

## REPORT ON MACHINERY.

No. 40306

Port of Rotterdam

THUR. 14 JUL 1904

No. in Survey held at *Alblasserdam* Date, first Survey *28 May* Last Survey *2 July* 19*04*.  
Reg. Book. *S. S. Greenwood* (Number of Visits *four*)  
on the *S. S. Greenwood*  
Master Built at *Cepell & Co. Yssel* By whom built *A. Vuyk* Tons { Gross *1015.*  
Engines made at *South Shields* By whom made *G. F. Gray* Net *609.51*  
Boilers made at *D.* By whom made *G. F. Gray* When built *1904*  
Registered Horse Power *when made 1904*  
Owners *John Holman & Sons, Ltd.* when made *1904*  
Port belonging to *London*  
Nom. Horse Power as per Section 28 *Is Refrigerating Machinery fitted* *Is Electric Light fitted*

ENGINES, &c.—Description of Engines *To be fitted at South Shields* No. of Cylinders No. of Cranks  
Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule Material of screw shaft  
Is the screw shaft fitted with a continuous liner the whole length of the stern tube Is the after end of the liner made water tight  
in the propeller boss If the liner is in more than one length are the joints burned If the liner does not fit tightly at the part  
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive If two  
liners are fitted, is the shaft lapped or protected between the liners Length of stern bush  
Dia. of Tunnel shaft as per rule Dia. of Crank shaft journals as per rule Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under  
collars Dia. 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  
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room In Holds, &c. *One 2 1/2" suction in each wing in forehold*  
*One 2 1/2" suction in each wing in after hold, one 2 1/2" suction in after well.*  
No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size  
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
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 and all boiler mountings accessible at all times  
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication 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  
Is it fitted with a watertight door worked from

BOILERS, &c.—(Letter for record) Total Heating Surface of Boilers Is forced draft fitted  
No. and Description of Boilers *To be fitted at South Shields* Working Pressure Tested by hydraulic pressure to  
Date of test Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to  
each boiler Area of each valve Pressure to which they are adjusted Are they fitted with easing gear  
Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers Length Material of shell plates  
Thickness Range of tensile strength Are they welded or flanged Descrip. of riveting: cir. seams long. seams  
Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps  
Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell  
plate  
Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter  
Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings  
bottom  
Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom  
Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules  
Material of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space:  
Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays  
Diameter at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom  
Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules  
Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays  
Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and  
thickness of girder at centre Length as per rule Distance apart Number and pitch of Stays in each  
Working pressure by rules Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler worked  
separately Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet  
holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



**DONKEY BOILER—** No. *one* Description *Vertical, cylindrical with crontube*  
 Made at *Alblasserdam* By whom made *Alblasserdam Machine fabriek* When made *1904* Where fixed *Stokholm*  
 Working pressure *100* tested by hydraulic pressure to *200* No. of Certificate *207* Fire grate area *29* Description of safety valves *Spring loaded*  
 No. of safety valves *2* Area of each *7.07* Pressure to which they are adjusted *100 lb* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Dia. of donkey boiler *7'-3 3/4"* Length *12'-6"* Material of shell plates *steel* Thickness *4/16* Range of tensile strength *27-32 T* Descrip. of riveting long. seams *lap, treble rivets* Dia. of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *3 1/4"*  
 Lap of plating *6"* Per centage of strength of joint Rivets *83* Thickness of shell crown plates *3/4"* Radius of do. *4'-2 1/4"* No. of Stays to do. *7*  
 Dia. of stays *2"* Diameter of furnace Top *6'-3/8"* Bottom *6'-4 1/8"* Length of furnace *5'-7"* Thickness of furnace plates *49/64* Description of joint *welded* Thickness of furnace crown plates *3/4"* Stayed by *above stays* Working pressure of shell by rules *119 lb*  
 Working pressure of furnace by rules *122 lb* Diameter of uptake *18"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*  
**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - 28 May, 6, 17 June, 2 July 1904.  
 { During erection on board vessel - - 9 July 04  
 Total No. of visits *five*

Is the approved plan of main boiler forwarded herewith *yes*  
 " " " " " " *yes*  
 " " " " " " *yes*

**General Remarks** (State quality of workmanship, opinions as to class, &c. *The above Donkey boiler has been built in accordance with the Secretary's letter F. 6<sup>th</sup> April 1904 & E. 7 April 04. And is marked No 207. Lloyd's test 200 lb. N.V.O. 2.7.04.*

*H. F. D. van Olphen*

*Safety valves adjusted under steam to 100 lb per square inch, and boiler found sound & tight under full pressure.*

Certificate (if required) to be sent to

The amount of Entry Fee.. £ : : When applied for,  
 Special .. .. £ 2 : 2 :  
 Donkey Boiler Fee .. .. £ 2 : 2 :  
 Travelling Expenses (if any) £ : 7 :  
 When received, *£2.8.10 paid 12.7.04*

*T. N. Bernicki*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *FRI. 12 AUG 1904*  
 Assigned *21/8/04*



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