

# REPORT ON MACHINERY.

No. 21803

Port of Glasgow

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Glasgow

Date, first Survey 18<sup>th</sup> Feb

Last Survey 18<sup>th</sup> March 1901

(Number of Visits 5)

"S.S. GERTY"

Tons { Gross 4027  
Net 3166

Master Soaveich Built at South Shields By whom built J Readhead & Sons

When built 1903

Engines made at South Shields By whom made J Readhead & Sons

when made 1903

Boilers made at do By whom made do

when made 1903

Registered Horse Power \_\_\_\_\_ Owners Gerty S. S. Co. Ltd Port belonging to Trieste

Nom. Horse Power as per Section 28 322 Is Refrigerating Machinery fitted

Is Electric Light fitted

## ENGINES, &c.—Description of Engines

Classed: + 100 H.P. + 2 M.B. 603

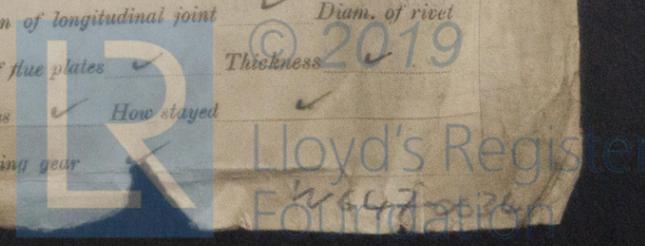
Dia. of Cylinders \_\_\_\_\_ Length of Stroke 6.03 Revs. per minute \_\_\_\_\_ No. of Cylinders \_\_\_\_\_ No. of Cranks \_\_\_\_\_  
 Dia. of Screw shaft \_\_\_\_\_ as per rule \_\_\_\_\_ as fitted \_\_\_\_\_ Material of screw shaft \_\_\_\_\_  
 Is the screw shaft fitted with a continuous liner the 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 \_\_\_\_\_ as fitted \_\_\_\_\_ Dia. of Crank shaft journals \_\_\_\_\_ as per rule \_\_\_\_\_ as fitted \_\_\_\_\_ 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. \_\_\_\_\_

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 (S) Total Heating Surface of Boilers 900 sq. ft. Is forced draft fitted

No. and Description of Boilers One single ended Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs  
 Date of test 18/3/04 Can each boiler be worked separately  Area of fire grate in each boiler 30 sq. ft. No. and Description of safety valves to each boiler 2 Spring loaded Area of each valve 3.905 Pressure to which they are adjusted 160 lbs Are they fitted with easing gear   
 Smallest distance between boilers or uptakes and bunkers or woodwork 15" Mean dia. of boilers 10" 5" Length 9' 4" Material of shell plates steel  
 Thickness 1" Range of tensile strength \_\_\_\_\_ Are they welded or flanged no Descrip. of riveting: cir. seams double long. seams treble  
 Diameter of rivet holes in long. seams 15/32" Pitch of rivets 4.48" Lap of plates or width of butt straps 13 1/2"  
 Per centages of strength of longitudinal joint: rivets 105 Working pressure of shell by rules 200 lbs Size of manhole in shell 11 1/8" x 15 3/4" plate 85  
 Size of compensating ring 6 x 1" No. and Description of Furnaces in each boiler 2 Morrison Material steel Outside diameter 37"  
 Length of plain part: top \_\_\_\_\_ bottom \_\_\_\_\_ Thickness of plates: crown \_\_\_\_\_ bottom 4.92 Description of longitudinal joint welded No. of strengthening rings   
 Working pressure of furnace by the rules 172 lbs Combustion chamber plates: Material steel Thickness: Sides .63 Back .59 Top .63 Bottom .78  
 Pitch of stays to ditto: Sides \_\_\_\_\_ Back 6.8 x 6.8 Top 7.5 x 7.5 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 264 lbs  
 Material of stays steel Area at smallest part 1.3 Area supported by each stay 46 Working pressure by rules 198 lbs End plates in steam space: Material steel Thickness .787 Pitch of stays 15 3/4 x 12 3/8 How are stays secured nuts Working pressure by rules 185 lbs Material of stays steel  
 Area at smallest part 4.4 Area supported by each stay 196 Working pressure by rules 210 Material of Front plates at bottom steel  
 Thickness 15/16 Material of Lower back plate steel Thickness 13/16 Greatest pitch of stays 13 3/8 x 6 13/16 Working pressure of plate by rules \_\_\_\_\_  
 Diameter of tubes 3 1/4" Pitch of tubes 4 3/8" x 4 3/8" Material of tube plates steel Thickness: Front 15/16 Back 7/8 Mean pitch of stays 8 3/4"  
 Pitch across wide water spaces 15" Working pressures by rules \_\_\_\_\_ Girders to Chamber tops: Material steel Depth and thickness of girder at centre 6.69 x 2.63 Length as per rule 22" Distance apart 7.86 Number and pitch of Stays in each 2 - 4.48  
 Working pressure by rules 200 lbs Superheater or Steam chest; how connected to boiler none 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. \_\_\_\_\_ 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 \_\_\_\_\_ 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 \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_

Dia. of stays \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace 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 uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - - } 1904: - February 18, 20, 24. March 2, 18.  
 { During erection on board vessel - - }  
 Total No. of visits 5.

approved plan held by owners Is the approved plan of main boiler forwarded herewith? yes.  
 Translated copy herewith.  
 " donkey " " " "

General Remarks (State quality of workmanship, opinions as to class, &c.) The scantlings of this boiler have been approved by the Committee, who have sanctioned it being put on board the steamer "Gerty" used as an auxiliary boiler, it has been repaired & retubed, & retested. In my opinion it is eligible to be classed with the main machinery, when properly fitted on board.

This boiler was salvaged from the steamer "Riddha" which was wrecked 12/07. Made by Schömer & Jensen, Lönning, 1902. having only been a few months in use.

This boiler is being fitted on board at Guoo under the inspection of the Society's Surveyor at that port.

Certificates (if required) to be sent to \_\_\_\_\_

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	2	: 2	11.5.1904
Donkey Boiler Fee .. .	£	:	:	When received, 4.6.04
Travelling Expenses (if any) £	:	:	:	31.5.04

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

Committee's Minute Glasgow 25 MAY 1904  
 Assigned Separated for completion

