

REPORT ON OIL ENGINE MACHINERY.

No. 4787.
8 APR 1925

Received at London Office

Date of writing Report *3rd March 1925* When handed in at Local Office *19* Port of *Kobe*

No. in Survey held at *Kobe* Date, First Survey *Feb 19th 1924* Last Survey *Feb 27th 1925*
Reg. Book. Number of Visits *47*

on the *Single* } Screw vessels *"FLORIDA MARU"* Tons { Gross *5832.87*
Twin } *Triple* } Net *3644.19*

Master *Kanjo Yehara* Built at *Kobe* By whom built *Kawasaki Dockyard Co Ltd* Yard No. *414* When built *1925-2.*

Engines made at *Glasgow (Clydebank)* By whom made *John Brown & Co Ltd* Engine No. *502A* When made *1925-2*

Donkey Boiler made at *Kobe* By whom made *Kawasaki Dockyard Co Ltd* Boiler No. *484* When made *1925-2*

Brake Horse Power *2,500.* Owners *Kawasaki Dockyard Co Ltd* Port belonging to *Kobe*

Nom. Horse Power as per Rule *593* Is Refrigerating Machinery fitted for cargo purposes *No* Is Electric Light fitted *Yes*

OIL ENGINES, &c.—Type of Engines *Lammelland Fullagar* *A* 2 or 4 stroke cycle *2* Single or double acting *Single*

Maximum pressure in cylinders *500 lb* No. of cylinders *6* No. of cranks *6* Diameter of cylinders *22"*

Length of stroke *33 x 2 66"* Revolutions per minute *98* Means of ignition *Heat of Compression* Kind of fuel used *Diesel oil fuel*

Is there a bearing between each crank *no* Span of bearings (Page 92, Section 2, par. 7 of Rules) *6'-0 15/16"*

Distance between centres of main bearings *7'-7"* Is a flywheel fitted *Yes* Diameter of crank shaft journals *as per Rule 15.6*
as fitted 16.0

Diameter of crank pins *16 1/2"* Breadth of crank webs *as per Rule 21 1/4 built* Thickness of ditto *as per Rule 9"*
as fitted 32" *as fitted 1 1/2 inch 12 1/2 Centre*

Diameter of flywheel shaft *as per Rule 15.6"* Diameter of tunnel shaft *as per Rule 13"* Diameter of thrust shaft *as per Rule 13.5 under collar*
as fitted 16.0" *as fitted 14"* *as fitted 16" under collar.*

Diameter of screw shaft *as per Rule 14.22* Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes*
as fitted 15"

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 *Yes*

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 *Yes*

If two liners are fitted, is the shaft lapped or protected between the liners *Yes* If without liners, is the shaft arranged to run in oil *Yes*

Type of outer gland fitted to stern tube *Yes* Length of stern bush *70 3/4"* Diameter of propeller *16'-3"*

Pitch of propeller *15'-3" to 16'-3"* No. of blades *4* state whether moveable *Yes (moveable)* Total surface *Develop 85 sq square feet*

Method of reversing *Compressed Air* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *Yes* Thickness of cylinder liners *2 1/2 at Centre*

Are the cylinders fitted with safety valves *Yes* Means of lubrication *Forced* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *water cooled at back of engine, rest 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 into silencer in funnel.*

No. of cooling water pumps *one, one* 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 *None* Diameter of ditto *None* Stroke *None*

Can one be overhauled while the other is at work *Yes* No. of auxiliary pumps connected to the main bilge lines *3 incl. Ball pump* How driven *E. Motor*

Sizes of pumps *2 @ 100 Tons/Hr. Capacity* No. and sizes of suction connected to both main bilge pumps and auxiliary bilge pumps:—In engine room *2 @ 2 1/2" 4 @ 3 1/2" DIA*
and in holds, etc. *2 each, 3 1/2" DIA: in No. 1, 3 & 4 holds, 2 @ 4" DIA: in No. 2* No. of ballast pumps *one* How driven *E. Motor* Sizes of pumps *200 Tons/Hr. Capacity*

Is the ballast pump fitted with a direct suction from the engine room bilges *Yes* State size *7" DIA* Is a separate auxiliary pump suction fitted in Engine Room and size *Yes 5" DIA*

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 fitted* Are all connections with the sea direct on the skin of the ship *Yes*

Are they valves or cocks *Valves & Cocks* 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 *Yes* Is it fitted with a watertight door *Yes*

worked from *Top platform* If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork *Yes*

AIR RECEIVERS:—No. of high pressure air receivers *1 Working 1 Stand by* Internal diameter *11 3/4 & 17 3/2"* Cubic capacity of each *5.3 & 18.35 cu ft*

Material *Steel* Seamless, lap welded or riveted longitudinal joint *Seamless* Range of tensile strength *25/32 tons*

Thickness *Working 5/8 Stand by 4/8* working pressure by Rules *1100 lbs* No. of starting air receivers *Three* Internal diameter *60"*

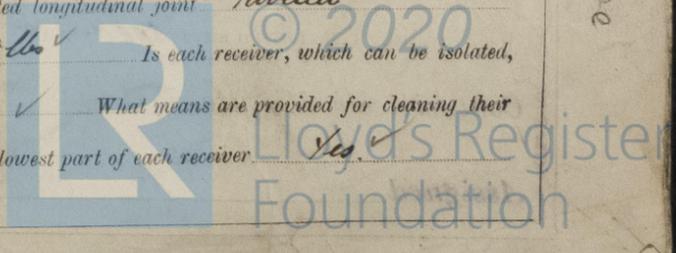
Total cubic capacity *260 cu ft each* Material *Steel* Seamless, lap welded or riveted longitudinal joint *riveted*

Range of tensile strength *28/32 tons* thickness *1 23/64"* Working pressure by rules *600 lbs* 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 *manhole*

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

8720-650600-040600



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.....	<i>See Glasgow Report N° 43296</i>				
" " PISTON WATER PASSAGES.....	"	"	"		
MAIN COMPRESSORS—1st STAGE.....	"	"	"		
" 2nd "	"	"	"		
" 3rd "	"	"	"		
AIR RECEIVERS—STARTING	<i>See Glasgow Report N° 43856</i>				
" INJECTION	"	"	"		
AIR PIPES	"	"	"		
FUEL PIPES	"	"	"		
FUEL PUMPS					
SILENCER					
" WATER JACKET	<i>See Glasgow Report N° 43296.</i>			<i>GB &</i>	
SEPARATE FUEL TANKS					

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

Receivers ✓

Separate Tanks *Yes*

SPARE GEAR *See attached sheets.*

The foregoing is a correct description,
Kawasaki Dockyard Co., Ltd.

Manufacturers.

Per *[Signature]*

Director.

Dates of Survey while building
 During progress of work in shops -- *See Glasgow Report N° 43296*
 During erection on board vessel -- *1924 July 19, 1925 June 14, Sept 1926*
 Total No. of visits *47*

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
 Crank shaft ✓ Thrust shaft *14-6-24* Tunnel shafts *12-5-24* Screw shaft *19-5-24* Propeller *7-6-24* Stern tube *10-4-24* Engine seatings *19-9-24*
 Engines holding down bolts *21-11-24* Completion of pumping arrangements *3-2-25* Engines tried under working conditions *7-2-25*
 Completion of fitting sea connections *20-10-24* Stern tube *7-6-24* Screw shaft and propeller *18-10-24*
 Material of crank shaft *See Gl. Rpt N° 43296* Identification Mark on Do. *do* Material of thrust shaft *O.H. Steel* Identification Mark on Do. *LR N° 297 A*
 Material of tunnel shafts *O.H. Steel* Identification Marks on Do. *LLOYDS N° 295 & 296 A.W.* Material of screw shafts *O.H. Steel* Identification Marks on Do. *LLOYDS N° 294 A.W.*

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.)

The machinery of this vessel has now been efficiently installed on board in accordance with the Requirements of the Rules & approved plans. Section 35 of Rules Materials & workmanship are sound & good. The machinery was tried under full working conditions with satisfactory results, & is eligible in my opinion to have the word "L.M.C. 2-25" & notation "Fitted for oil fuel" 2-25 in Register Book. F.P. above 150° F.

Approved plans of shafting & of settling tanks forwarded herewith, also shafting certificate

The amount of Entry Fee ... *£ 72.00* When applied for,
 Special ... *£ 380.00* 3-3-1925
 Donkey Boiler Fee ... *£ 76.00* When received,
 Travelling Expenses (if any) *SEE HULL RAT.* Mar. 11th 1925

H.D. Buchaway
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned
 + *Ampl. 2.25 Cl. Oil Eng. DB-120 lbs*

WED. 15 APR 1925



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