

# REPORT ON MACHINERY.

No. 205

(Received in London Office 5th MAR 83.)

No. in Survey held at Reg. Book.

Date, first Survey October Last Survey 1st March 1883

on the Iron S.S. Burgemeester de Waal Tons

Master Gohr Built at Antwerp When built 1883

Engines made at Hull By whom made C. W. Earl when made 1869

Boilers made at Hamburg By whom made James Empson when made 1877

Registered Horse Power 98 Owners G. A. Decker Port belonging to Antwerp

## ENGINES, &c.—

Description of Engines Compound direct acting  
 Diameter of Cylinders  $25\frac{1}{2}$  &  $50\frac{1}{2}$  Length of Stroke 24 No. of Rev. per minute 60 Point of Cut off, High Pressure  $\frac{2}{3}$  Low Pressure  $\frac{2}{3}$   
 Diameter of Screw shaft  $8\frac{1}{2}$  Diameter of Tunnel shaft  $8\frac{1}{4}$  Diameter of Crank shaft journals  $8\frac{1}{2}$  Diameter of Crank pin  $8\frac{1}{2}$  size of Crank webs  $6\frac{1}{2}$  &  $9\frac{1}{2}$   
 Diameter of screw 12" Pitch of screw 14" No. of blades 4 state whether moveable  $\frac{1}{2}$  total surface 36 feet  
 No. of Feed pumps 2 diameter of ditto 5" Stroke 14" Can one be overhauled while the other is at work yes  
 No. of Bilge pumps 2 diameter of ditto 5" Stroke 14" Can one be overhauled while the other is at work yes  
 Where do they pump from all Compartments  
 No. of Donkey Engines 2 Size of Pumps 10" and 5" Where do they pump from all the holds, also feed the boilers and throw water on deck  
 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 1 and sizes 5" Are they connected to condenser, or to circulating pump circulating pump  
 How are the pumps worked main Engines  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks valves and Cocks  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates all above 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 coterling 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 now  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from top platform

## BOILERS, &c.—

Number of Boilers one Description Circular double ended (see plan)  
 Working Pressure 65 lbs Tested by hydraulic pressure to 130 lbs Date of test 26th February 1883  
 Description of superheating apparatus or steam chest Vertical steam dome  
 Can each boiler be worked separately Can the superheater be shut off and the boiler worked separately No  
 No. of square feet of fire grate surface in each boiler 50' Description of safety valves 2 Spring safety valves  
 No. to each boiler 2 area of each valve 14" 63 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 3"  
 Diameter of boilers 10' Length of boilers 12' 3" description of riveting of shell long. seams Quince double riveting circum. seams same  
 Thickness of shell plates  $\frac{7}{8}$ " diameter of rivet holes ? whether punched or drilled ? pitch of rivets 4 inches  
 Lap of plating per centage of strength of longitudinal joint working pressure of shell by rules  
 Size of manholes in shell 15" x 12" size of compensating rings none  
 No. of Furnaces in each boiler 4 outside diameter 2' 11" length, top 4' 8" bottom 4' 8"  
 Thickness of plates  $\frac{1}{2}$ " description of joint welded if rings are fitted No greatest length between rings  
 Working pressure of furnace by the rules 136 lbs  
 Combustion chamber plating, thickness, sides  $\frac{1}{2}$ " back all one double ended top  $\frac{1}{2}$ "  
 Pitch of stays to ditto sides 10" at 15" back 5" top girders } dis same apart 14" pitch of stays 10"  
 If stays are fitted with nuts or riveted heads riveted heads working pressure of plating by rules 64 lbs  
 Diameter of stays at smallest part 1" 4" working pressure of ditto by rules  
 End plates in steam space, thickness  $\frac{11}{16}$ " pitch of stays to ditto brackets how stays are secured riveted  
 Working pressure by rules diameter of stays at smallest part working pressure by rules  
 Front plates at bottom, thickness  $\frac{11}{16}$ " Back plates, thickness  $\frac{11}{16}$ " greatest pitch of stays working pressure by rules

5/3/83

approved plans, to the outside it is submitted to be

G. A.

Form No. 8, 2003/7/20



Diameter of tubes  $2\frac{3}{4}$ " pitch of tubes 4 inches thickness of tube plates, front  $\frac{3}{4}$ " back  $\frac{3}{4}$ "  
 How stayed *by 1 1/2" stays* pitch of stays  $12 \times 12$ " width of water spaces 5 inches  
 Diameter of Superheater or Steam chest 3 feet length 6 feet  
 Thickness of plates  $\frac{7}{16}$ " description of longitudinal joint *single rivet* diameter of rivet holes ? pitch of rivets  
 Working pressure of shell by rules 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  $\frac{7}{16}$ " How stayed *Conver*  
 Superheater or steam chest; how connected to boiler *riveted on*

**DONKEY BOILER—** Description *vertical (see plan)*  
 Made at *Antwerp* By whom made *J. De Decker* when made *1883*  
 Where fixed *Stoke hold* working pressure *45 lbs* Tested by hydraulic pressure to *90 lbs* No. of Certificate  
 Fire grate area *14 feet* Description of safety valves *lever weight* No. of safety valves *one* area of each  $\frac{7}{8}$ "  
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *yes*  
 Diameter of donkey boiler *5'-3"* length *11'-10"* description of riveting *single*  
 thickness of shell plates  $\frac{1}{2}$ " diameter of rivet holes  $\frac{7}{8}$ " whether punched or drilled *punched*  
 pitch of rivets *3"* lap of plating *3"* per centage of strength of joint *37, 2*  
 thickness of crown plates  $\frac{5}{8}$ " stayed by *four diagonal stays 2" dia*  
 Diameter of furnace, top *4'-5"* bottom *4'-5"* length of furnace *7'-3"*  
 thickness of plates  $\frac{7}{16}$ " description of joint *single*  
 thickness of furnace crown plates  $\frac{1}{2}$ " stayed by *4 diagonal stays*  
 Working pressure of shell by rules *45 lbs* working pressure of furnace by rules *45, 64*  
 diameter of uptake *16"* thickness of plates  $\frac{5}{16}$ " thickness of water tubes  $\frac{6}{16}$ "

The foregoing is a correct description.

Manufacturer.

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

*These Engines and main Boilers came out of the late B.S. Tritania of Hamburg and according to Certificate in my possession, dated Hamburg 18<sup>th</sup> February 1878, signed by the "Boilerfizer", at Hamburg said Boiler then being new has been tested and found efficient for the working pressure of 65 lbs per square inch; in 1880 the vessel was lost here.*

*After inspection and last test by cold water it was found in good condition also donkey Boiler. on the last survey the machinery was under steam and found in good working order.*

*The spare gear required supplied.*

*I am of opinion that the Engines and Boilers of this vessel are worthy to be recorded favourably and a Certificate sent as requested by the owners.*

The amount of Entry Fee  $\pounds 2 : 0 : 0$  received by me,

Special  $\pounds 15 : 0 : 0$

Certificate (if required)  $\pounds - : 5 : 3$  *March 1883*

To be sent as per margin.

(Travelling Expenses, if any, &c.)

Committee's Minute

*Tuesday 6<sup>th</sup> March 1883*

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

*H. B. ...*

*Subject to*

Robert Edmund Taylor & Son, Printers, 24 Old Street, Goswell Road, London, E.C.