

# REPORT ON MACHINERY.

No. 2224  
APR 26 1937

Received at London Office

Date of writing Report **16th Mar 37** When handed in at Local Office **16th Mar 37** Port of **NAGASAKI.**

No. in Survey held at **HIKOSHIMA.** Date, First Survey Last Survey **5th March 1937**  
Reg. Book. (Number of Visits **8**)

on the **Non Propelling Oil Barge, "No.1". (300 tons Deadweight).** Tons { Gross Net }  
Master Built at **Hikoshima** By whom built **Mitsubishi Jukogyo K.K.** When built **1937**

Engines made at By whom made when made  
Boilers made at **Yokohama** By whom made **Mitsubishi J.K.K.** when made **1936**

Registered Horse Power Owners **U.S.S.R.** Port belonging to **(Not given)**  
Nom. Horse Power as per Section 28 / Is Refrigerating Machinery fitted for cargo purposes / Is Electric Light fitted **Yes**

**ENGINES, &c.—Description of Engines** / No. of Cylinders / No. of Cranks /

Dia. of Cylinders / Length of Stroke / Revs. per minute / Dia. of Screw shaft as per rule / Material of screw shaft / 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 water tight 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 / Length of stern bush /

Dia. of Tunnel shaft as per rule / Dia. of Crank shaft journals as per rule / Dia. of Crank pin / Size of Crank webs / Dia. of thrust shaft under collars / Dia. of screw / Pitch of Screw / No. of Blades / State whether moceable / Total surface /

No. of Feed pumps **One** Diameter of ditto **5 1/2 x 3 1/2"** Stroke **5"** Can one be overhauled while the other is at work /

No. of Bilge pumps / Diameter of ditto / Stroke / Can one be overhauled while the other is at work /

No. of Donkey Engines **One at 2" dia.** Sizes of Pumps **7x5x7 Worth Duplex.** No. and size of Suctions connected to ~~boilers~~ and Donkey pumps In Engine Room **3 at 2" dia.** In Holds, &c. /

No. of Bilge Injections / sizes / Connected to condenser, or to circulating pump / Is a separate Donkey Suction fitted in Engine room & size /

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 /

Are all connections with the sea direct on the skin of the ship **Yes** Are they Valves or Cocks **Both**

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **Yes** 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 **Yes** Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers **None** How are they protected **See report**

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings 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 / Is it fitted with a watertight door / worked from /

**BOILERS, &c.—(Letter for record **S**)** Manufacturers of Steel **See separate report.**

Total Heating Surface of Boilers **84.97sq M** Is Forced Draft fitted **No** No. and Description of Boilers **One Cylindrical return tube type**

Working Pressure **7 Kg/cm<sup>2</sup>** Tested by hydraulic pressure to **14 Kg/cm<sup>2</sup>** Date of test **20-10-36** No. of Certificate **47.**

Can each boiler be worked separately / Area of fire grate in each boiler / No. and Description of Safety Valves to each boiler **70 m/m twin Spring loaded.** Area of each valve **3848.5 m/m<sup>2</sup>** Pressure to which they are adjusted **7 Kg/cm<sup>2</sup>** Are they fitted with easing gear **Yes**

Smallest distance between boilers or uptakes and bunkers or woodwork / Mean dia. of boilers / Length / Material of shell plates

Thickness / Range of tensile strength / Are the shell plates welded or flanged / Descrip. of riveting: cir. seams / long. seams / Diameter of rivet holes in long. seams / Pitch of rivets / Lap of plates or width of butt straps

Per centages of strength of longitudinal joint / rivets / Working pressure of shell by rules / Size of manhole in shell / plate

Size of compensating ring / No. and Description of Furnaces in each boiler / Material / Outside diameter

Length of plain part top / Thickness of plates crown / Description of longitudinal joint / No. of strengthening rings / bottom

Working pressure of furnace by the rules / Combustion chamber plates: Material / Thickness: **See report No. 5958.** Back / Top / Bottom

Pitch of stays to ditto: Sides / Back / Top / If stays are fitted with nuts or riveted heads / Working pressure by rules

Material of stays / Area at smallest part / Area supported by each stay / Working pressure by rules / End plates in steam space:

Material / Thickness / Pitch of stays / How are stays secured / Working pressure by rules / Material of stays

Area at smallest part / Area supported by each stay / Working pressure by rules / Material of Front plates at bottom

Thickness / Material of Lower back plate / Thickness / Greatest pitch of stays / Working pressure of plate by rules

Diameter of tubes / Pitch of stays / Material of tube plates / Thickness: Front / Back / Mean pitch of stays

Pitch across wide water spaces / Working pressures by rules / Girders to Chamber tops: Material / Depth and thickness of girder at centre / Length as per rule / Distance apart / Number and pitch of stays in each

Working pressure by rules / Steam dome: description of joint to shell / % of strength of joint

Diameter / Thickness of shell plates / Material / Description of longitudinal joint / Diam. of rivet holes

Pitch of rivets / Working pressure of shell by rules / Crown plates / Thickness / How stayed

**SUPERHEATER.** Type / Date of Approval of Plan / Tested by Hydraulic Pressure to /

Date of Test / Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve / Pressure to which each is adjusted / Is Easing Gear fitted

009256 - 009266 - 0094



**IS A DONKEY BOILER FITTED?**

If so, is a report now forwarded?

**SPARE GEAR.** State the articles supplied:—

**Auxiliaries:—** 1 set piston rings, 1 set valve spindle for feed, bilge, sanitary pump.

**Dynamo engine:—** 1 hot bulb & burner, 1 crank pin bearing (top half) 1 crosshead brass, 1 fuel pump valve & spring, 1 set piston ring, 1 air inlet valve, 1 fuel nozzle, 1 set carbon brushes & springs for 3 K.W. generator.

**Boiler:—** tubes 9 plain and 4 stay, 1 set safety valve & seats (2) 1 set main stop valve & seats (2) 1 set S.V. springs (2). 6 gauge glass 1 expender.

**Cargo oil pump,** 1 set piston rings & 1 valve spindle for each pump. 1 assortment of bolts, nuts, washers, iron of various sizes and a quantity of spanners & hand tools supplied.

The foregoing is a correct description,

**HIKOSHIMA WORKS, MITSUBISHI JUKOGYO** KAPUSHUKI KAITSHA

*[Signature]*

GENERAL MANAGER

Manufacturer.

Dates of Survey while building	{	During progress of work in shops - - -	1937
		During erection on board vessel - - -	Jan. 11.22. Feb.16.24.25. Mar 5.
		Total No. of visits	6.

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

Dates of Examination of principal parts—	Cylinders	Slides	Covers	Pistons	Rods
Connecting rods	Crank shaft	Thrust shaft	Tunnel shafts	Screw shaft	Propeller
Stern tube	Steam pipes tested	18-2-37	<del>boiler</del> boiler seatings	14-12-36	Engines holding down bolts
Completion of pumping arrangements	24-2-37	Boilers fixed	11-12-37	Pump <del>tried</del> tried under steam	24-2-37
Completion of fitting sea connections	14-12-36	Stern tube		Screw shaft and propeller	
Main boiler safety valves adjusted	15-2-37	Thickness of adjusting washers		join nuts fitted.	
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	Identification Marks on Do.		
Material of Steam Pipes	Steel	Test pressure	21 Kg/cm <sup>2</sup>		
Is an installation fitted for burning oil fuel	Yes	Is the flash point of the oil to be used over 150°F.	Yes		
Have the requirements of Section 49 of the Rules been complied with	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.)

This machinery & boiler have been efficiently installed on board, tried under working conditions and found satisfactory.

The heating coils in the O.F. settling tanks tested to 200 lbs water pressure, after installing on board and found good and sound,

The oil fuel press piping, heaters &c tested to 400 lbs oil pressure, after installing and found good and sound.

All the requirements of Sections 20, 34 & 40 of the Rules as far as they apply have been complied with.

2 cargo oil pumps fitted in pump room on weather deck (Horizontal duplex 12x8x10) tried under working and capacity conditions and found satisfactory.

The amount of Entry Fee ... £	:	:	When applied for,
Inst. Fee Mach. & Boilers 5-0-0	:	13. 3.	19 37
Donkey Boiler Fee ... £	:	:	When received,
Travelling Expenses (if any) £	:	22. 3.	19 37

*[Signature]* For T. Kuroishi & Self N.D. Buchanan  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 30 APR 1937

Assigned

See Nat. J.C. 2224

+ N.B. 3.37  
Fath. for 53. 3.37 sh. above 1500



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