

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

AUG 15 1940

(Received at London Office)

Writing Report 2/7/1940. When handed in at Local Office 3rd July 1940 Port of Kobe.

Survey held at Harima. Date, First Survey 1/6/40 Last Survey 26/6/1940 (No. of Visits Five.)

on the Machinery of the ~~Wood, Iron or Steel~~ T.M.S. "HUKKO MARU".

Gross 3834 Vessel built at Harima. By whom Kobe Steel Works, Ltd. When 1924 12mo
 Net 2290 Engines made at Winterthur. By whom Sulzer Bros. & Co. When 1924.
 478 NHP Boilers, when made (Main) -- (Donkey) 1924.
 Owners Hukko Syosen K.K. Owners' Address (if not already recorded in Appendix to Register Book.)
 Managers Taiyo Kaiun K.K. Port, Hasidate. Voyage
 If Surveyed Afloat or in Dry Dock Both Harima Dock.
 Key Boilers 120 lbs.

Particulars of Classification (which must be inserted precisely as in Register Book & Supplements).

CHARACTER, for Special Survey, Date of last Survey and of Periodical Surveys.	Years assigned and expired.	Machinery and Boiler Surveys (including date of N.B., if any)
*100A1	8,38	*LMC(CS) 7,36 8,38
		DBS 8,38
		TS (CL) P. 8,38
		S. 7,36
ssKob.No. 3-7,36.		

Report No. Port PART LMC(CS), TS, PARTICULARS OF EXAMINATION AND REPAIRS (if any) DBS & REPAIRS TO DAMAGE

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

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

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

Does the Surveyor personally go inside each Main Boiler separately and make a thorough examination at this time? --

Does the Surveyor go inside the Donkey Boiler? Yes.

Are parts of the Boilers which could not be thus thoroughly examined? --

Are 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? --

What is the date of internal examination of each boiler? June 1940. Present condition of funnel? Good.

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

Does the Surveyor examine the Safety Valves of Donkey Boiler? Yes. To what pressure were they afterwards adjusted under steam? 120 lbs.

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

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

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

Has the propeller shaft now been drawn and examined? Yes. (P & S) 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 the propeller shaft now been changed? No. If so, state reasons. --

Has the propeller 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? --

What is the date of examination of Screw Shaft? June 1940. (P & S) State the distance between lignum vitae bearing and top of after bearing of screw shaft. P. 3.25 m/m. S. 2.15 m/m. Are electric light and power fitted. YES. Not complete.

ONE:- Vessel placed in dry dock, P & S propellers, stern bushes, sea cocks and valves with shell fastenings examined and found or now placed in good condition.

Port and starboard Tail Shafts with continuous liner, examined and found in good condition.

The following parts of main and auxiliary engines opened up, examined and found or now in good condition.

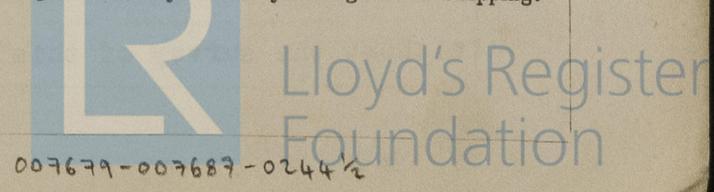
- Port and Starboard Main Engines:-
- Nos. 1, 2, 3 & 4 cylinders, pistons, valves, gears, and covers.
 - Nos. 1, 2, 3 & 4 connecting rods and top and bottom ends.
 - Nos. 1, 2, 3, 4, 5 & 6 crankshaft journals.
 - Thrust and Intermediate shafts.
 - Main Air Compressors - complete with bearing.
 - Scavenging pumps:- complete with bearing. (P.T.O.).

Observations, Opinion, and Recommendation:- The Machinery and Donkey Boiler of this vessel are in good condition and eligible, in my opinion, to be as classed with fresh record of (G.S.) - with date - when the survey is completed, and D.B.S. 6, 40. Port and starboard shafts (CL) seen 6,40 now.

(per Section 29) Yen 155:00 Fees applied for 1/7/1940
 Special Survey Yen 120:00
 Damage or Repair Fee (if any) Yen 100:00
 Expenses (if chargeable) (See Hull Report)

Received by me, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute JUNE 27 AUG 1940 As may be seen D.B.S. 6, 40



Insert Character of Ship and Machinery precisely as in the Register Book. Is a Certificate required? If so, to be sent to

Auxiliary Oil Engines:-

No.1 (Port) and No.2 (Starboard Forward) auxiliary oil engines - complete with compressors.

Auxiliary air compressor.

Emergency air compressor.

Air Receivers:-

Nos.1 & 2 M.P. air receivers - internally

Nos.3, 4 & 9 H.P. air bottles - internally.

Pumps:-

Port and Starboard Main Engine driven piston cooling water pumps.

Port and Starboard Main Engine driven jacket cooling water pumps.

Port and Starboard Main Engine driven lubricating oil pumps.

Port and Starboard Main Engine driven bilge pumps.

Port and Starboard Main Engine driven sanitary pumps.

Oil fuel transfer pump.

Lubricating oil pump.

Auxiliary cooling water pump.

Feed water pump for Donkey Boiler.

Oil fuel Unit pump for Donkey Boiler.

Fresh water pump.

Ballast pump.

General service pump.

Oil Fuel Tanks:-

Port and Starboard oil fuel daily service tanks - internally.

Pumping arrangements examined and found in order.

Electric Installation megger tested, switchboard and fuses examined and found or now placed in good condition, installation afterwards tested under working condition with satisfactory results.

The Donkey Boiler was 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.

Oil fuel pumps opened out, examined and found in good order. The oil fuel tank, valves, pipes and deck controls for the oil fuel burning installation and fire extinguishing apparatus examined and found in order.

The installation afterwards examined under working conditions and found satisfactory.

TO COMPLETE THE SURVEY:-

Starboard L.P. air receiver and Nos.7, 8 & 10 H.P. air bottles to be examined internally.

NOTE:- LMC(CS) will be completed when the Hull Special Survey is completed.

REPAIRS DUE TO DAMAGE:-

The forward section of the Port Main Engine crankshaft has now been renewed on account of a circumferential fracture near to the fillet of the forward crank web.

Owing to the vessel being on Government service, this portion of the crank shaft was ordered by the Government Authorities without the knowledge of the Owners and without the survey of this Society. The shaft was made by Messrs. Kobe Steel Works,

(continued)

an approved steel works, and under the survey of Teikoku Kaiji Kyokai, a copy of whose certificate is attached hereto.

The new shaft was examined in the finished condition and as far as could be seen was satisfactory.

Owing to the exceptional circumstance prevailing at the present time it is extremely difficult for the Owners to obtain a LLOYD'S tested shaft.

As the shaft was made by approved steel works and the test results comply with the Rule requirement, the acceptance of this shaft is submitted for the favourable consideration of the Committee in this instance.

REPAIRS DUE TO WEAR AND TEAR:-

Port main engine crank shafts lifted up and alignment adjusted.

The forward section of port main engine crank shaft renewed as stated above.

Nos.1 & 2 main bearings of port main engine - bottom halves - remetaled.

All crosshead pins of main engines - skimmed up and the brasses adjusted.

Other minor repairs and adjustments carried out. SA.