

Report of Survey for Repairs, &c., of Engines and Boilers.

(Received at London Office 19 JUL 1941)

Date of writing Report 15/4/41. When handed in at Local Office 21st April 1941. Port of Kobe.

No. in Reg. Book 77605 Survey held at Innoshima. Date, First Survey 26/11/40 Last Survey 27/1/1941.
 on the Machinery of the ~~Wood's Iron or Steel~~ S/S "KOKI MARU". (No. of Visits Eight.)

Tonnage { Gross 5291 Vessel built at Tokyo. By whom Ishikawajima S.B. Co. When 1921 Smo.
 Net 3222 Engines made at Tokyo. By whom Ishikawajima S.B. Co. When 1921.

Nominal Horse Power 513 NHP Boilers, when made (Main) 1921. (Donkey) --

No. of Main Boilers 3 SB Owners Hashimoto Kisen Kabushiki Kaisha Owners' Address (if not already recorded in Appendix to Register Book.)
 No. of Donkey Boilers -- Managers Port Kobe. Voyage

Steam Pressure in Main Boilers 200 lbs. If Surveyed Afloat or in Dry Dock Both
 in Donkey Boilers -- (State name of Dock.) Innoshima Dock.

Last Report No. Port

Particulars of Examination and Repairs (if any) LMC, TS & DAMAGE.

(Periodical Surveys, when held, must be reported in detail and seriatim in the terms of the Rules. State clearly the cause of Repairs, if any, and, in detail, the nature and extent of Examinations and subsequent Repairs. Repairs on account of Damage (the cause of which must be stated) should be separated from Repairs due to other causes; and besides being detailed in the body of the report, should be briefly summarised at the end of the report. State also the dates and initials of any letters respecting this case.)

In damage cases where the Surveyor has not made a special damage report he is required to state whether he offered his services for this purpose, and why they were declined --

Was a damage report made by anyone else? If so, by whom? --

Did the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? Yes.

" " Donkey " " " " --

If this was not done, state for what reasons? --

And what parts of the Boilers could not be thus thoroughly examined? --

Also what special means, in the absence of internal examination, were adopted by the Surveyor to assure himself of the thorough efficiency of those parts of each Boiler? --

State latest date of internal examination of each boiler December, 1940. Present condition of funnel(s) Good.

Did the Surveyor examine the Safety Valves of the Main Boiler? Yes. To what pressure were they afterwards adjusted under steam? 200 lbs.

Did the Surveyor examine the Safety Valves of Donkey Boiler? -- To what pressure were they afterwards adjusted under steam? --

Did the Surveyor examine all the manholes, doors and their fastenings of the Main Boilers? Yes. and of the Donkey Boilers? --

Did the Surveyor examine the drain plugs of the Main Boilers? -- and of the Donkey Boilers? --

Did the Surveyor examine all the mountings of the Main Boilers? Yes. and of the Donkey Boilers? --

Has screw shaft now been drawn and examined? Yes. Is it fitted with continuous liner? Yes. Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? No.

Has shaft now been changed? No If so, state reasons --

Has the shaft now fitted been previously used? -- Has it a continuous liner? -- Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? --

State date of examination of Screw Shaft Nov. 1940. State the distance between lignum vitae ~~between~~ of stern bush and top of after bearing of screw shaft 3/32".

Engine parts, when referred to by numbers, should be counted from forward. Is electric light ~~on~~ rows fitted? Yes.

If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? Yes.

Has the insulation resistance of the generators, circuits and apparatus been tested and found to be not less than 100,000 ohms? Yes.

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done Complete.

NOW DONE:- Vessel placed in dry dock, propeller, stern bush, sea cocks and valves with their shell fastenings examined and found or now placed in good condition.

Tail shaft with continuous liner examined and found in good condition.

All cylinders, pistons, valves and rods, crank, thrust and intermediate shafting, condenser, pumps, piping and pumping arrangements examined and found or now placed in good condition.

The steam ^{& feed} pipes were tested by hydraulic pressure to twice the W.P., and the copper steam and feed pipes were annealed before testing.

Electric Installation megger tested, twitchboard and fuses examined and found or now placed in good condition, installation afterwards tested under working condition with satisfactory results. (P.T.O.).

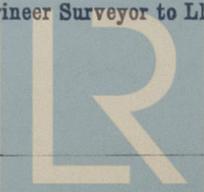
General Observations, Opinion, and Recommendation:—The machinery and boilers of this vessel (State clearly what alteration, if any, is suggested to be made in the existing classification of the vessel's machinery in the Register Book, consequent upon this survey, and also any alteration required to be made in the records of the vessel's machinery, boilers, working pressures, &c.; thus, for example, B.S. 9,11, B.&M.S. 9,11, L.M.C. 9,11, or L.M.C. 140 lb., F.D., &c.)
CS 2,34,
 are in good condition and eligible, in my opinion, to be continued as classed with fresh record of **L.M.C. 1, 41.** and Tail Shaft (CL) seen 11,40.

Survey Fee (per Section 20) 5- - - Fees applied for 19
 Special Damage or Repair Fee (if any) See Hull Report. (per Section 20.) Received by me, 19
 Travelling expenses (if chargeable) See Hull Report.

N. Arima
For J. Kunishi & Self.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 15 AUG 1941
 Assigned + L.M.C. 1.41

CERTIFICATE WRITTEN



Insert Character of Ship and Machinery precisely as in the Register Book

Is a Certificate required? If so, to be sent to

The 3 Main Boilers were examined over all parts with doors, mountings and safety valves and found or now placed in good condition. Safety valves adjusted under steam as stated above.

REPAIRS DUE TO DAMAGE stated to have been caused by stranding on the 24th August, 1940 in the Tsingtao Harbour whilst the vessel leaving the port for Kamaisi, subsequently by flooding in all holds, bunkers and machinery space and by salvage operations. For further particulars please see Kobe Damage Report dated 15th February, 1941 attached hereto.

It was stated that the machinery space was flooded by sea water about 3 feet above the top of cylinder - now main engine with seating and thrust block dismantled, repaired and refitted.

All rods of main engine, slightly corroded - now skimmed up, and bushes and packings renewed as found necessary.

All crosshead pins of main engine, slightly corroded - now skimmed up, and bearings adjusted.

All astern guide plates of main engine, slightly corroded and guide shoes, cracked - now guide plate skimmed up and guide shoes remetalled.

4 crank shaft bearings of main engine, cracked - now remetalled, all main engine holding down bolts examined and renewed or repaired as necessary.

Main engine stop valve chest and seat, cracked and one gear for the valve spindle, damaged, now valve chest and seat renewed and gear repaired.

Starting valve chest, cracked - now renewed.

H.P., M.P. and L.P. cylinders overhauled, cleaned, examined and repaired as necessary.

Indicator cocks, drain cocks and escape valve overhauled, examined and repaired as necessary.

All shafting ~~xxxx~~ removed, and alinement adjusted.

Tail shaft drawn in for examination and found in good condition.

All cylinder lagging of main engine, damaged by water - now renewed.

All sea cocks and valves with their shell fastenings removed, examined, repaired and refitted.

Main condenser cleaned, tested and repaired as necessary.

Air pump shifting valve chest, cracked - now renewed.

Main feed pump suction valve chest, cracked - now renewed.

Main bilge pump escape valve chest, cracked, and suction valve chest, cracked, and suction valve spindle, bent - now renewed.

Air pump, main feed, bilge and sanitary pumps taken in shop repaired and refitted.

3 lubricating oil feeders of main engine, broken - now renewed.

3 oil trays of main engine eccentric, damaged - now repaired as necessary.

Boilers and Fittings:-

3 main boilers cleaned, examined and tested by hydraulic pressure to $1\frac{1}{2}$ x Working Pressure.

All valves and cocks fitted to boilers examined, tested and renewed as necessary.

All furnaces measured and found in good condition.

3 main boilers, slightly slipped to forward - now placed in good order. (Cont.)

Seams and rivets, leaking in places - now repaired as necessary.

Several small stays, leaking - now recaulked or renewed as necessary.

A number of tubes, leaking - now recaulked or renewed as necessary.

Asbestos and sheet iron laggings of 3 boilers, damaged - now renewed.

Smoke boxes, uptake and air trunk, buckled - now repaired or renewed as necessary and made air tight.

Smoke box doors and fittings, damaged, now overhauled, repaired and refitted.

Ashpit doors, furnaces door pins and fittings, damaged - now renewed or repaired as necessary.

Lower parts of funnel and casing, slightly buckled now repaired.

2 steel doors, between engine and boiler rooms, damaged - now renewed.

About 100 retarders, buckled - now renewed.

3 wooden buckets, damaged or lost - now renewed.

Main and auxiliary steam pipes tested.

Main and auxiliary feed pipes tested.

Copper steam and feed pipes annealed before testing.

Auxiliary Machinery:-

Impeller casing of circulating pump, fractured - now renewed.

Reversing engine, fan engine and dynamo engine taken in shop cleaned, repaired and refitted.

Independent feed pumps, circulating pump, ballast and donkey feed pumps taken in shop, cleaned, repaired and refitted.

Evaporator and cascade tanks removed, examined and refitted.

All cylinder lagging for auxiliary machinery, damaged by water - now renewed.

15 K.W. dynamo, damaged by water - now repaired and tested.

Main switch board and fittings, damaged by water - now tested and repaired or renewed as necessary.

Electric wiring, lamps and fittings, damaged by water - now tested and repaired or renewed as found necessary.

Valves and Piping:-

All valves, cocks and piping in engine and boiler rooms and shaft tunnel - removed, examined, repaired or renewed as found necessary.

All pipe lagging in engine and boiler rooms, damaged by water - now renewed.

One main steam pipe (5½" x 12'-0"), One C.I. three way piece and expansion joints, fractured - now renewed.

Main injection valve chest with one cast iron pipe (14" x 4'-0"), fractured - now renewed.

2 main discharge pipes (4" x 5'-0") and (4" x 6'-0"), fractured - now renewed.

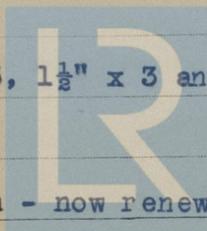
Auxiliary engine exhaust valve chest to L.P. receiver, cracked, now renewed.

Reversing engine exhaust valve chest with one bend pipe on condenser, cracked and one valve spindle, bent, - now renewed.

Independent feed pump exhaust valve chest and suction group valve chest, broken - now renewed.

12 copper steam pipes (4½" x 1, 3½" x 1, 3" x 3, 1½" x 3 and 1" x 4), broken or lost - now renewed.

2 cast iron "T" pieces to blow off pipe, broken - now renewed. (continued)



Suction and delivery group valve chests of donkey feed pump, broken and 2 valve spindles, bent - now renewed.

Engine room bilge suction group valve chests, broken - now renewed.

No.5 ballast tank suction group valve chest, broken - now renewed.

One valve chest and seat communicating cascade tanks, broken - now renewed.

44 bilge and ballast suction pipes (6" x 5, 5½" x 5, 4½" x 10, 4" x 10, 3½" x 10 and 3" x 4), and 4 "T" pieces in machinery space, damaged or lost -now renewed.

18 sanitary or water service pipes (3" & 2½" x 7, 2" x 3 and 1½" x 3) in machinery space and shaft tunnel, damaged or lost - now renewed.

2 engine room bilge sounding pipes, broken - now renewed.

7 copper drain pipes (¾" x 3 and ½" x 4) and one "T" piece and one cross piece, damaged or lost - now renewed.

21 copper steam pipes (5/8" x 18 and 1½" x 3), for pressure gauges, damaged or lost - now renewed.

One tunnel bilge mud box, damaged, now renewed.

All pressure gauges, in engine and boiler rooms cleaned, tested and renewed as found necessary.

Miscellaneous:-

Engine room gratings, hand rails, stanchions, floor plates and angles, bent or lost - now repaired or renewed as necessary.

One engine room table, damaged - now renewed.

4 daily service oil tanks and bearers, damaged - now repaired as necessary.

8 steel casings for ballast suction valve chests, damaged or lost - now repaired as necessary.

Angle guide bar of ash hoisting bucket, bent - now repaired.

Spare gears, tools and running stores as per list stated to have been damaged or lost - now supplied.

All spare gears cleaned, examined and placed in good order.

Stores and tools cleaned, and placed in order.

Engine and boiler rooms cleaned and recoated.

All removals necessary to effect repairs replaced in good order.

Main and auxiliary machinery tried under working condition on completion of repairs.

SALVAGE DAMAGE:-

Windlass and winches used for salvage operations - now overhauled, examined and repaired as necessary.

10 reversing arm brackets of winches, cracked - now renewed.

12 securing studs of stop valve cover of winches, slacked, now renewed.

No.4 winch (starboard) cross head pins, worn, now renewed.

2 securing bolts of slide rod brackets each on Nos.1 & 5 winches, broken, now renewed.

One winch steam pipe, one exhaust pipe, and several pipe flanges on upper deck, badly bent or cracked - now renewed.

Winch steam pipe lagging on upper deck, damaged in places, now renewed.

(continued). H.A.

LIST OF FITTINGS AND EQUIPMENTS SUPPLIED. (Damaged or Stated to have been Lost).

Cylinder oil, -----	8 gallons.
Engine oil, -----	165 gallons.
Boiled oil, -----	5 gallons.
Black paint, -----	100 lbs.
Mast colour paint, -----	50 lbs.
Alminum paint, -----	10 lbs.
White Zinc paint, -----	100 lbs.
Oxid paint, -----	40 lbs.
Causitic Soda, -----	40 lbs.
Common soda, -----	80 lbs.
Hemp, -----	2 lbs.
Twin, -----	3 lbs.
Gouge wire, -----	25 square feet.
Lead wire, -----	3 lbs.
Grease packing, -----	46 lbs.
Crip packing, -----	20 lbs.
Lamp wick, -----	3 balls.
Handle (hammer), -----	15.
Asbestos powder, -----	3 bags.
Joint sheet, -----	27 lbs.
Boiler compound, -----	5 gallons.
Black lead, -----	3 lbs.
Fire cray, -----	2 bags.
Lime, -----	3 bags.
Mangan pate, -----	1 bag.
Cotton cloth, -----	30 feet.
Sponge gaurd, -----	50.
Charcoal, -----	1 bag.
Chork, -----	1 box.
Electrode, -----	3 lbs.
Copper pipe, -----	1½ box.
Brass solder, -----	5 lbs.
Borax, -----	3 lbs.
Muriatic acid, -----	1 lbs.
Thermometer, -----	1.
Wash brush, -----	10.
Tube brush, -----	7.
Vaseline, -----	1 lbs.

SALVAGE DAMAGE.

Kelosene, -----	7 gallons.
Rag waste, -----	5 kan.
Shovel, -----	10.

NOTE:- One off compound wound D.C. 15 K.W. steam dynamo was newly fitted on board.

The wiring are according to the rules, all working parts examined when overhauled and found in good order, afterwards installation tried on board and found satisfactory. (Cont.).

This dynamo does not run in parallel with the previous set. U.A.



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