

REPORT ON MACHINERY

TRUR. 15 OCT 1885

No. 4152

No. in Survey held at Glazow Paisley
Reg. Book.

Date, first Survey 11th April

Received at London Office

Last Survey October 11th 1885

(Number of Visits) 34

Tons 129.25
48.44

on the Screw Steamer "Zubracho"

Master Miller Built at Paisley By whom built L. Lullarton & Coy When built 1880

Engines made at Glazow By whom made Lees Anderson & Coy when made 1883

Boilers made at " By whom made " when made 1883

Registered Horse Power 55 Owners Senor Pedro Rizzo Port belonging to Monte Video

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting
 Diameter of Cylinders 18" & 36" Length of Stroke 24" No. of Rev. per minute 110 Point of Cut off, High Pressure small Low Pressure "
 Diameter of Screw shaft 4" Diam. of Tunnel shaft 6 1/2" Diam. of Crank shaft journals 7" Diam. of Crank pin 4" size of Crank webs 4 1/2" x 8 3/4"
 Diameter of screw 1 1/2" Pitch of screw 11" & 6" No. of blades 4 state whether moveable fixed total surface 250 ft²
 No. of Feed pumps two diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps two diameter of ditto 2 1/4" Stroke 13" Can one be overhauled while the other is at work Yes
 Where do they pump from All Compartments
 No. of Donkey Engines One Size of Pumps 6" and 3" x 6 stroke Where do they pump from Sea Bilges & Hotwell

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 3" Are they connected to condenser, or to circulating pump Circulating
 How are the pumps worked By Levers
 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 Near to loadline
 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 None How are they protected "
 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 On Slip before being launched
 Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Upper platform

BOILERS, &c.—

Number of Boilers One Description Round Horizontal Whether Steel or Iron Steel
 Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs Date of test 14th July 1883
 Description of superheating apparatus or steam chest None
 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 40 ft² Description of safety valves Direct Spring No. to each boiler Two
 Area of each valve 11" Are they fitted with easing gear Yes No. of safety valves to superheater 4 area of each valve "
 Are they fitted with easing gear Yes Smallest distance between boilers and bunkers or woodwork 4 1/2" to bunkers, 2 1/2" to baffle = 6 1/2" Diameter of boilers 12 ft²
 Length of boilers 9" x 6" description of riveting of shell long. seams Double riveted circum. seams Double riveted Thickness of shell plates 13/16"
 Diameter of rivet holes 1 3/16" (iron) whether punched or drilled Drilled pitch of rivets 4 3/4" Lap of plating Shaps 10/16"
 Per centage of strength of longitudinal joint 45 working pressure of shell by rules 109 lbs size of manholes in shell 16" x 12"
 Size of compensating rings Double plate fitted No. of Furnaces in each boiler Two
 Outside diameter 3" x 6" length, top 6" x 3" bottom 9 ft² thickness of plates 9/16" description of joint Double butt shaps if rings are fitted Half fitted on bottom
 Greatest length between rings " working pressure of furnace by the rules 112 lbs combustion chamber plating, thickness, sides 10/32" back 15/32" top 10/32"
 Pitch of stays to ditto, sides 8" x 8" back 8 1/2" x 8" top 8" x 8" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 70 1/2 lbs Diameter of stays at smallest part 1 1/4" (iron) working pressure of ditto by rules 115 lbs end plates in steam space, thickness 25/32"
 Pitch of stays to ditto 15" x 15 3/4" how stays are secured By double nut working pressure by rules 100 lbs diameter of stays at smallest part 2 3/8" (iron) working pressure by rules 112 lbs Front plates at bottom, thickness 12/16" Back plates, thickness 12/16"
 Greatest pitch of stays 12" x 8" working pressure by rules " Diameter of tubes 8 1/2" pitch of tubes 4 3/4" x 4 3/4" thickness of tube plates, front 12/16" back 11/16" how stayed By tubes pitch of stays 1 1/4" x 1 1/4" width of water spaces 4"
 Diameter of Superheater or Steam chest Some 2' x 6" length 2' x 6" thickness of plates 1/16" description of longitudinal joint Simple diam. of rivet holes 3/4"
 Pitch of rivets 2" working pressure of shell by rules 153 lbs 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 10/16" how stayed By flange double riveted
 Superheater or steam chest; how connected to boiler Some By flange double riveted

State of Report is also sent on the Hull of the Ship

7152 gls

DONKEY BOILER— Description *See above*

Made at _____ by whom made _____ when made _____ where fixed _____

Working pressure _____ tested by hydraulic pressure to _____ No. of Certificate _____ fire grate area _____ description of safety valves _____

No. of safety valves _____ area of each _____ if fitted with easing gear _____ if steam from main boilers can enter the donkey boiler _____ diameter of donkey boiler _____ length _____ description of riveting _____

Thickness of shell plates _____ diameter of rivet holes _____ whether punched or drilled _____ pitch of rivets _____ lap of plating _____

per centage of strength of joint _____ thickness of crown plates _____ stayed by _____

Diameter of furnace, top _____ bottom _____ length of furnace _____ thickness of plates _____ description of joint _____

Thickness of furnace crown plates _____ stayed by _____ working pressure of shell by rules _____

Working pressure of furnace by rules _____ diameter of uptake _____ thickness of plates _____ thickness of water tubes _____

SPARE GEAR. State the articles supplied:— *One Propeller, Propeller Shaft + Stem Bush, Top + bottom Connecting Rod bolts, 1 set Coupling bolts, Connecting rod top end brass, also Crankpin brass, Feed + Bilge Pump valves + Seats, assortment of bolts nuts, Iron &c*

The foregoing is a correct description,
Wm. Anderson & Co. Manufacturers.

General Remarks (State quality of workmanship, opinions as to class, &c. *These Engines and Boilers*)
are of good workmanship and materials and are now in good order & safe working condition & reliable in my opinion to be noted in the Register Book Lloyds M. C. 10785

*This submitted that this vessel is eligible to have £ 1000 10 00 recorded
M 15/10/85*

The amount of Entry Fee .. £ 1 : 0 : 0 received by me,
Special .. £ 8 : 5 : 0
Donkey Boiler Fee .. £ 0 : 0 : 0
Certificate (if required) .. £ 0 : 0 : 0 *13/10/1885*
To be sent as per margin.
(Travelling Expenses, if any, £ ..)

Committee's Minute

FRIDAY 16 OCT 1885

James Morrison & G. L. Hina
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Clyde District

W. M. C.

