

REPORT ON MACHINERY.

6246

No. 6246 Received at London Office Rec'd 25th SEP, 1883.
 No. in Survey held at Dumbarton Date, first Survey Nov 11th 82 Last Survey Sept 20th 1883
 Reg. Book. (Number of Visits) 1443.00
 on the Genl Steamer "Marano" Tons 805.44
 Master W. W. Hamilton Built at Dumbarton By whom built W. & J. Denny & Co When built 1883
 Engines made at Dumbarton By whom made Denny & Co when made "
 Boilers made at "" By whom made "" when made ""
 Registered Horse Power 240 Owners The Dundee & N. by Lem Port belonging to London

ENGINES, &c.—

Description of Engines Compound Inverted Surface Condensing
 Diameter of Cylinders 28" & 68" Length of Stroke 48" No. of Rev. per minute 75 Point of Cut off, High Pressure 1/10 Low Pressure 1/10
 Diameter of Screw shaft 12 3/4" Diam. of Tunnel shaft 12" Diam. of Crank shaft journals 13 1/2" Diam. of Crank pin 13 1/2" size of Crank webs 8 1/4" x 17 1/4"
 Diameter of screw 13" 6" Pitch of screw 19" 0" No. of blades 4 state whether moveable Yes total surface 65 sq. ft.
 No. of Feed pumps Two diameter of ditto 4 1/4" Stroke 24 1/4" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two diameter of ditto 4 1/4" Stroke 24 1/4" Can one be overhauled while the other is at work Yes
 Where do they pump from Bilges of Engine Room and all Compartments of Vessel.
 No. of Donkey Engines one Size of Pumps 4" x 9" stroke Where do they pump from Sea. Hotwell. Bilge
of Engine Room all Compartments of Vessel and through Condenser.
 Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 No. of bilge injections one and sizes 5 1/4" dia Are they connected to condenser, or to circulating pump Circulating
 How are the pumps worked By Eccentrics fitted on webs of Crank shaft.
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Both.
 Are 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 Below
 Are 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 Yes
 What pipes are carried through the bunkers Fore Hold. Section How are they protected Wood-Casing
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock Before launching
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top.

BOILERS, &c.—

Number of Boilers Two Description Cylinder & Multitubular Whether Steel or Iron (Steel)
 Working Pressure 90 lbs Tested by hydraulic pressure to 180 lbs Date of test 6th August 1883
 Description of superheating apparatus or steam chest Horizontal Steam Receiver
 Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately Yes
 No. of square feet of fire grate surface in each boiler 106.5 Description of safety valves Direct Spring No. to each boiler Two
 Area of each valve 28.27 in Are they fitted with easing gear Yes No. of safety valves to superheater 1 area of each valve "
 Are they fitted with easing gear " Smallest distance between boilers and bunkers or woodwork 14" inches Diameter of boilers 13" 2 1/16"
 Length of boilers 15" 3 1/2" description of riveting of shell long. seams Double Butt circum. seams Double Lap Thickness of shell plates 3/8"
 Diameter of rivet holes 1 1/16" whether punched or drilled drilled pitch of rivets 4 1/2" x 2 1/2" Lap of plating 12 1/2 straps
 Per centage of strength of longitudinal joint 72% working pressure of shell by rules 103 lbs size of manholes in shell 17" x 13"
 Size of compensating rings Doubling Plate 34" x 28" x 3/8" thick No. of Furnaces in each boiler 6 if rings are fitted bottom
 Outside diameter 3' 2" length, top 15' 9" bottom through thickness of plates 1/2" description of joint Double Butt
 Greatest length between rings 5' 6" working pressure of furnace by the rules 102 combustion chamber plating, thickness, sides 1/2" back " top 1/2"
 Pitch of stays to ditto, sides 9 x 8 3/4" back " top 9 x 8" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 101
 Diameter of stays at smallest part 1 1/16" steel working pressure of ditto by rules 112 end plates in steam space, thickness 3/8"
 Pitch of stays to ditto 17" x 16 1/2" how stays are secured Nuts Washers working pressure by rules 95 lbs diameter of stays at smallest part 2 1/16"
 working pressure by rules 104 lbs Front plates at bottom, thickness 3/4" Back plates, thickness "
 Greatest pitch of stays " working pressure by rules " Diameter of tubes 3" pitch of tubes 4 1/4" x 4 1/4" thickness of tube plates, front 1/16" back 1/16" how stayed Subs pitch of stays 17" x 8 1/2" width of water spaces 6"
 Diameter of Superheater or Steam chest 3' 1 1/16" length 20' 1 1/4" thickness of plates 9/16" description of longitudinal joint Double Lap diam. of rivet holes 3/8"
 Pitch of rivets 3 1/4" working pressure of shell by rules 164 diameter of flue " thickness of plates " If stiffened with rings "
 Distance between rings " working pressure by rules " end plates of superheater, or steam chest; thickness 3/8" how stayed Subs
a Radius of 2' 6" Superheater or steam chest; how connected to boiler By Two Nuts flanges and riveted to both.

This report is also sent on the Hull of the Ship

GLS148-0228

6246. etc.

DONKEY BOILER— Description *Circular Top & Bottom Flat-sided Multitubular*
 Made at *Dumbarton* by whom made *Messrs. Denny & Coy* when made *1883* where fixed *on deck*
 Working pressure *45 lbs* tested by hydraulic pressure to *90 lbs* No. of Certificate *1166* fire grate area *16.25 Sq ft* description of safety
 valves *Disc Spring* No. of safety valves *two* area of each *4 sq in* if fitted with easing gear *yes* if steam from main boilers can
 enter the donkey boiler *No* diameter of donkey boiler *6' 0 1/16"* length *4' 5 1/2"* description of riveting *Double Rivet Lap*
 Thickness of shell plates *7/16"* diameter of rivet holes *7/8"* whether punched or drilled *drilled* pitch of rivets *3 1/4"* lap of plating *1 1/8"*
 per centage of strength of joint *43* thickness of ~~shell~~ ^{end} plates *9/16"* stayed by *1 1/4" stay pitched 15" x 11 1/4"*
 Diameter of furnace, top *3' 0 1/4"* bottom *3' 6"* length of furnace *5' 6"* thickness of plates *1/2"* description of joint *Double Rivet Lap*
 Thickness of furnace ~~shell~~ ^{combustion chamber} plates *1/2"* stayed by *round stay pitched 8 1/8" x 8"* working pressure of shell by rules *74*
 Working pressure of furnace by rules *42 lbs* diameter of uptake *—* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied: *The following has been supplied in addition to the requirements of the Rules. viz, 1/2 Crank shaft. 1 propeller shaft and 4 blades. 1 set Crank pin bushes. 3 air or air pump rods. 2 slide Valve spindles. 1 Safety Valve spring. 36 Main Wires Scales.*
 The foregoing is a correct description,
Denny & Coy. Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The above Engines & Wires have been constructed under special survey. The workmanship and material are of good quality and well finished. The whole of the Machinery has been tested under steam and found to be good and efficient and in my opinion eligible to be noted in the Society's Register Book.
Lloyds M.C. 9.83.

The amount of Entry Fee .. £ *2 : 0 : 0* received by me,
 Special £ *33 : 10 : 0*
 Donkey Boiler Fee £ *0 : 0 : 0*
 Certificate (if required) .. £ *0 : 0 : 0* *24/9/1883*
To be sent as per margin.
 (Travelling Expenses, if any, £)

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

*Submitted that this have
 been in charge
 Lloyd's M.C. 9.83
 25-9-83*

Committee's Minute *TUESDAY 25 SEPT 1883*
J. L. M. E.