

REPORT ON MACHINERY.

No. 9122

No. in Survey held at Port Glasgow Date, first Survey 21st Decr 85 Last Survey 12th May 1886
 Reg. Book. on the Swire S.S. "Satellite" (Number of Visits 42) 242.39
 Tons 72.01
 Master Not appointed Built at Port Glasgow By whom built D. J. Dunlop & Co. When built 1886
 Engines made at Port Glasgow By whom made D. J. Dunlop & Co. when made 1886
 Boilers made at do By whom made do when made 1886
 Registered Horse Power 120 Owners Hon^{ble} Corporation of Trinity House Port belonging to London

ENGINES, &c.—

Description of Engines Compound Inverted Direct Acting Triple Expansion (6 Cylinders)
 Diameter of Cylinders 20 1/2" 20 1/2" 20 1/2" Length of Stroke 22" No. of Rev. per minute 106 Point of Cut off, High Pressure 12 3/4" Intermediate 13" Low Pressure 13"
 Diameter of Screw shafts 5 1/8" Diam. of Tunnel shafts 5 1/8" Diam. of Crank shaft journals 5 1/8" Diam. of Crank pins 5 1/8" size of Crank webs 6 5/8" x 3 1/2"
 Diameter of screws 7.6" Pitch of screws 12.6" No. of blades Four state whether moveable no total surface 20 sq feet
 No. of Feed pumps Two diameter of ditto 2 3/4" Stroke 11" Can one be overhauled while the other is at work yes
 No. of Bilge pumps Two diameter of ditto 2 3/4" Stroke 11" Can one be overhauled while the other is at work yes
 Where do they pump from Engine room, Stokehold & Fore & Aft Compartments
 No. of Donkey Engines One Size of Pumps 3 1/4" x 7 stroke Where do they pump from Sea Hot wells & Bilges

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 6" Are they connected to condenser, or to circulating pump Circulating pump
 How are the pumps worked By levers for air pumps & Feed & Bilge pumps. Drysdale's Centrifugal pump for circulating water
 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 above
 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 Ash Ejector pipes & pipes How are they protected Wood & iron
 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 vessel was launched
 Is the screw shaft tunnel watertight no tunnel and fitted with a sluice door yes worked from Engine room top platform

BOILERS, &c.—

Number of Boilers One Description Round Horizontal Multitubular Whether Steel or Iron Steel
 Working Pressure 150 lbs Tested by hydraulic pressure to 300 lbs per sq Date of test 16th April 1886
 Description of superheating apparatus or steam chest None fitted
 Can each boiler be worked separately no Can the superheater be shut off and the boiler worked separately no
 No. of square feet of fire grate surface in each boiler 40 Description of safety valves Direct spring No. to each boiler Two
 Area of each valve 10.3 sq Are they fitted with easing gear yes No. of safety valves to superheater no area of each valve no
 Are they fitted with easing gear no Smallest distance between boilers and bunkers or woodwork 11 1/2" Diameter of boilers 11' 8"
 Length of boilers 9' 9" description of riveting of shell long. seams Double butt strap circum. seams Double Thickness of shell plates 1 1/2"
 Diameter of rivet holes 1 3/16" whether punched or drilled Drilled pitch of rivets 5 1/2" Lap of plating 17" Straps
 Per centage of strength of longitudinal joint 78.4 working pressure of shell by rules 154 lbs size of manholes in shell 19 1/2" x 16"
 Size of compensating rings 3 1/2" x 3 1/2" x 1 1/2" No. of Furnaces in each boiler Three elongated
 Outside diameter 35" length, top 6' 6" bottom 9' 2" thickness of plates 15 1/2" description of joint Welded if rings are fitted no
 Greatest length between rings no working pressure of furnace by the rules 157 lbs combustion chamber plating, thickness, sides 1 1/2" back 3 1/2" top 1 1/2"
 Pitch of stays to ditto, sides 7 1/2" x 7 1/2" back 7 1/2" x 7 1/2" top 7 1/2" x 7 1/2" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 156 1/2 lbs Diameter of stays at smallest part 1 1/2" & 1 3/8" working pressure of ditto by rules 173 lbs end plates in steam space, thickness 3 1/2"
 Pitch of stays to ditto 14" x 13 1/2" how stays are secured Double nuts working pressure by rules 150 lbs diameter of stays at smallest part 2 1/8" working pressure by rules 169 lbs Front plates at bottom, thickness 1 1/2" Back plates, thickness 7/8"
 Greatest pitch of stays 12 1/2" working pressure by rules 150 lbs Diameter of tubes 3 1/4" pitch of tubes 14 1/2" x 14 1/2" thickness of tube plates, front 13 1/4" 58 doubling plate back 1 3/4" how stayed Stay tubes pitch of stays 9" x 9" width of water spaces 6"
 Diameter of Superheater or Steam chest no length no thickness of plates no description of longitudinal joint no diam. of rivet holes no
 Pitch of rivets no working pressure of shell by rules no diameter of flue no thickness of plates no If stiffened with rings no
 Distance between rings no working pressure by rules no end plates of superheater, or steam chest; thickness no how stayed no
 Superheater or steam chest; how connected to boiler no

ARK 305-0253

Lloyd's Register
Foundation

DONKEY BOILER— Description *None fitted*

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:— *2 top & 2 bottom end bolts & nuts, 2 main bearing bolts
a set of coupling bolts, a set of feed & bilge pump valves, a set of piston
springs, a quantity of bolts nuts & wire assorted, one safety valve spring,
4 tubes for main boiler, 4 tubes for surface condenser.*

The foregoing is a correct description,
Wm. C. Smith Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The Engines & main boiler have
been specially surveyed during construction, and satisfactorily tested under
full steam. Shafts examined when being turned in lathe and found satisfactory.
quality of workmanship good, and the machinery & boiler are now in good
order and safe working condition, and are in my opinion eligible to be noted
in the Register Book. LMC. 5.86.*

*It is submitted that this vessel
is eligible to have the notification
+ LMC 5.86 recorded.*

18/5/86

The amount of Entry Fee .. £ 1 : 0 : 0 received by me,
Special .. £ 10 : 10 : 0
Donkey Boiler Fee .. £ .. : .. :
Certificate (if required) .. £ gratis 17th May 1886
To be sent as per margin. *nil*

Committee's Minute

TUESDAY 13 MAY 1886

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

Greenock District