

REPORT ON OIL ENGINE MACHINERY.

No. 4710

16 FEB 1925

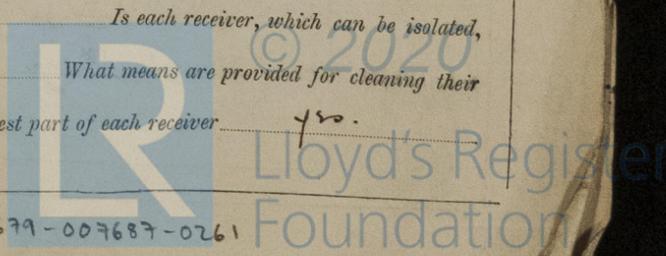
Date of writing Report 24/12/24 When handed in at Local Office 1924 Port of Kobe
 Received at London Office
 No. in Survey held at Harima Date, First Survey 11 June 1924 Last Survey 23 December 1924
 Reg. Book. Number of Visits 24

on the Single Twin Triple Screw vessel "FUKKO MARU."
 Master Harima Built at Harima By whom built Kobe Steel works. Harima Dockyard. Yard No. 93 When built 1924
 Engines made at Winterthur By whom made Sulzer Bros & Co. Engine No. 5049 When made 1923
 Donkey Boiler made at Harima By whom made Kobe Steel works. Harima Dockyard Boiler No. 93 When made 1924
 Brake Horse Power 1600 (2 Engines) Owners Kobe Steel works. Port belonging to Kobe
 Nom. Horse Power as per Rule 478 370 (2 Eng) Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

See also Winterthur Report No 35

OIL ENGINES, &c.—Type of Engines Sulzer Diesel engines. 2 or 4 stroke cycle Single or double acting
 Maximum pressure in cylinders No. of cylinders No. of cranks Diameter of cylinders
 Length of stroke Revolutions per minute Means of ignition Kind of fuel used
 Is there a bearing between each crank Span of bearings (Page 92, Section 2, par. 7 of Rules)
 Distance between centres of main bearings Is a flywheel fitted Diameter of crank shaft journals
 Diameter of crank pins Breadth of crank webs Thickness of ditto
 Diameter of flywheel shaft Diameter of tunnel shafts Diameter of thrust shafts
 Diameter of screw shafts 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 3'-3" Diameter of propeller 8'-10"
 Pitch of propeller 9'-10" No. of blades 11 state whether moveable Total surface 61 square feet
 Method of reversing Is a governor or other arrangement fitted to prevent racing of the engine when declutched Thickness of cylinder liners
 Are the cylinders fitted with safety valves Means of lubrication Are the exhaust pipes and silencers water cooled or lagged with non-conducting material
 Exhausts led up funnel 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 1 aux 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 Diameter of ditto Stroke
 Can one be overhauled while the other is at work No. of auxiliary pumps connected to the main bilge lines 2 How driven Electric Motor
 Sizes of pumps BILGE CENTRIF. 80 tons hr. BALLAST 4" dia. x 9" stroke No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room 2-3" 1-2 1/2"
 and in holds, etc. NO. 1 HOLD 2-3" 2 THROW. NO. 2 HOLD 2-3" AH HOLD 2-4 1/2" COFFERDAMS IN Engine room 6-3" No. of ballast pumps 1 How driven Electric Motor Sizes of pumps 7" diam x 9" stroke (2 throws)
 Is the ballast pump fitted with a direct suction from the engine room bilges State size 5" Is a separate auxiliary pump suction fitted in Engine Room and size 5" 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 Both 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 Above 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 upper platform 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 No. of stages Diameters Stroke Driven by
 No. of auxiliary air compressors 1 No. of stages 3 Diameters See Winterthur Certificate of 20-3-23 Stroke Driven by
 No. of small auxiliary air compressors 1 No. of stages 2 Diameters See Winterthur Certificate of 16-8-23 Stroke Driven by
 No. of scavenging air pumps Diameter Stroke Driven by
 Diameter of auxiliary Diesel Engine crank shafts Are the air compressors and their coolers made so as to be easy of access

AIR RECEIVERS:—No. of high pressure air receivers 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 10 See Winterthur letter of 17/12/23 Internal diameter
 Total cubic capacity Material Seamless, lap welded or riveted longitudinal joint
 Range of tensile strength thickness Working pressure by rules Is each receiver, which can be isolated, fitted with a safety valve as per Rule Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces Is there a drain arrangement fitted at the lowest part of each receiver



IS A DONKEY BOILER FITTED? 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					

*See Whitehead Report
no 35.*

See Whitehead Report no 35.

PLANS. Are approved plans forwarded herewith for shafting Receivers Separate Tanks

SPARE GEAR

See attached list.

The foregoing is a correct description,

J. Urata

Manufacturer.

Dates of Survey while building	During progress of work in shops--	5-9-24	19-9-24	10-10-24	27-10-24	3-11-24	14-11-24	2-12-24
	During erection on board vessel--	11-6-24	10-9-24	20-9-24	16-10-24	28-10-24	6-11-24	24-11-24
	Total No. of visits	24.						

Dates of Examination of principal parts—Cylinders	5-9-24	Covers	28-6-24	Pistons	5-9-24	Rods	5-9-24	Connecting rods	18-7-24
Crank shaft	5-9-24	Thrust shaft	10-7-24	Propeller	10-9-24	Stern tube	11-9-24	Engine seatings	15-9-24
Engines holding down bolts	2-12-24	Completion of pumping arrangements	23-12-24	Engines tried under working conditions	12-12-24				
Completion of fitting sea connections	20-9-24	Stern tubes	15-9-24	Screw shafts and propellers	20-9-24				
Material of crank shaft	✓	Identification Mark on Do.	✓	Material of thrust shaft	F.S.	Identification Mark on Do.	✓		
Material of tunnel shafts	F.S.	Identification Marks on Do.	✓	Material of screw shafts	F.S.	Identification Marks on Do.	✓		
Is the flash point of the oil to be used over 150° F.	<input checked="" type="checkbox"/> Yes.								

Is this machinery duplicate of a previous case If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been efficiently installed on board in accordance with the requirements of the Rules, and Section 35 of the Rules, and the materials and workmanship are sound and good.

The machinery has been tried under full working conditions and found satisfactory, and is eligible in my opinion to have the notation + Lmc 12-24 and "fitted for oil fuel 12-24 (F.P. above 150°)

The amount of Entry Fee ...	\$ 62.00	When applied for,	
Special (Installation) ...	\$ 297.00		19
Donkey Boiler Fee ...	\$ 78.00	When received,	
Travelling Expenses (if any) £	See Blue Rpt.		29/1/25

J. McWilliam
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI, 20 FEB 1925**
Assigned *+ Lmb 12.24. C.L.*
oil engines



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