

# REPORT ON MACHINERY.

No. 1015

Port of *Amsterdam*

Received at London Office **MON. 14 MAR 1904**

Survey held at *Leiden*

Date, first Survey *25 January* Last Survey *5<sup>th</sup> March 1904.*

(Number of Visits *5*)

on the *New donkey boiler for Mr. Hughes & Co. No. 251*

Tons } Gross  
          } Net  
When built

Built at \_\_\_\_\_ By whom built \_\_\_\_\_ when made \_\_\_\_\_

\_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

\_\_\_\_\_ By whom made \_\_\_\_\_ when made \_\_\_\_\_

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

Is Refrigerating Machinery fitted \_\_\_\_\_ Is Electric Light fitted \_\_\_\_\_

## GINES, &c.—Description of Engines

No. of Cylinders	Length of Stroke	Revs. per minute	No. of Cylinders	No. of Cranks
The screw shaft fitted with a continuous liner the whole length of the stern tube				
the propeller boss If the liner is in more than one length are the joints burned				
between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive				
If two cranks are fitted, is the shaft lapped or protected between the liners				
No. of Tunnel shaft	Dia. of Crank shaft journals	Dia. of Crank pin	Size of Crank webs	Dia. of thrust shaft under
No. of Bars	Dia. of screw	Pitch of screw	No. of blades	State whether moveable
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		
Engine Room In Holds, &c.				

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 \_\_\_\_\_

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 \_\_\_\_\_

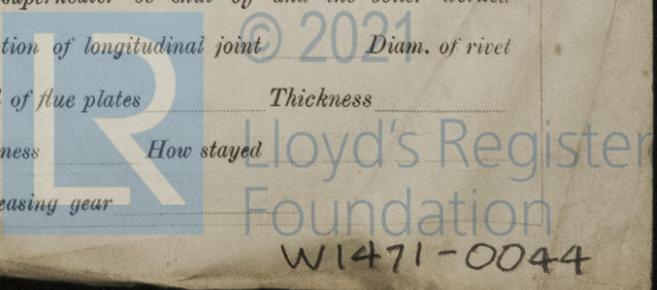
When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_ Is the screw shaft tunnel watertight \_\_\_\_\_

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	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 _____
Percentage of strength of longitudinal joint _____	Working pressure of shell by rules _____	Size of manhole in shell _____
Size of compensating ring _____	No. and Description of Furnaces in each boiler _____	Material _____
Outside diameter _____	Length of plain part _____	Thickness of plates _____
Description of longitudinal joint _____	No. of strengthening rings _____	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 _____
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 _____	Diameter _____	Length _____
Thickness of shell plates _____	Material _____	Description of longitudinal joint _____
Diam. of rivet _____	Pitch of rivets _____	Working pressure of shell by rules _____
Diameter of flue _____	Material of flue plates _____	Thickness _____
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. *69* Description *Steel Vertical boiler (Galloway type)*.  
 Made at *Sliden* By whom made *A. Klootwijk* When made *1904* Where fixed —  
 Working pressure *100 lb.* tested by hydraulic pressure to *100 lb.* No. of Certificate *69* Fire grate area — Description of safety valves —  
 No. of safety valves — Area of each — Pressure to which they are adjusted — If fitted with easing gear — If steam from main boilers can enter the donkey boiler —  
 Dia. of donkey boiler *4'-0"* Length *11'-0"* Material of shell plates *Steel* Thickness *1/2"* Range of tensile strength *28,324* Descrip. of riveting long. seams *Lap double riveted* Dia. of rivet holes *7/8"* Whether punched or drilled *drilled* Pitch of rivets *2 1/2"*  
 Lap of plating *4 1/8"* Per. centage of strength of joint *89.5%* Rivets *16* Thickness of shell crown plates *5/16"* Radius of do. *4'-6"* No. of Stays to do. *6*  
 Dia. of stays. *1 1/4"* Diameter of furnace Top *5'-9"* Bottom *6'-4 1/2"* Length of furnace *7'-6"* Thickness of furnace plates *1/4"* Description of joint *Lap* Thickness of furnace crown plates *2 7/8"* Stayed by *Six 2 1/4" stays* Working pressure of shell by rules *100 lb.*  
 Working pressure of furnace by rules — Diameter of uptake *2 1/2"* Thickness of uptake plates *1/2"* Thickness of water tubes *9 x 3/8"*

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,  
 Manufacturer. *A. Klootwijk*

Dates of Survey while building { During progress of work in shops - - } *from 25<sup>th</sup> of January till 5<sup>th</sup> of March*  
 { During erection on board vessel - - }  
 Total No. of visits *five* Is the approved plan of main boiler forwarded herewith —  
 " " " donkey " " " *Yes*

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*This donkey boiler has been made according to the Society's rules & approved plan, which is now in London Office. Material has been tested as required by rules, and the workmanship throughout good. Boiler tested to 200 lbs high pressure was found to be tight in every respect and no setting whatever. Boiler marked as under. This boiler is intended to be placed on board the S.S. No. 251 building by messrs Weyh & Capelle 1/4 Yssel.*

No 69  
 LLOYD'S TEST  
 200 lbs  
 J.B.S. 5-3-04

Certificate (if required) to be sent to the Secretaries are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	:	:	<i>March 1904</i>
Donkey Boiler Fee .. ..	£	2	2	When received,
Travelling Expenses (if any)	£	2	9.2	<i>March 1904</i>

*[Signature]*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. 8 APL 1904

Assigned

