

# REPORT ON MACHINERY.

No. 66

No. in Survey held at *Slikkerveer* Date, first Survey *15 May* Last Survey *3 Oct. 1884*  
 Reg. Book. on the *Iron S.S. Burgemeester van Tollenhoven* (Number of Visits *10*) Tons *215*  
 Master *L. Hoogerwerf* Built at *Slikkerveer* By whom built *P. Smit Jr.* When built *1884*  
 Engines made at *Slikkerveer* By whom made *P. Smit Jr.* when made *10-84*  
 Boilers made at *d.* By whom made *d.* when made *10-84*  
 Registered Horse Power *30* Owners *Quinkersche Stoomboot Reedery* Port belonging to *Rotterdam*.

## ENGINES, &c.—

Description of Engines *Compound, Inverted Surface Condensing*  
 Diameter of Cylinders *15 1/2" x 28"* Length of Stroke *16"* No. of Rev. per minute *110* Point of Cut off, High Pressure *70%* Low Pressure *65%*  
 Diameter of Screw shaft *5"* Diam. of Tunnel shaft *4 1/2"* Diam. of Crank shaft journals *5"* Diam. of Crank pin *5"* size of Crank webs *3 3/4" x 6 1/2"*  
 Diameter of screw *6 feet* Pitch of screw *8 ft 4"* No. of blades *4* state whether moveable *not* total surface *14.5 sq ft.*  
 No. of Feed pumps *one* diameter of ditto *2 1/4"* Stroke *10"* 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 *roses in Engine room and Afterwell.*  
 No. of Donkey Engines *One* Size of Pumps *2 1/2" x 5"* Where do they pump from *Bilges as above*  
*Sea, Condensor & 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 *4"* Are they connected to condenser, or to circulating pump *to circulating pump.*  
 How are the pumps worked *by levers from L. P. Crosshead.*  
 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 *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 *last seen before launch of ship*  
 Is the screw shaft tunnel watertight *yes* and fitted with a sluice door *yes* worked from *Eng. room platform.*

## BOILERS, &c.—

Number of Boilers *One* Description *Cylindrical tubular* Whether Steel or Iron *Iron*  
 Working Pressure *80 lbs* Tested by hydraulic pressure to *160 lbs* Date of test *23 Aug. 84.* *8:40*  
 Description of superheating apparatus or steam chest *Cylindrical vertical.*  
 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 *210 sq ft* Description of safety valves *Adm's spring* No. to each boiler *two*  
 Area of each valve *7.07 sq"* Are they fitted with casing gear *one* No. of safety valves to superheater *—* area of each valve *—*  
 Are they fitted with casing gear *—* Smallest distance between boilers and bunkers *12"* Diameter of boilers *8'-6"*  
 Length of boilers *8'-9"* description of riveting of shell long. seams *lap. dbl. riv* circum. seams *lap. sq. riv* Thickness of shell plates *13/16"*  
 Diameter of rivet holes *1 1/16"* whether punched or drilled *drilled* pitch of rivets *3 1/2"* Lap of plating *4 3/4"*  
 Percentage of strength of longitudinal joint *56%* working pressure of shell by rules *84 lbs* size of manholes in shell *16" x 16"*  
 No. of compensating rings *5" x 5/8"* Double riveted No. of Furnaces in each boiler *one* (Conf. ch)  
 Outside diameter *5'-11 1/4"* length, top *6 ft* bottom *8'-1 1/2"* thickness of plates *3/8"* description of joint *Corrugated* if rings are fitted *2 belts*  
 Greatest length between rings *—* working pressure of furnace by the rules *84* combustion chamber plating, thickness, sides *1/2"* back *1/2"* top *1/2"*  
 Pitch of stays to ditto, sides *8 1/4" x 8"* back *8 3/4"* top *8 x 9"* If stays are fitted with nuts or riveted heads *riv heads* working pressure of plating by  
 rules *83* Diameter of stays at smallest part *1 1/4"* working pressure of ditto by rules *83* end plates in steam space, thickness *3/4"*  
 Pitch of stays to ditto *largest 15" x 12 1/2"* how stays are secured *nuts & wash.* working pressure by rules *89 lbs* diameter of stays at  
 smallest part *2 1/4"* *4 1 1/8"* working pressure by rules *106 & 106.* Front plates at bottom, thickness *3/4"* Back plates, thickness *3/4"*  
 Greatest pitch of stays *8 3/4"* working pressure by rules *188* Diameter of tubes *3 1/4"* pitch of tubes *4 1/4"* thickness of tube  
 plates, front *3/4"* back *3/4"* how stayed *str. tub* pitch of stays *8 1/2" x 17* width of water spaces *1"*  
 Diameter of Superheater or Steam chest *36"* length *36"* thickness of plates *1/2"* description of longitudinal joint *lap. dbl. diam. of rivet holes 3/4"*  
 Pitch of rivets *2 1/2"* working pressure of shell by rules *150* 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 *—*  
 Superheater or steam chest; how connected to boiler *dbl. riv flange.*





## DONKEY BOILER—

Description

Vertical tubular (Bearly's patent)

Made at *Barrow* by whom made *Bearly*.when made *1884* where fixed *Stokehold*.Working pressure *60* tested by hydraulic pressure to *120* No. of Certificate *47.1.9.84* grate area *40* ft description of safetyvalves *lever & weight* No. of safety valves *two* area of each *1.13.0* if fitted with easing gear *yes* if steam from main boilers can enter the donkey boiler *no* return diameter of donkey boiler *2'-9 3/4"* length *5'-11"* description of riveting *lap double*:Thickness of shell plates *3/8"* diameter of rivet holes *3/16"* whether punched or drilled *—* pitch of rivets *—* lap of plating *—* per centage of strength of joint *—* thickness of *tube* plates *1/16"* stayed by *one 1 1/2"* stay with nuts & washDiameter of furnace, top *2'-4 1/4"* bottom *0"* length of furnace *1'-9"* thickness of plates *3/8"* description of joint *—*Thickness of furnace crown plates *7/16"* stayed by *stay as above* working pressure of shell by rules *38.10 B.W.G*Working pressure of furnace by rules *250* diameter of uptake *tubes 2"* thickness of plates *—* thickness of water tubes *—*

SPARE GEAR. State the articles supplied: *2 bolts and nuts for connecting rod top and bottom ends. 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed and bilge pump valves. A quantity of assorted bolts and iron of various sizes.*

The foregoing is a correct description,

*P. Smit Jr*

Manufacturer.

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

*The materials used and the workmanship being good. The boilers and machinery proving to work very satisfactorily under a full head of steam renders this vessel eligible in my opinion to be recorded in the Society's Register book with.*

*L.M.C. 10.84 in red.*

The amount of Entry Fee .. £ *1* : received by me, }  
 Special .. £ *8* :  
 Donkey Boiler Fee .. £ *2* :  
 Certificate (if required) .. £ *2* : *6* 18

To be sent as per margin.

(Travelling Expenses, if any, £ *0-11-4*.)

Committee's Minute

TUESDAY 14 OCT 1884

*L.M.C.**W.F.D. van Alphen*

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