During erection on board vessel -  
 Total No. of visits *in shop 6*

Dates of Examination of principal parts—Cylinders *9/8/31* Covers *9/8/31* Pistons *1/3/31* Rods ✓ Connecting rods *6/28/30, 1/3/31*

Crank shaft *1/3/30, 1/3/31* 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 9/31*

Crank shaft, Material *S.M. Steel* Identification Mark *LLOYD'S No. 6034 K.A. 13.2-31* 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 Item Rpt No. 3273*

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

*This engine has been constructed under Special Survey in accordance with Rule Requirements and approved Plans. Materials and workmanship are good, and the tests have proved satisfactory. It is submitted that this engine will be eligible to be classed with record of LMC when fitted into a classed vessel to the satisfaction of the Society's Surveyors.*

Certificate (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 Survey fee <i>£ 309.40</i>	:	:	<i>14.2.1931</i>
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	:	<i>17.3.1931</i>

*R. J. Andersson*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE. 28 JUL 1931

Assigned

*See F. B. Rpt.*



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