

# REPORT ON MACHINERY.

No. 37147

Received at London Office

1 JUL 1926

Writing Report 30-6-1926 When handed in at Local Office 30-6-1926 Port of Hull  
 Survey held at Hull Date, First Survey 14-1-26, Last Survey 26-6-1926  
 Book on the S.S. "KAKARIKI" (Number of Visits 31)  
 Built at Selby By whom built Cochrane & Sons Ltd (1926)  
 es made at Hull By whom made Amos & Smith Ltd. (1926) when made 1926  
 s made at Hull By whom made Amos & Smith Ltd. (1926) when made 1926.  
 ired Horse Power Owners Union Steamship Co. of New Zealand. Port belonging to Sydney.  
 Horse Power as per Section 28 141 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

ENGINES, &c.—Description of Engines Triple expansion. No. of Cylinders 3 No. of Cranks 3  
 of Cylinders 16. 27. 44. Length of Stroke 30 Revs. per minute 112 Dia. of Screw shaft as per rule 8.9 Material of steel  
 as fitted 9.4 screw shaft  
 screw shaft fitted with a continuous liner the whole length of the stern tube yes Is the after end of the liner made water tight  
 propeller boss yes If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part  
 the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two  
 are fitted, is the shaft lapped or protected between the liners Length of stern bush 3-4  
 Tunnel shaft as per rule 7.98 Dia. of Crank shaft journals as per rule 8.38 Dia. of Crank pin 8 3/4 Size of Crank webs 17 1/2 x 5 1/2 Dia. of thrust shaft under  
 as fitted 8 3/4 Dia. of screw 11-0 Pitch of Screw 11-4 1/2 No. of Blades 4 State whether moveable no Total surface 38 sq. ft.  
 Feed pumps 2 Diameter of ditto 2 3/4 Stroke 16 Can one be overhauled while the other is at work yes  
 Bilge pumps 2 Diameter of ditto 2 3/4 Stroke 16 Can one be overhauled while the other is at work yes  
 Donkey Engines 3 Sizes of Pumps { 7 x 5 x 12 4 in. Duplex. No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room one 3" dia. 4 ft.; one 2 1/4" dia. 4 ft. 7 x 8 In Holds, &c. 2 @ 2 3/4, one port & one starboard.  
 Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes. 3"  
 the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
 connections with the sea direct on the skin of the ship yes Are they Valves or Cocks both.  
 ey 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 above  
 ey 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  
 pipes are carried through the bunkers forward suction How are they protected  
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yes  
 e Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yes  
 Screw Shaft Tunnel watertight Is it fitted with a watertight door worked from

ERS, &c.—(Letter for record S.) Manufacturers of Steel David Colville & Sons Ltd.  
 Heating Surface of Boilers 2520 sq. ft. Is Forced Draft fitted no. No. and Description of Boilers 2 S.E. Main.  
 ing Pressure 180 lb. Tested by hydraulic pressure to 320 lb. Date of test 23-4-26 No. of Certificate 3593  
 ach boiler be worked separately yes Area of fire grate in each boiler 36.6 sq. ft. No. and Description of Safety Valves to  
 oiler 2 spring loaded Area of each valve 4.910 Pressure to which they are adjusted 180 lb. Are they fitted with easing gear yes.  
 st distance between boilers or uptakes and bunkers or woodwork alt 5-0 dia. of boilers 11-6 Length 10-6 Material of shell plates S  
 31/32 Range of tensile strength 28/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR.  
 eams TRDBS Diameter of rivet holes in long. seams 1 1/2 Pitch of rivets 7.1 Lap of plates on width of butt straps 15 5/8  
 ntages of strength of longitudinal joint rivets 93 Working pressure of shell by rules 182.5 lb. Size of manhole in shell 16 x 12  
 plate 85.4 compensating ring 40 x 30 x 3 1/2 No. and Description of Furnaces in each boiler 2 Dightm. Material S Outside diameter 3-8 1/4  
 of plain part top Thickness of plates crown 9 1/2 bottom 16 Description of longitudinal joint welded. No. of strengthening rings  
 if none pressure of furnace by the rules 184. Combustion chamber plates: Material S Thickness: Sides 11/16 Back 11/16 Top 11/16 Bottom 11/16  
 of stays to ditto: Sides 9 x 8 Back 9 x 8 1/2 Top 8 x 11 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180  
 ial of stays S Area at smallest part 1 7/8 x 1 3/4 Area supported by each stay 88 sq. Working pressure by rules 206. End plates in steam space:  
 ial S Thickness 1 3/16 Pitch of stays 22 x 15 How are stays secured D.N. Working pressure by rules 183 Material of stays S  
 at smallest part 3" dia Area supported by each stay 330 sq. Working pressure by rules 203 Material of Front plates at bottom S  
 7/8 Material of Lower back plate S Thickness 7/8 Greatest pitch of stays 14 x 9 Working pressure of plate by rules 226  
 3/4 Pitch of tubes 4 3/8 Material of tube plates S Thickness: Front 7/8 Back 3/4 Mean pitch of stays 8 3/4 x 8 3/4  
 across wide water spaces 14 x 8 3/4 Working pressures by rules 192 Girders to Chamber tops: Material S Depth and  
 ss of girder at centre 8 1/2 x 1 1/2 Length as per rule 2-6 Distance apart 11" Number and pitch of stays in each 2 @ 8"  
 ing pressure by rules 180 Steam dome: description of joint to shell % of strength of joint  
 Apr 8. 12 Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes  
 of rivets Working pressure of shell by rules Crown plates Thickness How stayed  
 REHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to  
 Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler  
 o. of Visits 2 er of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

Two top end bolts & nuts. Two bottom end bolts & nuts. 2 main bearing bolts & nuts. 1 set coupling bolts. 1 set air, feed, & bilge pump valves. 1 propeller. 1 tail shaft. Valve spindle; set of piston rings. Air pump bucket & rod. 100 Condenser tubes. Centrifugal pump impeller & spindle. 12 boiler tubes, feed pump ram. Crank nut, journal & pin. Main bearing brass.

The foregoing is a correct description,  
FOR AMOS & SMITH LTD.

S. J. Robinson

DIRECTOR.

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1926: Jan 14. 30. Feb 3. 8. 11. 19. 26. Mar 3. 8. 11. 22. 30. 31 Apr 6. 9. 20. 23. 26  
During erection on board vessel -- May 3. 10. 27 Jun 1. 9. 10. 11. 15. 16. 21. 22. 23. 26.  
Total No. of visits 31

Is the approved plan of main boiler forwarded herewith

Yes

" " " donkey " " "

Dates of Examination of principal parts—Cylinders 6-4-26 30-3-26 Slides 26-4-26 Covers 30-3-26 Pistons 26-4-26 Rods 20-4-26

Connecting rods 20-4-26 Crank shaft 30-3-26 Thrust shaft 30-3-26 Tunnel shafts Screw shaft 22-3-26 Propeller 22-3-26

Stern tube 22-3-26 Steam pipes tested 11, 15, 16, 26-4-26 Engine and boiler seatings 31-3-26 Engines holding down bolts 9-6-26

Completion of pumping arrangements 23-6-26. Boilers fixed 9-6-26. Engines tried under steam 21-6-26.

Completion of fitting sea connections 31-3-26 Stern tube 31-3-26 Screw shaft and propeller 31-3-26.

Main boiler safety valves adjusted 23-6-26 Thickness of adjusting washers PP  $\frac{5}{16}$  S  $\frac{11}{16}$ ; SP  $\frac{5}{16}$  S  $\frac{5}{16}$ .

Material of Crank shaft Steel Identification Mark on Do. 222 P.F. Material of Thrust shaft Steel Identification Mark on Do. 222 P.F.

Material of Tunnel shafts Identification Marks on Do. Material of Screw shafts Steel Identification Marks on Do. 222 P.F.

Material of Steam Pipes S.D. steel,  $3\frac{1}{2}$  dia  $\times \frac{1}{4}$ ;  $4\frac{1}{8}$  dia  $\times \frac{5}{16}$  Test pressure 560 lb per sq in

Is an installation fitted for burning oil fuel

Is the flash point of the oil to be used over 150°F.

Have the requirements of Section 49 of the Rules been complied with

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.)

The engine & boiler of this vessel have been built under special survey, & in accordance with the approved plans & the Rules of this Society. The materials & workmanship are good. The machinery has been satisfactorily fitted on board, tried under working conditions, & found good. The steam & feed pipes have been tested by hydraulic pressure as required by the Rules. The safety valves have been adjusted under steam & tried for accumulation. The machinery is eligible in my opinion for the record + LMC 6.26. C.L. in the Register Book.

It is submitted that  
this vessel is eligible for  
THE RECORD + LMC 6.26. C.L.

Mark on spare tail shaft:—

Lloyd's  
No 226  
26-4-26  
P.F.

Mark on spare crank pieces:—

Lloyd's  
No 7574  
JP.

The amount of Entry Fee ... £ 3 : - :  
Special ... £ 35 : 5 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 30/6/26  
When received, 3. 7. 26

P. Fitzgerald

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUES. 6 JUL 1926

Assigned

+ L.M.C. 6.26  
C.L.

CERTIFICATE WRITTEN



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Foundation