

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

Received at London Office

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Port of DUNEDIN, N.Z.

No. in
Reg. Book
64321

Survey held at Port Chalmers

Date: First Survey 21st January Last Survey 6th October, 1948

on the Machinery of the Wood Iron or Steel S.S. "KAIKORAI"

(No. of Visits Forty-seven)

Tonnage { Gross 3151		Vessel built at	W Hartlepool	By whom	W. Gray & Co. Ltd.	When	1918	Year	Month
Net 1860		Engines made at	W Hartlepool	By whom	Cen. Mar. Eng. Works	When	1918		5
Nominal Horse Power } 430MN		Boilers, when made (Main)	1918		(Donkey)	When	1918		
No. of Main Boilers 3SB		Owners	Union S.S.Co. of New Zealand Ltd.	Owners' Address	---				
No. of Donkey Boilers Nil		Managers	" " " " " " " "	(if not already recorded in Appendix to Register Book.)				Stated for	
Steam Pressure— in Main Boilers 180lb.				Port	Wellington N.Z.	Voyage	Sale for Breakin		
in Donkey Boilers ---		If Surveyed Afloat or in Dry Dock	Both, Otago	Particulars of Classification		up	(which must be inserted		
		(State name of Dock.)							

Last Report No.....Port

Particulars of Examination and Repairs (if any) Part Special for LMC.

(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

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

And what parts of the Boilers could not thus be 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 4th October, 1948

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

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? Yes, 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? No Is it fitted with continuous liner? --- Is an approved appliance fitted at the after end of the shaft to permit of it being efficiently lubricated? ---

Has shaft now been changed? --- 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 --- State the distance between lignum vitae or bearing metal 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.

If so, did the Surveyor examine the generators, motors, switchgear, cables and fuses? No

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

If the Survey is not complete, state what arrangements have been made for its completion and what remains to be done. Survey not being proceeded with for Classification. This vessel arrived at this Port in October, 1947 and subsequently survey

was proceeded with for LMC, subsequently vessel docked in September 1948 and on account of high cost of hull repairs, survey was discontinued and vessel offered for sale, see Hull Report No. 2701.

letter forwarded to Head Office per Air Mail 22nd October 1948.

NOW DONE:- Boilers:- Three boilers opened up including all mountings, cleaned and examined throughout. In all three boilers considerable wastage and pitting found on crown plates and back plates

of combustion chambers, girder stays removed from crown of all boilers for extended examination and recommendations made for removal of all boiler stays.

Recommendations made for renewal of all crown plates, sections of back plates of combustion chambers, including various screwed stays. Sections of wrapper plate and back tube plates recommended for

General Observations, Opinion, and Recommendation:— The Machinery of this vessel to be continued as

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 CS 3,34,

proceeds to Sea, including Survey of L.P. Cylinder & Piston, Tail Shaft, Electrical Equipment,

pairs to three Boilers, Air Pump, M.E. Plunger Pump and examination of Machinery under working conditions.

Key Fee (per Section 29)	£ 45 : 0 : 0	Fees applied for,	27-10-1948
rt Repairs	10:10:0		
Special Damage or Repair Fee (if Boilers	£ 6 : 6 : 0		
(per Section 29)			

14 : 0 : 0
 1 : 16 : 0
 Received by me,
 --- 19
 25 FEB 1949
 Engineer Surveyor to Lloyd's Register of Shipping.

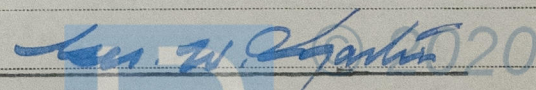
Committee's Minute.....
Signed..... *Dafydd*.....

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S.S. " KAIKORAI ".

Page Two.

corrugations, particularly starbd. furnace of port boiler. All furnaces drill tested and high corrugations of starbd. furnace of port boiler found to be $7/32"$, also furnaces gauged and found to be down varying from $3/8"$ to $1\frac{1}{4}"$. A number of tubes in each boiler recommended for renewal. Numerous repairs and replacements recommended on boiler mountings on account of wear and tear. Wastage found to have taken place on back tube plates of each boiler and recommendations made for cropping and renewal of top section of same. Repairs generally on boilers were put in hand but not completed at time of last visit. Main Engines:- Completely opened up with the exception of L.P. Cylinder, and H.P. and I.P. Cylinders, Pistons, Valve Casings, and Valves opened up and examined. Bottom end bearings, crankshaft throughout, main bearings and fastenings examined, thrust shaft and thrust bearing examined, intermediate shafting and bearing examined. Auxiliaries:- All auxiliaries opened up and examined throughout, with the exception of Dynamo Engine, including Main Engine driven Air Pump, Plunger Bilge & Sanitary Pumps, Independent Main Circulating Pump, Two Independent Feed Pumps, Ballast Pump, General Service Pump, Fresh Water Pump, and Fan Engine. Main Condenser and Auxiliary Condenser examined. Main and Auxiliary Steam Pipes examined and Hydraulic tested to 360lbs. per sq. in. Pumping arrangement examined and various sections of pipe lines particularly in way of port side of engineroom and stokehold found to be considerably wasted. At this time all pipework lifted on port side of engineroom for access to D.B. Tank Top repairs. Air Pump Casting was lifted and turned over to allow extended survey of same, found to be wasted through on bottom on after side adjacent to plunger pump, casting of one plunger pump found wasted and perforated on bottom. Main Condenser shell found to be fractured at fwd. inboard side at half height. Excess wear down found to have taken place throughout Main Engine bearings. Numerous minor repairs and replacements found to be necessary on Auxiliary Pumps. REPAIRS NOW DONE:- Spare H.P. Piston Rod fitted, I.P. Piston Rod skimmed up and new neck bush fitted, Main Engine Crankshaft lifted and all Main bearings retalled, all bottom end bearings and all eccentric sheaves retalled, thrust bearing and thrust shaft bearings retalled, all intermediate shaft bearings retalled and shafting relined throughout. Main Circulating Pump, Ballast and General Service Pumps, and two Boiler Feed Pumps overhauled and replacements effected to same. Main Condenser, bronze metal patch cast and fitted internally and steel patch fitted externally in way of fracture in shell at fwd. inboard side, secured by studs and setpins, tube plates and tubes replaced and condenser tested and found satisfactory. Auxiliary Condenser, work of construction of a new Auxiliary Condenser commenced but incomplete. Pumping Arrangement, work of replacing sections of pipe lines commenced, but incomplete. In Dry Dock:- After End of Stern Bush only examined, Propeller examined. Vessel undocked without any repairs being undertaken. REMARKS:- Latest information to hand that vessel has been sold to interests in China and vessel is being repaired as an unclassed vessel to obtain a New Zealand Government Marine Department's Certificate to proceed to China.


 SURVEYOR.