

# REPORT ON MACHINERY.

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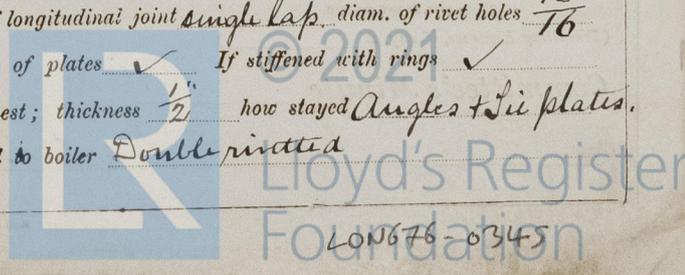
No. \_\_\_\_\_  
 No. in Survey held at London Date, first Survey Aug. 27 Last Survey Dec. 15<sup>th</sup> 1885.  
 Reg. Book. \_\_\_\_\_ (Number of Visits 7)  
 on the Wmch Boiler of S. S. "Merikara" Tons \_\_\_\_\_  
 Master \_\_\_\_\_ Built at \_\_\_\_\_ By whom built \_\_\_\_\_ When built \_\_\_\_\_  
 Engines made at \_\_\_\_\_ By whom made Denny & Co. when made 1875.  
 Boilers made at Brimley by Bm By whom made Fraser & Fraser. when made 1885.  
 Registered Horse Power 400. Owners S. McNeil & P. Denny Port belonging to Glasgow.

## ENGINES, &c.—

Description of Engines \_\_\_\_\_  
 Diameter of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ No. of Rev. per minute \_\_\_\_\_ Point of Cut off, High Pressure \_\_\_\_\_ Low Pressure \_\_\_\_\_  
 Diameter of Screw shaft \_\_\_\_\_ Diam. of Tunnel shaft \_\_\_\_\_ Diam. of Crank shaft journals \_\_\_\_\_ Diam. of Crank pin \_\_\_\_\_ size of Crank webs \_\_\_\_\_  
 Diameter of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ state whether moveable \_\_\_\_\_ total surface \_\_\_\_\_  
 No. of Feed pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 No. of Bilge pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work \_\_\_\_\_  
 Where do they pump from \_\_\_\_\_  
 No. of Donkey Engines \_\_\_\_\_ Size of Pumps \_\_\_\_\_ Where do they pump from \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible \_\_\_\_\_  
 No. of bilge injections \_\_\_\_\_ and sizes \_\_\_\_\_ Are they connected to condenser, or to circulating pump \_\_\_\_\_  
 How are the pumps worked \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are 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 \_\_\_\_\_  
 Are 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 \_\_\_\_\_  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times \_\_\_\_\_  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges \_\_\_\_\_  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_  
 Is the screw shaft tunnel watertight \_\_\_\_\_ and fitted with a sluice door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—

Number of Boilers One Description Multitubar. Whether Steel or Iron Steel  
 Working Pressure 80lbs. Tested by hydraulic pressure to 160lbs. Date of test \_\_\_\_\_  
 Description of superheating apparatus or steam chest Steam dome.  
 Can each boiler be worked separately  Can the superheater be shut off and the boiler worked separately   
 No. of square feet of fire grate surface in each boiler 15 Description of safety valves Directspring No. to each boiler One  
 Area of each valve 9.6 Are they fitted with easing gear yes No. of safety valves to superheater  area of each valve   
 Are they fitted with easing gear  Smallest distance between boilers and bunkers or woodwork  Diameter of boilers 7.3 1/2  
 Length of boilers 7.6 description of riveting of shell long. seams double lap circum. seams double lap Thickness of shell plates 7/16  
 Diameter of rivet holes 1 whether punched  drilled  rhipned  pitch of rivets 3 1/2 Lap of plating 4 1/8  
 Per centage of strength of longitudinal joint 70.6 working pressure of shell by rules 98lbs. size of manholes in shell 17" X 13"  
 Size of compensating rings 6" X 9/16 No. of Furnaces in each boiler One  
 Outside diameter 3.4 7/8 length, top 4.6 bottom 6.6 thickness of plates 7/16 description of joint double butt if rings are fitted   
 Greatest length between rings  working pressure of furnace by the rules 98lbs. combustion chamber plating, thickness, sides 15" back 15" top 15"  
 Pitch of stays to ditto, sides 9" back 8 1/2" top 8 1/2" If stays are fitted with nuts or riveted heads Nuts. working pressure of plating by rules 93lbs. Diameter of stays at smallest part 1 1/2 working pressure of ditto by rules 131lbs. end plates in steam space, thickness 5/8  
 Pitch of stays to ditto 12" how stays are secured double nuts & washers working pressure by rules 97lbs. diameter of stays at smallest part 2" working pressure by rules 130lbs. Front plates at bottom, thickness 5/8 Back plates, thickness 5/8  
 Greatest pitch of stays 7 3/4 working pressure by rules 200lbs. Diameter of tubes 2 1/2 pitch of tubes 3 1/4 thickness of tube plates, front 5/8 back 5/8 how stayed st. tubes pitch of stays 9 3/4 width of water spaces 6"  
 Diameter of Superheater or Steam chest 2.1 length 1.10 thickness of plates 3/8 description of longitudinal joint single lap diam. of rivet holes 13/16  
 Pitch of rivets 2" working pressure of shell by rules 180lbs. 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 1/2" how stayed Angles & Lie plates.  
 Superheater or steam chest; how connected to boiler Double riveted



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**DONKEY BOILER—** Description \_\_\_\_\_

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:—

The foregoing is a correct description,  
Manufacturer.

**General Remarks** (State quality of workmanship, opinions as to class, &c. *Material & Workmanship on this boiler found to be good. It has been surveyed under Survey & is eligible in my opinion for the working pressure of 80 lbs. per sq. in.*

The amount of Entry Fee .. £ : : received by me, )

Special .. .. £ : : )

Donkey Boiler Fee *8/18/6* £ 2 2 : : )

Certificate (if required) .. £ : : *20/1/1886* )

To be sent as per margin.

(Travelling Expenses, if any, £ )

*Geo. C. Thompson*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

*W.A. ...*  
FRIDAY 8 JAN 1886