

W1115-0105

REPORT ON OIL ENGINE MACHINERY.

No. 4972

WEC JUN 4 1920

Received at London Office

Report made at **Hong Kong** Date, First Survey **3-12-19** Last Survey **May 19th. 1920**
 When handed in at Local Office **19** Port of **Hong Kong** Number of Visits **18**
 Survey held at **Hong Kong**
 Type of Vessel **Single** Screw vessels **"LIMBURG"** Tons **Gross 1221**
Single **Net 1141**
 Builder **Weyerhaeuser** Built at **Amsterdam** By whom built **Nederl. Schps. Maats.** Yard No. **S.10792/95** When built **1909**
 Made at **Stockholm** By whom made **J. & C.G. Bolinder** Engine No. **P.10780/83** When made **1917**
 Boiler made at **Sunderland** By whom made **Mascol & Pollock** Boiler No. **3448** When made **1917**
 Horse Power **640** Owners **Nederl. Indische Tankstoomboot Maats. (Bataviafche Petroleum Maats Mgrs.)** Port belonging to **Batavia**
 Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **Yes**

Engines

GINES, &c. Type of Engines **Two Bolinder Marine Heavy Oil** 2 or 4 stroke cycle **2** Single or double acting **Single**
 Pressure in cylinders **270 lbs.** No. of cylinders **4** No. of cranks **4** Diameter of cylinders **420 m/m.**
 Stroke **480 m/m** Revolutions per minute **225** Means of ignition **Hot Bulb** Kind of fuel used **Solar Oil**
 Clearing between each crank **Yes** Span of bearings (Page 92, Section 2, par. 7 of Rules) **495 m/m**
 Distance between centres of main bearings **805 m/m** Is a flywheel fitted **Yes** Diameter of crank shaft journals **as per Rule 176 m/m**
 as fitted **180 m/m** Breadth of crank webs **as per Rule 234 m/m** Thickness of ditto **as per Rule 98.5 m/m**
 as fitted **270 m/m** as fitted **105 m/m**
 Diameter of flywheel shaft **as per Rule 176 m/m** Diameter of tunnel shaft **as per Rule 140 m/m** Diameter of thrust shaft **as per Rule -**
 as fitted **180 m/m** as fitted **190 m/m** as fitted **-**
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube **No. 2 liner**
 end of the liner made watertight in the propeller boss **Yes** If the liner is in more than one length are the joints burned **-**
 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 **only**
 are fitted, is the shaft lapped or protected between the liners **4 coats paint** If without liners, is the shaft arranged to run in oil **-**
 Diameter of propeller gland fitted to stern tube **-** Length of stern bush **In tube 27"** Diameter of propeller **6'5"**
 Diameter of propeller **5'-5"** No. of blades **Three** state whether moveable **No** Total surface **13.5** square feet
 reversing **Direct Reverse** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Thickness of cylinder liners **-**
 Are the exhaust pipes and silencers water cooled or lagged with **Forced** **Yes**
 Are the exhaust pipes and silencers water cooled or lagged with **Exhaust pipes lagged.** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine **Exhaust on each engine and one Donkey ballast pump**
 No. of cooling water pumps **two** Is the sea suction provided with an efficient strainer which can be cleared **Yes**
 No. of bilge pumps fitted to the main engines **two on each engine** Diameter of ditto **4"** Stroke **7"**
 No. of auxiliary pumps connected to the main bilge lines **Two** How driven **1 by Aux. Motor. 1 by Steam**
 No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps: **In engine room 2 at 2 1/2"**
Stroke 2 1/2" Dia. 5 1/2" **1 at 3 1/2"** **Sizes of pumps 6"x6"x6"**
3" **5"x6 1/2"x7"**
 Is a separate auxiliary pump suction fitted in **Yes** State size **3 1/2"**
 Are all the bilge suction pipes fitted with roses **Yes** Are the roses in Engine Room always accessible **Yes**
 Are all connections with the sea direct on the skin of the ship **Yes**
 Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates **Yes**
 Are they each fitted with a discharge valve always accessible on the plating of the vessel **Yes**
 Are the bilge suction pipes, cocks and valves arranged so as to prevent any **Yes**
 Is the screw shaft tunnel watertight **None** Is it fitted with a watertight door **-**

RECEIVERS: No. of high pressure air receivers **-** Internal diameter **-** Cubic capacity of each **-**
 Seamless, lap welded or riveted longitudinal joint **-** Range of tensile strength **-**
 working pressure by Rules **-** No. of starting air receivers **Two** Internal diameter **16,15/16"**
 Capacity **9.73 c.ft.** Material **Steel** Seamless, lap welded or riveted longitudinal joint **Seamless or welded.**
 Tensile strength **Safety valves** thickness **13/16"** Working pressure by rules **300 lbs.** Is each receiver, which can be isolated, **Yes**
 Is a safety valve as per Rule **on compressor** Can the internal surfaces of the receivers be examined **Yes** What means are provided for cleaning their **Yes**
 faces **Portable steam hose and drain** Is there a drain arrangement fitted at the lowest part of each receiver **Yes**

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IS A DONKEY BOILER FITTED? **Yes**

Yes

If so, is a report now forwarded? **Yes**

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS					
" " COVERS					
" " JACKETS					
" " PISTON WATER PASSAGES					
MAIN COMPRESSORS—1st STAGE					
" " 2nd					
" " 3rd					
AIR RECEIVERS—STARTING					
" " INJECTION					
AIR PIPES					
FUEL PIPES					
FUEL PUMPS					
SILENCER					
" " WATER JACKET					
SEPARATE FUEL TANKS					

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

SPARE GEAR Two pistons; One connecting rod; Three sets crank pin brasses; Three Firing he Two sets crosshead pin brasses. Six automisers; Six balls for lubricating; One spring for fu injection pumps; Twelve piston springs.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building

During progress of work in shops - -	
During erection on board vessel - -	1920 Jan. 19, 26, Feb. 2, 9, 16, 24, Mar. 2, 12, Apr. 10, 27, May 18, &
Total No. of visits	12

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

Crank shaft - Thrust shaft - Tunnel shafts - Screw shaft 3/12/19 Propeller 2/12/19 Stern tube 3/12/19 Engine seatings

Engines holding down bolts 2/2/20 Completion of pumping arrangements 18/5/20 Engines tried under working conditions 19/5/20

Completion of fitting sea connections 6/1/20 Stern tube 6/1/20 Screw shaft and propeller 12/1/20

Material of crank shaft - Identification Mark on Do. - Material of thrust shaft - Identification Mark on Do.

Material of tunnel shafts - Identification Marks on Do. - Material of screw shafts Steel 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. Engines were not built under Special Survey previous to machinery being placed in vessel they were opened, cleaned and generally examined found in order.

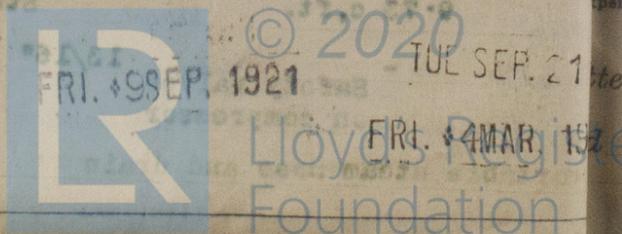
The Machinery has been examined and found satisfactory & tested on five mile course under Surveyor's personal supervision. Speed 8.04 knots fully loaded. Revolutions 200 per minute, full ahead; 180 Revs. full astern; Lowest revs. for manoeuvring purposes 140.

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

W. Morrison
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. JUL. 30 1920

Assigned See H.K. rpt (9) attached



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