

# REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

OCT 21 1937

Date of writing Report 16th SEPT. 1937 When handed in at Local Office 20th SEPT. 1937 Port of YAMKOBEL

No. in Survey held at MATSUE Date, First Survey 4th SEPTEMBER 1936 Last Survey 3rd AUGUST, 1937  
 Reg. Book. 500A (Number of Visits 27) Tons Gross 72.00  
 on the STEEL SINGLE SCREW TUG BOAT "HINCHUK" Net 1937

Built at MATSUE By whom built ISHIBASHI TEKKO SHO Yard No. 961 When built 1937

Engines made at MATSUE By whom made ISHIBASHI TEKKO SHO Engine No. 1301 When made 1937

Boilers made at OSAKA By whom made YAMANE TEKKO SHO Boiler No. 301 When made 1937

Registered Horse Power 180 Owners U.S.S.R. Port belonging to VLADIVOSTOK

Nom. Horse Power as per Rule 34 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which Vessel is intended TOWING SERVICES

**ENGINES, &c.** — Description of Engines COMPOUND, SURFACE CONDENSING Revs. per minute 160

Dia. of Cylinders 320 M.M., 615 M.M. Length of Stroke 460 M.M. No. of Cylinders 2 No. of Cranks 2

Crank shaft, dia. of journals as per Rule 130 M.M. Crank pin dia. 130 M.M. Crank webs Mid. length breadth 170 M.M. Thickness parallel to axis shrunk  
as fitted 130 M.M. Mid. length thickness 80 M.M. Thickness around eye-hole shrunk

Intermediate Shafts, diameter as per Rule 124 M.M. Thrust shaft, diameter at collars as per Rule 130 M.M.  
as fitted 124 M.M. as fitted 130 M.M.

Tube Shafts, diameter as per Rule 142 M.M. Is the tube shaft fitted with a continuous liner YES  
as fitted 142 M.M. screw

Bronze Liners, thickness in way of bushes as per Rule 11.8 M.M. Thickness between bushes as per Rule 10.1 M.M. Is the after end of the liner made watertight in the propeller boss YES  
as fitted 12.5 M.M. as fitted 11.5 M.M. If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner 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 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft YES

Propeller, dia. 1600 M.M. Pitch 1980 M.M. No. of Blades 4 Material BRONZE whether Movable No Total Developed Surface 9350 sq. feet

Feed Pumps worked from the Main Engines, No. 1 Diameter 59 M.M. Stroke 230 M.M. Can one be overhauled while the other is at work YES

Bilge Pumps worked from the Main Engines, No. 1 Diameter 59 M.M. Stroke 230 M.M. Can one be overhauled while the other is at work YES

Feed Pumps { No. and size ONE - 4" x 2 1/2" x 4" Pumps connected to the { No. and size TWO: 5/4 x 4" x 5" 59 M.M. x 230 M.M.  
 How driven STEAM Main Bilge Line How driven STEAM MAIN ENGINE.

Ballast Pumps, No. and size TWO: 2" x 2 1/2" Lubricating Oil Pumps, including Spare Pump, No. and size TWO: 2" x 2 1/2"

Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps; — In Engine and Boiler Room TWO: 2" x 2 1/2" In Pump Room TWO: 2" x 2 1/2" In Holds, &c. TWO: 2" x 2 1/2"

**Main Water Circulating Pump Direct Bilge Suctions, No. and size** ONE - 2 1/2" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size TWO - 2" Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-bores YES

Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges YES

Are all Sea Connections fitted direct on the skin of the ship YES Are they fitted with Valves or Cocks YES

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

What Pipes pass through the bunkers BILGE SUCTION PIPE OF FORWARD CREW SPACE How are they protected STEEL CASING

What pipes pass through the deep tanks YES Have they been tested as per Rule YES

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times YES

Is the arrangement of Valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another YES Is the Shaft Tunnel watertight NONE Is it fitted with a watertight door YES worked from YES

**MAIN BOILERS, &c.** — (Letter for record S) Total Heating Surface of Boilers 69.66 M<sup>2</sup> = 750 #

Is Forced Draft fitted No No. and Description of Boilers ONE, SINGLE ENDED MULTITUBULAR Working Pressure 120 LBS.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? YES

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? YES

Is the donkey boiler intended to be used for domestic purposes only YES

**PLANS.** Are approved plans forwarded herewith for Shafting 22. 9. 36 Main Boilers 3. 2. 37 Auxiliary Boilers YES Donkey Boilers YES  
 (If not state date of approval)

Superheaters YES General Pumping Arrangements 27. 8. 36 Oil fuel Burning Piping Arrangements YES

### SPARE GEAR.

Has the spare gear required by the Rules been supplied YES

State the principal additional spare gear supplied YES

ISHIBASHI TEKKO SHO  
 (ISHIBASHI IRON WORKS CO.)

DIRECTOR S. Ishibashi

Manufacturer.



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 Foundation

007721-009729-0122

1936. SEPT. 4, 12, 28. OCT. 6. NOV. 13. DEC. 3, 29. 1937. JAN. 25, 28, 29. FEB. 6, 10.

Dates of Survey while building

During progress of work in shops --

During erection on board vessel --

15. 18. 26. MAR. 6. APR. 12. 16. MAY. 23.

JUL. 16. 17. 18. 19. 20. 23. 29. AUG. 3.

Total No. of visits 27.

Dates of Examination of principal parts - Cylinders 29. 12. 36. Slides 29. 12. 36. Covers 29. 12. 36.
Pistons 29. 12. 36. Piston Rods 29. 12. 36. Connecting rods 29. 12. 36.
Crank shaft 29. 12. 36. Thrust shaft 29. 12. 36. Intermediate shafts 29. 12. 36.
Tube shaft Screw shaft 29. 12. 36. Propeller 26. 2. 37.
Stern tube 12. 4. 37. Engine and boiler seatings 23. 5. 37. Engines holding down bolts 23. 5. 37.
Completion of fitting sea connections 23. 5. 37.
Completion of pumping arrangements 16. 7. 37. Boilers fixed 18. 7. 37. Engines tried under steam 29. 7. 37.
Main boiler safety valves adjusted 16. 7. 37. Thickness of adjusting washers
Crank shaft material FORGED STEEL Identification Mark No. 5543-A Thrust shaft material FORGED STEEL Identification Mark No. 5543-B.
Intermediate shafts, material FORGED STEEL Identification Marks No. 5543-C Tube shaft, material Identification Mark
Screw shaft, material FORGED STEEL Identification Mark No. 5543-D Steam Pipes, material COPPER Test pressure 240 lbs. Date of Test 20. 7. 37.
Is an installation fitted for burning oil fuel No. Is the flash point of the oil to be used over 150°F.
Have the requirements of the Rules for the use of oil as fuel been complied with
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo No. If so, have the requirements of the Rules been complied with
If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with 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.)
THIS MACHINERY HAS BEEN CONSTRUCTED UNDER SPECIAL SURVEY IN ACCORDANCE WITH THE RULES AND APPROVED PLANS FOR NAVIGATION IN ICE.
THE MATERIALS AND WORKMANSHIP ARE GOOD.
ON COMPLETION THE MACHINERY WAS INSTALLED IN THE VESSEL IN ACCORDANCE WITH THE RULES AND TRIED UNDER FULL WORKING CONDITIONS AND ELIGIBLE IN OUR OPINION TO BE CLASSED L.M.C. 8-37 AND T.S. (C.L.) 8-37.

The amount of Entry Fee ... £ 2. - : When applied for, Aug. 13th 1937
Special ... £ 18-15-0 :
Donkey Boiler Fee ... £ : : When received, Aug. 19th 1937
Travelling Expenses (if any) £ : :

J. Arima & C. Macpherson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE 26 OCT 1937
Assigned t.d.m.b. 8.37
C.L.

