

REPORT ON MACHINERY.

No. 28677

Received at London Office

WED. 23 MAR 1910

of writing Report 15. 2. 1910 When handed in at Local Office 19 Port of Glasgow

in Survey held at Paisley Date, First Survey June 21st 09 Last Survey Mar 18th 1910

Book. Twin screw S/S "Paritutu" (Hopper Dredger) (Number of Visits 35)

on the Twin screw S/S "Paritutu" (Hopper Dredger) Tons { Gross 564
Net 233

ster ✓ Built at Paisley By whom built Fleming Ferguson & Co When built 1910

ines made at Paisley By whom made Fleming Ferguson & Co when made 1910

ilers made at ditto By whom made ditto when made 1910

gistered Horse Power Owners New Plymouth Harbour Board Port belonging to New Plymouth Harbour Board

m. Horse Power as per Section 28 106 Is Refrigerating Machinery fitted for cargo purposes ✓ Is Electric Light fitted ✓

GINES, &c. Description of Engines Triple Expansion (2 sets) No. of Cylinders 6 No. of Cranks 6

a. of Cylinders 11-18-30 Length of Stroke 22" Revs. per minute as per rule 5.5 Dia. of Screw shaft as fitted 6 1/2" Material of screw shaft S

the screw shaft fitted with a continuous liner the whole length of the stern tube ✓ Is the after end of the liner made water tight ✓

the propeller boss ✓ If the liner is in more than one length are the joints burned ✓ 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 ✓ If two

ers are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 26"

ia. of Tunnel shaft as per rule 5.4 Dia. of Crank shaft journals as per rule 5.7 Dia. of Crank pin 6 1/4" Size of Crank webs 12 1/4" Dia. of thrust shaft under

llars 6 1/4" Dia. of screw 4.6" Pitch of Screw 8-9" No. of Blades 3 State whether moveable ✓ Total surface 20.26

o. of Feed pumps 2 Diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work ✓

o. of Bilge pumps 2 Diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work ✓

o. of Donkey Engines Two Sizes of Pumps 5 1/4" 4 3/4" 5" No. and size of Suctions connected to both Bilge and Donkey pumps

Engine Room Two 2 1/2" In Holds, &c. Two 2 1/2" in after hold 1-2 1/2"

Stokehold 2-2" in after hold

o. of Bilge Injections 2 sizes 3 1/2" Connected to condenser or to circulating pump ✓ Is a separate Donkey Suction fitted in Engine room & size ✓ 2 1/2"

re all the bilge suction pipes fitted with roses ✓ Are the roses in Engine room always accessible ✓ Are the sluices on Engine room bulkheads always accessible ✓

re all connections with the sea direct on the skin of the ship ✓ Are they Valves or Cocks both

re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates ✓ Are the Discharge Pipes above or below the deep water line above

re they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

What pipes are carried through the bunkers ✓ How are they protected ✓

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

re the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges ✓

Dates of examination of completion of fitting of Sea Connections 12-1-10 of Stern Tube 12-1-10 Screw shaft and Propeller 12-1-10

Is the Screw Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from main deck level

OILERS, &c. (Letter for record S) Manufacturers of Steel Beaumont Colville Stewart & Lloyd

Total Heating Surface of Boilers 920.8 Is Forced Draft fitted No No. and Description of Boilers one Single Ended

Working Pressure 160 Tested by hydraulic pressure to 320 Date of test 12-1-10 No. of Certificate 10255

Can each boiler be worked separately ✓ Area of fire grate in each boiler 73 1/2 No. and Description of Safety Valves to

each boiler Double Direct Spring Area of each valve 8.29 Pressure to which they are adjusted 165 Are they fitted with easing gear ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 14.10/32 Length 10-0" Material of shell plates S

Thickness 1 1/32" Range of tensile strength 28/32 Are the shell plates welded or flanged ✓ Descrip. of riveting: cir. seams DR

long. seams TR. DBS Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 1/4" Top of plates width of butt straps 18 1/8"

Per centages of strength of longitudinal joint 90.6% Working pressure of shell by rules 184 Size of manhole in shell 16 1/2"

Size of compensating ring 4 1/4" x 1 1/2" Ring No. and Description of Furnaces in each boiler 3 corrugated Material S Outside diameter 3-11 1/16"

Length of plain part top 14" Thickness of plates bottom 1 1/32" Description of longitudinal joint weld No. of strengthening rings ✓

Working pressure of furnace by the rules 141 Combustion chamber plates: Material S Thickness: Sides 1 1/16" Back 1 1/8" Top 1 1/16" Bottom 1 3/16"

Pitch of stays to ditto: Sides 9 3/4" x 9 3/4" Back 9" x 9" Top 9" x 10 1/2" If stays are fitted with nuts or riveted heads DR Working pressure by rules 166

Material of stays S Diameter at smallest part 2 1/16" Area supported by each stay 94.5 Working pressure by rules 171 End plates in steam space:

Material S Thickness 1 3/32" Pitch of stays 9 1/2" x 3 1/4" How are stays secured DN. iron Working pressure by rules 162 Material of stays S

Diameter at smallest part 4.85 Area supported by each stay 413 Working pressure by rules 175 Material of Front plates at bottom S

Thickness 1 3/16" Material of Lower back plate S Thickness 1 1/16" Greatest pitch of stays 14" Working pressure of plate by rules 215

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 3 1/4" Back 1 1/16" Mean pitch of stays 9"

Pitch across wide water spaces 14" Working pressures by rules 196 Girders to Chamber tops: Material S Depth and

thickness of girder at centre 4 1/8" x 3 1/4" (2) Length as per rule 2.3 1/16" Distance apart 10' 10 1/2" Number and pitch of stays in each 2 at 9"

Working pressure by rules 141 Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked

separately ✓ Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness

If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed ✓

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear ✓

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. Description on attached Report.

Made at By whom made When made Where fixed

Working pressure tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of Safety

Valves No. of Safety Valves Area of each Pressure to which they are adjusted Date of adjustment

If fitted with easing gear If steam from main boilers can enter the donkey boiler Dia. of donkey boiler Length

Material of shell plates Thickness Range of tensile strength Descrip. of riveting long. seams

Dia. of rivet holes Whether punched or drilled Pitch of rivets Lap of plating Per centage of strength of joint Rivets Plates

Working pressure of shell by rules Thickness of shell crown plates Radius of do. No. of stays to do. Dia. of stays

Diameter of furnace Top Bottom Length of furnace Thickness of furnace plates Description of joint

Working pressure of furnace by rules Thickness of furnace crown plates Stayed by

Diameter of uptake Thickness of uptake plates Thickness of water tubes Dates of survey

SPARE GEAR. State the articles supplied :—

The foregoing is a correct description,

Manufacturer.

Flaming & Ferguson, Limited.

Edinburgh

Dates of Survey while building

During progress of work in shops- 1909. June 21, 29, July 5, 19, 30, Aug 4, 11, 24, Sept. 3, 14, 15, 23, Oct 4, 14, 21, 25-29

During erection on board vessel - - - Nov. 2, 4, 12, 26, Dec 9, 15, 22, 1910 Jan. 12, 13, 17, 25, 31 Feb. 3, 15, 25, Mar 3, 10, 18

Total No. of visits 35

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 3-9-09 Slides 11-8-09 Covers 3-9-09 Pistons 11-8-09 Rods 11-8-09

Connecting rods 24-8-09 Crank shaft 21-10-09 Thrust shaft 21-10-09 Tunnel shafts 4-11-09 Screw shaft 4-11-09 Propeller 4-11-09

Stern tube 21-10-09 Steam pipes tested 25-2-10 Engine and boiler seatings 9-12-09 Engines holding down bolts 15-2-09

Completion of pumping arrangements 10-3-10 Boilers fixed 17-1-10 Engines tried under steam 18-3-10

Main boiler safety valves adjusted 10-3-10 Thickness of adjusting washers Port V 11/32 Star V 11/32 Aft V 7/16 Fore V 7/16

Material of Crank shaft \$ Identification Mark on Do. LLOYDS WGM 389 Material of Thrust shaft \$ Identification Mark on Do. LLOYDS WGM 389

Material of Tunnel shafts \$ Identification Marks on Do. ditto Material of Screw shafts \$ Identification Marks on Do. ditto

Material of Steam Pipes Copper Test pressure 320lb.

General Remarks (State quality of workmanship, opinions as to class, &c. These Engines & Boilers have been built under Special Survey in accordance with the approved plans & have been securely fitted on board. The workmanship & material are of good quality. The Machinery is eligible in my opinion for the record of LMC 3-10

It is submitted that this vessel is eligible for THE RECORD. + LMC 3.10

JWD 29/3/10

The amount of Entry Fee

Special £ 2 : - : When applied for, 18/31 1910

Donkey Boiler Fee £ 15 : 18 : : When received, 21/31 1910

Traveling Expenses (if any) £ : : : 21/31 1910

Committee's Minute GLASGOW 22 MAR 1910

Assigned + LMC 3.10

W. Gordon Maclellan Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



Lloyd's Register Foundation

MACHINERY CERTIFICATE WRITTEN 23.3.10

Glasgow

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

L.H.H. 24.3.10.