

REPORT ON MACHINERY.

No. 24630

Port of GlasgowReceived at London Office TUES. NOV 20 1906No. in Survey held at Renfrew Date, first Survey 8th April Last Survey 15th Nov 1906Reg. Book. on the Twin Screw Steam Pump & Bucket Hooper Dredge "Karnafuti I." (Number of Visits 1)Master Renfrew Built at Renfrew By whom built Tom Simons & Co Ltd Tons { Gross 1906 Net 1906 When built 1906Engines made at Renfrew By whom made Tom Simons & Co Ltd when made 1906Boilers made at Renfrew By whom made Tom Simons & Co Ltd when made 1906Registered Horse Power 108 Owners ✓ Port belonging to ChittagonNom. Horse Power as per Section 28 148 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yesENGINES, &c.—Description of Engines Twin Compound No. of Cylinders 4 No. of Cranks 4Dia. of Cylinders 18" x 36" Length of Stroke 24" Revs. per minute 130 Dia. of Screw shaft as per rule 2" Material of steelIs the screw shaft fitted with a continuous liner the whole length of the stern tube no liners Is the after end of the liner made water tight in 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 liners are fitted, is the shaft lapped or protected between the liners ✓ Length of stern bush 3'-6"Dia. of Tunnel shaft as per rule 6.97 Dia. of Crank shaft journals as per rule 7.2 Dia. of Crank pin 7 1/2" Size of Crank webs 5" x 13" Dia. of thrust shaft under collars 7 1/2" Dia. of screw 8-0 Pitch of Screw 10' 0" No. of Blades 4 State whether moveable no Total surface 359No. of Feed pumps 2 Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work yesNo. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 12" Can one be overhauled while the other is at work yesNo. of Donkey Engines 2 Sizes of Pumps 6 x 6 x 6 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room two 2 1/4" & two 2" bilge ejectorsIn Engine Room two 2 1/4" & two 2" bilge ejectors In Holds, &c. two 2 1/4" in pump engine roomNo. of Bilge Injections 2 sizes 3 1/2" Connected to condenser, or to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size yes 2 1/2"Are all the bilge suction pipes fitted with roses yes Are the roses in Engine room always accessible yes Are the sluices on Engine room bulkheads always accessible noAre all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks bothAre they 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 aboveAre they 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 yesWhat pipes are carried through the bunkers none How are they protected iron casingAre all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges yesDates of examination of completion of fitting of Sea Connections 18/10/06 of Stern Tube 18/10/06 Screw shaft and Propeller 18/10/06Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door ✓ worked from ✓BOILERS, &c.—(Letter for record S) Manufacturers of SteelTotal Heating Surface of Boilers 2920 Is Forced Draft fitted no No. and Description of Boilers 2 cylindricalWorking Pressure 120 lbs Tested by hydraulic pressure to 240 lbs Date of test 5/9/06 No. of Certificate 8344Can each boiler be worked separately yes Area of fire grate in each boiler 144 No. and Description of Safety Valves to each boiler 1 pair direct spring Area of each valve 8.3 Pressure to which they are adjusted 125 lbs Are they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 12" Mean dia. of boilers 13'-0" Length 10'-0" Material of shell plates steelThickness 3/32" Range of tensile strength 37/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double laplong. seams butt Diameter of rivet holes in long. seams 7/8" Pitch of rivets 6 3/8" Lap of plates or width of butt straps 13 7/8"Per centages of strength of longitudinal joint 84 Working pressure of shell by rules 123 lbs Size of manhole in shell 16" x 12"Size of compensating ring 24 1/2" x 28 1/2" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 42"Length of plain part top Thickness of plates bottom Description of longitudinal joint welded No. of strengthening rings 5Working pressure of furnace by the rules 120 lbs Combustion chamber plates: Material steel Thickness: Sides 9/16" Back 1/2" Top 9/16" Bottom 5/8"Pitch of stays to ditto: Sides 8 1/2" x 9 1/2" Back 8" x 7 1/8" Top 9 1/2" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135 x 126 lbsMaterial of stays steel Diameter at smallest part 9/16" Area supported by 1 stay 61 Working pressure by rules 125 lbs End plates in steam space: Material steel Thickness 3/32" Pitch of stays 14 1/2" x 16" How are stays secured 2 x 1/2" Working pressure by rules 124 Material of stays steelDiameter at smallest part 3-26 Area supported by each stay 232 Working pressure by rules 140 lbs Material of Front plates at bottom steelThickness 1/16" Material of Lower back plate steel Thickness 5/8" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 126 lbsDiameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates steel Thickness: Front 1/16" Back 1/16" Mean pitch of stays 10.9Pitch across wide water spaces 14 1/4" Working pressures by rules 140 lbs + 134 lbs Orders to Chamber tops: Material steel Depth and thickness of girder at centre 7 x 1/16" Length as per rule 32" Distance apart 8 Number and pitch of stays in each two 9 1/2"Working pressure by rules 120 lbs Superheater or Steam chest; how connected to boiler no 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. 1 Description Vertical cross tube
 Made at Amman By whom made Cochran & Co Amman When made 1906 Where fixed in Stothold
 Working pressure 100 tested by hydraulic pressure to 200 Date of test 21/6/06 No. of Certificate 8170 Fire grate area 11 1/4 Description of Safety
 Valves Spring Loaded No. of Safety Valves 2 Area of each 3-14 Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Dia. of donkey boiler per Report 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 _____
 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:— 2 top end bolts & nuts, 2 bottom end bolts & nuts, 1 set of coupling bolts & nuts, 2 main bearing bolts & nuts, 1 set of feed & bridge pump valves, iron, bolts & nuts assorted, 1 crank shaft, 1 propeller shaft, 2 propellers

The foregoing is a correct description,

Manufacturer.

FOR WM. SIMONS & CO., LTD.

J. M. C. M. M. M.

SECRETARY.

Dates of Survey while building { During progress of work in shops - 1906: Apr. 8, 9, 19, 25, May 2, 4, 18, Jun. 2, 4, 11, 18, 21, 25, 29, July 2, 10, Aug. 30, Sep. 5, 12
 { During erection on board vessel - 20, 28, Oct. 4, 10, 22, 23, 27, 31, Nov. 6, 12, 13, 15
 Total No. of visits 31

Is the approved plan of main boiler forwarded herewith yes

" " " donkey " " " no

Dates of Examination of principal parts—Cylinders 9/4/06 Slides 25/4/06 Covers 25/4/06 Pistons 25/4/06 Rods 25/4/06
 Connecting rods 25/4/06 Crank shaft 18/5/06 Thrust shaft 18/5/06 Tunnel shafts 18/5/06 Screw shaft 18/5/06 Propeller 27/6/06
 Stern tube 12/9/06 Steam pipes tested 28/9/06 Engine and boiler seatings 12/9/06 Engines holding down bolts 28/9/06
 Completion of pumping arrangements 27/10/06 Boilers fixed 20/9/06 Engines tried under steam 27/10/06
 Main boiler safety valves adjusted 16/11/06 Thickness of adjusting washers Pat. Bolts 7/16 3/16 Std. Bolts 9/16 9/32
 Material of Crank shaft Steel Identification Mark on Do. 18/5/06 Material of Thrust shaft Steel Identification Mark on Do. A.M.C. 2/7/06
 Material of Tunnel shafts Steel Identification Marks on Do. per report Material of Screw shafts Steel Identification Marks on Do. A.M.C. 2/7/06
 Material of Steam Pipes Solid drawn copper 6" bore 8 W.G. Test pressure 240 lbs.

General Remarks (State quality of workmanship, opinions as to class, &c.)

In account of damage to stern frame when launching, the Port stern tube & propeller shaft were drawn in, after the repair to stern port was completed the stern tube was put in place and the nut screwed up, the shaft put out and found fair with coupling of intermediate shaft before the stern port was put in.

These engines and boilers have been built under special survey the materials and workmanship are of good description they have been well fitted on board and tried under steam.

In my opinion the machinery of this vessel is eligible to have certification of L.M.C. 11.06 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 11.06 ELEC. LIGHT.

The amount of Entry Fee.. £ 2 : : When applied for, 19 NOV 1906
 Special .. £ 22 : 4 : :
 Donkey Boiler Fee .. £ : : :
 Travelling Expenses (if any) £ : : :
 When received, 22/11/06

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

Committee's Minute

Assigned

+ L.M.C. 11.06

MACHINERY CERTIFICATE
 WRITTEN 20-11-06



Lloyd's Register Foundation

Certificate (if required) to be sent to

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

Is a Report also sent on the Hull of the Ship?

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