

## REPORT ON MACHINERY.

No. 2224

Received at London Office

APR 26 1937

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  
When built 1937

Master Built at Hikoshima By whom built Mitsubishi Jukogyo K.K.

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 moveable / Total surface /

No. of Feed pumps One Diameter of ditto 5 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 ~~XXXXXX~~ 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 /

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

Total Heating Surface of Boilers 84.97 sq 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

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 Thickness of plates bottom

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Shell Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts & 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

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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

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 ~~Examine~~ boiler seatings 14-12-36 Engines holding down bolts

Completion of pumping arrangements 24-2-37 Boilers fixed 11-12-37 ~~Examine~~ 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 ... £ : :  
Inst. Fee Mach. & Boilers 5-0-0 : 13. 3. 19 37  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 22. 3. 19 37

When applied for,

When received,

Committee's Minute

FRI 30 APR 1937

Assigned

See Ref. J.E. 2224

+ N. B. 3. 37

Att. for 03. 3. 37 Sh. above 1500

For T. Kuroishi & Self N.B. Buchanan/  
Engineer Surveyor to Lloyd's Register of Shipping.



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