

REPORT ON OIL ENGINE MACHINERY.

No. 6028

Received at London Office - 8 OCT 1926

Date of writing Report Sept. 7th 1926 When handed in at Local Office Sept. 8th 1926 Port of Hongkong
No. in Survey held at Hongkong Date, First Survey July 26th 1926 Last Survey Sept. 6th 1926
Reg. Book. Single } Screw vessel " PAZ II " Triple } Number of Visits 13

Master _____ Built at Hongkong By whom built HK. W. Dock Co Yard No. 629 When built 1926
Engines made at Stockholm By whom made A.B. Atlas Diesel Engine No. 50028 When made 1919
Donkey Boilers made at None By whom made _____ Boiler No. _____ When made _____
Brake Horse Power 160 Owners The North Negros Sugar Co. Ltd Port belonging to Manila, P.I.
Nom. Horse Power as per Rule 74 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted No

IL ENGINES, &c.—Type of Engines Marine Polar Diesel (Type P-41) 2 or 4 stroke cycle 2 Single or double acting Single
Maximum pressure in cylinders 450 lbs No. of cylinders 4 No. of cranks 4 Diameter of cylinders 260 m/m
Length of stroke 370 m/m Revolutions per minute 250 Means of ignition Compression (injection) Kind of fuel used Balikpapan Fuel oil
Is there a bearing between each crank yes Span of bearings (Page 92, Section 2, par. 7 of Rules) 365 m/m
Distance between centres of main bearings 515 m/m Is a flywheel fitted yes Diameter of crank shaft journals as per Rule 156 m/m
Diameter of crank pins 160 m/m Breadth of crank webs as per Rule 208 m/m Thickness of ditto as per Rule 87.3 m/m
Diameter of flywheel shaft as per Rule 156 m/m Diameter of tunnel shaft as per Rule 4.1 inches Diameter of thrust shaft as per Rule 112 m/m
Diameter of screw shaft as per Rule 4.6 inches Is the screw shaft fitted with a continuous liner the whole length of the stern tube yes
Is the after end of the liner made watertight in the propeller boss yes 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 None Length of stern bush 24" Diameter of propeller 5'-0"
Pitch of propeller 4'-0" No. of blades 3 state whether moveable fixed Total surface 8' square feet
Method of reversing Manoeuvring Engine Is a governor or other arrangement fitted to prevent racing of the engine when declatched yes Thickness of cylinder liners _____
Are the cylinders fitted with safety valves yes Means of lubrication Forced, with sight feed Are the exhaust pipes and silencers water cooled or lagged with non-conducting material 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 led up the funnel yes No. of cooling water pumps 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
No. of bilge pumps fitted to the main engines one Diameter of ditto 120 m/m Stroke 60 m/m
Can one be overhauled while the other is at work _____ No. of auxiliary pumps connected to the main bilge lines one How driven Auxil. Motor
Sizes of pumps 6" Centrifugal No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 1-2"
and in holds, etc. 1-2 1/2" No. of ballast pumps one How driven Auxil. Motor Sizes of pumps 6" Centrifugal
Is the ballast pump fitted with a direct suction from the engine room bilges yes State size 3 1/2" Is a separate auxiliary pump suction fitted in Engine Room and size yes - 2 1/2" Are all the bilge suction pipes fitted with roses yes Are the roses in Engine Room always accessible yes

Are the sluices on Engine Room bulkheads always accessible None Are all connections with the sea direct on the skin of the ship yes
Are they valves or cocks Valves Are they fixed sufficiently high on the ship's side to be seen without lifting the floor plates yes
Are the discharge pipes above or below the deep water line above Are they each fitted with a discharge valve always accessible on the plating of the vessel yes
Are all pipes, cocks, valves and pumps in connection with the machinery accessible at all times yes Are the bilge suction pipes, cocks and valves arranged so as to prevent any communication between the sea and the bilges yes Is the screw shaft tunnel watertight None 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 2 No. of stages 2 Diameters 65+200 m/m Stroke 300 m/m Driven by Main Engines
No. of auxiliary air compressors 1 No. of stages 2 Diameters 30, 80 m/m Stroke 80 m/m Driven by Belt from Auxil. Motor
No. of small auxiliary air compressors _____ No. of stages _____ Diameters _____ Stroke _____ Driven by _____
No. of scavenging air pumps 2 (Combined Scavenging + Manoeuvring) Diameter 398 m/m Stroke 300 m/m Driven by Main engines
Diameter of auxiliary Diesel Engine crank shafts as per Rule Hot Bulb Motor, 5 B.H.P. Are the air compressors and their coolers made so as to be easy of access yes

AIR RECEIVERS:—No. of high pressure air receivers 2 Internal diameter 350 m/m Cubic capacity of each 225 Litres
Material Steel Seamless, lap welded or riveted longitudinal joint See Stockholm Report Range of tensile strength -do-
Thickness -do- working pressure by Rules -do- No. of starting air receivers one Internal diameter 649 m/m
Total cubic capacity 635 litres Material Steel Seamless, lap welded or riveted longitudinal joint See Stockholm Report
Range of tensile strength -do- thickness -do- Working pressure by rules -do- 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 Doors + Manholes, steam from outside source can be connected. Is there a drain arrangement fitted at the lowest part of each receiver yes



IS A DONKEY BOILER FITTED? *No*

If so, is a report now forwarded?

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS	} <i>See Stockholm Surveyor's Report</i>				
COVERS					
JACKETS.....					
PISTON WATER PASSAGES.....					
MAIN COMPRESSORS—1st STAGE.....					
2nd					
3rd					
AIR RECEIVERS—STARTING					
INJECTION					
AIR PIPES	<i>23/8/26</i>	<i>13 kg/cm²</i>	<i>2000 lbs.</i>	<i>L.R. Test 2000 lbs + 400 lbs.</i>	<i>Good</i>
FUEL PIPES	<i>- do -</i>	<i>70 kg/cm²</i>	<i>- do -</i>	<i>- do -</i>	<i>- do -</i>
FUEL PUMPS	} <i>See Stockholm Surveyor's Report</i>				
SILENCER					
WATER JACKET					
SEPARATE FUEL TANKS	<i>2/8/26</i>	<i>maximum 3ft. head.</i>	<i>8ft head</i>	<i>LLOYD'S TEST 8 FT Head</i>	<i>Good</i>

PLANS. Are approved plans forwarded herewith for shafting *Inter. & Tail Shafts Kobe 20/5/26* Receivers Separate Tanks *Kobe 16/7/26*

SPARE GEAR *See Attached list.*

HONGKONG & WHARF DOCK CO., LTD.

The foregoing is a correct description,

R.M. Dyer
Manufacturer.
Chief Manager.

Dates of Survey while building

- During progress of work in shops - *July 26th, 27th, 29th, Aug. 2nd - 7th, 1926.*
- During erection on board vessel - *Aug. 9th, 12th, 17th, 23rd, 24th, 30th, Sept. 1st + 6th 1926*
- Total No. of visits *13*

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

Crank shaft Thrust shaft Tunnel shafts *7/8/26* Screw shaft *7/8/26* Propeller *7/8/26* Stern tube *29/7/26* Engine seatings *29/7/26*

Engines holding down bolts *24/8/26* Completion of pumping arrangements *1/9/26* Engines tried under working conditions *1/9/26*

Completion of fitting sea connections *2/8/26* Stern tube *2/8/26* Screw shaft and propeller *9/8/26*

Material of crank shaft *Steel* Identification Mark on Do. *S.K.M. A* Material of thrust shaft *Steel* Identification Mark on Do. *S.K.M. 1917.* LLOYD'S N° 1249

Material of tunnel shafts *Steel* Identification Marks on Do. *F.S.M. 7/8/26* Material of screw shafts *Steel* Identification Marks on Do. *T.S.M. 7/8/26* LLOYD'S N° 271

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

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *"ALOHA" (Hongkong Report N° 6027)*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The materials have been tested by the Surveyors to this Society & the machinery has been constructed under Special Survey at Stockholm. The machinery has been installed in accordance with the Rules & it is recommended that the vessel be classed with Lloyd's Machinery Certificate & the record of L.M.C. 9-26 be made in the Register Book.*

Full power trials were run over the measured course, speed of vessel 8.5 knots, @ 260 revs. per min; lowest revs. for manoeuvring purposes 150 per minute, Full speed astern revs. 250 per minute.

The amount of Entry Fee ... *\$ 43-00* : When applied for, *6/9 1926*

Special ... *A - - -* : *6/9 1926*

Donkey Boiler Fee ... *\$ 79-00* : When received, *29.9.26*

Fitting on Board ... *\$ 25-00* : *29.9.26*

Travelling Expenses (if any) *\$ - - -* : *29.9.26*

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



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Committee's Minute

TUES. 12 OCT 1926

Assigned

+ line 9. 26

CERTIFICATE WRITTEN

oil Engines

Certificate (if required) to be sent to the Surveyors on or below the space for Committee's Minute.