

## REPORT ON OIL ENGINE MACHINERY.

No. 6349

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Date of writing Report 5<sup>th</sup> March 1926 When handed in at Local Office 11<sup>th</sup> March 1926 Port of GothenburgNo. in Survey held at Gothenburg Date, First Survey 19<sup>th</sup> October, 1925 Last Survey 24<sup>th</sup> February 1926  
Reg. Book. Number of Visits 4on the <sup>Single</sup> ~~Twin~~ <sup>Triple</sup> Screw vessels Tons <sup>Gross</sup> <sup>Net</sup>

Master Built at By whom built Yard No. When built

Engines made at LYSEKIL By whom made SKANDIA-VERKEN, A.B. Engine No. 15387 When made 1926

Donkey Boilers made at By whom made Boiler No. When made

Brake Horse Power 950 Owners VANCOUVER PILE DRIVING &amp; CONTRACTING Co Port belonging to VANCOUVER

Nom. Horse Power as per Rule 715.72 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

OIL ENGINES, &c.—Type of Engines One Heavy Oil Engine 2 or 4 stroke cycle 2 Single or double acting Single  
Maximum pressure in cylinders 20.0 kg/cm<sup>2</sup> No. of cylinders 4 No. of cranks 4 Diameter of cylinders 360 mm [14 3/16"]  
Length of stroke 400 mm [15 3/4"] Revolutions per minute 300 Means of ignition Hot bulbs Kind of fuel used Crude oil  
Is there a bearing between each crank Yes Span of bearings (Page 106, Section 2, par. 7 of Rules) 478 mm  
Distance between centres of main bearings 700 mm Is a flywheel fitted Yes Diameter of crank shaft journals as per Rule 149 mm  
as fitted 170 mm  
Diameter of crank pins 168 mm Breadth of crank webs as per Rule 198 mm Thickness of ditto as per Rule 84 mm  
as fitted 228 mm as fitted 99 mm  
Diameter of flywheel shaft as per Rule as fitted Diameter of tunnel shaft as per Rule as fitted Diameter of thrust shaft as per Rule 115 mm  
as fitted 127 mm  
Diameter of screw shaft as per Rule as fitted Is the screw shaft fitted with a continuous liner the whole length of the stern tube  
Is the after end of the liner made watertight in the propeller boss If the liner is in more than one length are the joints burned  
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 If without liners, is the shaft arranged to run in oil  
Type of outer gland fitted to stern tube Length of stern bush Diameter of propeller  
Pitch of propeller No. of blades state whether moveable Total surface square feet  
Method of reversing Special reversing gear by Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Thickness of cylinder liners  
Are the cylinders fitted with safety valves cylinder only Means of lubrication Forced lubrication Are the exhaust pipes and silencers water cooled or lagged with  
non-conducting material Water cooled If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine  
No. of cooling water pumps Is the sea suction provided with an efficient strainer which can be cleared  
within the vessel No. of bilge pumps fitted to the main engines 1 Diameter of ditto 120 mm Stroke 60 mm  
Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines How driven  
Sizes of pumps No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room  
and in holds, etc. No. of ballast pumps How driven Sizes of pumps  
Is the ballast pump fitted with a direct suction from the engine room bilges State size Is a separate auxiliary pump suction fitted in  
Engine Room and size Are all the bilge suction pipes fitted with roses Are the roses in Engine Room always accessible  
Are the sluices on Engine Room bulkheads always accessible Are all connections with the sea direct on the skin of the ship  
Are they valves or cocks Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates  
Are the discharge pipes above or below the deep water line Are they each fitted with a discharge valve always accessible on the plating of the vessel  
Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times Are the bilge suction pipes, cocks and valves arranged so as to prevent any  
communication between the sea and the bilges Is the screw shaft tunnel watertight 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  
No. of main air compressors None The starting receiver filled up with gas from the cylinders No. of stages Diameters Stroke Driven by  
No. of auxiliary air compressors None No. of stages Diameters Stroke Driven by  
No. of small auxiliary air compressors 1 No. of stages 1 Diameters 70 mm Stroke 120 mm Driven by Separate oil engine  
No. of scavenging air pumps None, cyl. scavenged by comp. air in the crank house Diameter Stroke Driven by  
Diameter of auxiliary Diesel Engine crank shafts as per Rule as fitted Are the air compressors and their coolers made so as to be easy of access

AIR RECEIVERS:—No of high pressure air receivers None Internal diameter Cubic capacity of each  
material Seamless, lap welded or riveted longitudinal joint Range of tensile strength  
thickness working pressure by Rules No. of starting air receivers 2 Internal diameter 450 mm  
Total cubic capacity 500 liters Material S.N. Steel Seamless, lap welded or riveted longitudinal joint Lap welded  
Range of tensile strength 26 to 30 tons/in<sup>2</sup> thickness 9 mm Working pressure by rules 23.0 kg/cm<sup>2</sup> Is each receiver, which can be isolated,  
fitted with a safety valve as per Rule to Is safety valve fitted to the auxil. compressor Can the internal surfaces of the receivers be examined Yes, imperfectly What means are provided for cleaning their  
inner surfaces Caustic soda and steam Is there a drain arrangement fitted at the lowest part of each receiver Yes

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## IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

## HYDRAULIC TESTS:—

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....	24/2/26	20 kg/cm <sup>2</sup>	40 kg/cm <sup>2</sup>	LLOYDS TEST 40kg G.A. 24.2.26 G	
" " COVERS .....	24/2/26	20 "	40 "	LLOYDS TEST 40kg G.A. 24.2.26 G	
" " JACKETS .....	24/2/26	1. "	5. "		
" PISTON WATER PASSAGES .....	✓				
MAIN COMPRESSORS—1st STAGE .....	✓				
" 2nd " .....	✓				
" 3rd " .....	✓				
AIR RECEIVERS—STARTING .....	24/2/26	20 kg/cm <sup>2</sup>	40 kg/cm <sup>2</sup>	№ 1178118 LLOYDS TEST 40KG W.P. 20 KG G.A. 24.2.26 G	
" INJECTION .....	✓				
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....	✓				
" WATER JACKET .....	24/2/26	1.0 kg/cm <sup>2</sup>	5.0 kg/cm <sup>2</sup>	B.	
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for shafting 27.8.25  
(If not, state date of approval)

Receivers See plan attached. Separate Tanks

SPARE GEAR For the main engine: 1 cylinder cover complete, piston with rings complete, 4 hot bulbs, 18 piston rings, 2 connecting rod top-end bolts & nuts, 2 connecting rod bottom end bolts & nuts, 2 main bearing bolts & nuts, 1 set of cylinder cover studs & nuts, 1 set of coupling bolts, 1 starting air valve, 1 fuel pump complete, 4 sets of fuel valves, 1 valve for the cooling water pump, 1 valve for the bilge pump, 8 ignition plugs, 20 mouthpieces for the fuel injection, 4 fuel non return valves, 1 set of air suction valves with springs, 1 fuel pipe, 1 cam shaft for the governor, 4 cam rollers for ditto, 1 spring for the reversing gear, 1 dial for the governor.

For the aux. compressor: 4 hot bulbs, 4 piston rings for the oil engine, 4 dials for the compressor, 1 set of valves for the compressor, 1 fuel pump, 1 set of fuel valves, 2 ignition plugs, 2 mouthpieces for the fuel injection.

The foregoing is a correct description,

SEANNA VEREE, A.B.

Frank Carey

Manufacturer.

C. J. H.

Dates of Survey while building { During progress of work in shops - - 1925 19th Oct, 1926 26th Jan 23rd, 24th Feb.  
During erection on board vessel - -  
Total No. of visits 4

Dates of Examination of principal parts—Cylinders 19/10/25, 24/2/26 Covers 24/2/26 Pistons 19/10/25, 24/2/26 Rods ✓ Connecting rods 19/10/25, 24/2/26  
Crank shaft 19/10/25, 26/1/26 Thrust shaft 19/10/25 Tunnel shafts Screw shaft Propeller Stern tube Engine seatings  
Engines holding down bolts Completion of pumping arrangements Engines tried under working conditions in shop 23/3/26  
Completion of fitting sea connections Stern tube Screw shaft and propeller  
Material of crank shaft L.M. Steel Identification Mark on Do. LLOYDS № 3006 G G.A. 19.10.25 Material of thrust shaft L.M. Steel Identification Mark on Do. LLOYDS № 3006 G G.A. 19.10.25  
Material of tunnel shafts Identification Marks on Do. Material of screw shafts Identification Marks on Do.

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

Is this machinery duplicate of a previous case No If so, state name of vessel ✓

General Remarks (State quality of workmanship, opinions as to class, &c. This machinery has been built under Special Survey and all the requirements of the Rules have been complied with.  
The crank and thrust shafts as per forging reports attached.  
The workmanship is good.  
The main engine and the auxiliary compressor tried under working conditions in shop and proved to work satisfactorily.

This machinery is worthy in my opinion to be classed in the Register Book of this Society with the notation of LHC with date, when it has been fitted in a classed vessel to the satisfaction of a Surveyor to the Society.

The amount of Entry Fee ... £ : : When applied for,  
Special ... £ 323.50 : 11th March 1926  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ 127.25 : 3 6 26

G. Snander  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 21 SEP 1926

FRI. 8 APR 1927  
TUES. 16 AUG 1927

Assigned

See Ver. P. 1651



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