

enrk. 12731

REPORT ON MACHINERY.

Port of Greenock.

Received at London Office _____ 18__

No. in Survey held at Greenock Date, first Survey 21st March Last Survey 11th May 1890
 Reg. Book. _____ (Number of Visits 8)
 on the S.S. Russell's N^o 467 (Carmichael, Maclean's N^o 30) Tons ^{Gross} _____
 Master _____ Built at Greenock By whom built Russell & Co. When built 1900.
 Engines made at Glasgow By whom made Ross & Duncan when made _____
 Boilers made at _____ By whom made _____ when made _____
 Registered Horse Power _____ Owners _____ Port belonging to _____
 Nom. Horse Power as per Section 28 _____ Is Electric Light fitted _____

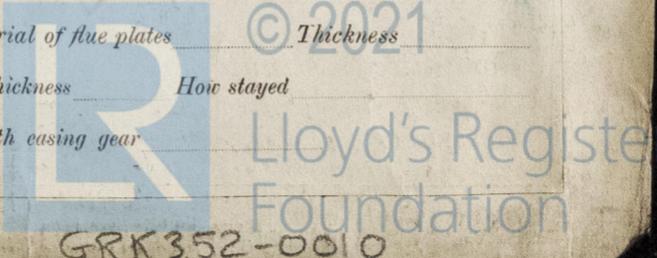
ENGINES, &c.—Description of Engines

Description of Engines		No. of Cylinders	No. of Cranks
Diameter of Cylinders	Length of Stroke	Revolutions per minute	Diameter of Screw shaft ^{as per rule}
Diameter of Tunnel shaft ^{as per rule}	Diameter of Crank shaft journals	Diameter of Crank pin	Size of Crank webs ^{as fitted}
Diameter of screw	Pitch of screw	No. of blades	State whether moveable
No. of Feed pumps	Diameter of ditto	Stroke	Total surface
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 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 <u>Yes</u>			
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates		Are they Valves or Cocks <u>Both</u>	
Are they each fitted with a discharge valve always accessible on the plating of the vessel <u>Yes</u>			
Are the blow off cocks fitted with a spigot and brass covering plate <u>Yes</u>		Are the discharge pipes above or below the deep water line	
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 <u>Before launching</u>			
Is the screw shaft tunnel watertight			
it fitted with a watertight door _____ worked from _____			

BOILERS, &c.— (Letter for record _____) Total Heating Surface of Boilers _____ Is forced draft fitted _____

Description of Boilers

Description of Boilers	Working Pressure	Tested by hydraulic pressure to
State of test	Can each boiler be worked separately	Area of fire grate in each boiler
Each boiler	Area of each valve	Pressure to which they are adjusted
Each casing gear	Smallest distance between boilers or uptakes and bunkers or woodwork	No. and Description of safety valves to
Length	Material of shell plates	Area of each valve
Diameter of rivet holes in long. seams	Thickness	Pressure to which they are adjusted
Percentages of strength of longitudinal joint	Description of riveting: circum. seams	Are they fitted
Size of compensating ring	long. seams	
Length of plain part	Pitch of rivets	Mean diameter of boilers
Working pressure of furnace by the rules	Lap of plates or width of butt straps	
Thickness of plates	Working pressure of shell by rules	
Description of longitudinal joint	Size of manhole in shell	
Combustion chamber plates: Material	No. and Description of Furnaces in each boiler	
Thickness: Sides	Material	Outside diameter
Back	Length of plain part	No. of strengthening rings
Top	Bottom	
If stays are fitted with nuts or riveted heads	Working pressure of furnace by the rules	
Working pressure by rules	Combustion chamber plates: Material	
Material of stays	Thickness: Sides	
Diameter at smallest part	Back	
Area supported by each stay	Top	
Working pressure by rules	If stays are fitted with nuts or riveted heads	
End plates in steam space:	Working pressure by rules	
Material	Material of stays	
Thickness	Working pressure by rules	
Pitch of stays	Material of Front plates at bottom	
How are stays secured	Diameter at smallest part	
Working pressure by rules	Area supported by each stay	
Material of stays	Working pressure by rules	
Material of Lower back plate	Material of Front plates at bottom	
Thickness	Working pressure of plate by rules	
Greatest pitch of stays	Material of tubes	
Working pressure of plate by rules	Pitch of tubes	
Material of tube plates	Material of tube plates	
Thickness: Front	Thickness: Front	
Back	Back	
Mean pitch of stays	Mean pitch of stays	
Working pressures by rules	Working pressures by rules	
Girders to Chamber tops: Material	Girders to Chamber tops: Material	
Depth and	Depth and	
Thickness of girder at centre	Thickness of girder at centre	
Length as per rule	Length as per rule	
Distance apart	Distance apart	
Number and pitch of Stays in each	Number and pitch of Stays in each	
Working pressure by rules	Working pressure by rules	
Superheater or Steam chest; how connected to boiler	Superheater or Steam chest; how connected to boiler	
Can the superheater be shut off and the boiler worked	Can the superheater be shut off and the boiler worked	
Material	Material	
Description of longitudinal joint	Description of longitudinal joint	
Diam. of rivet	Diam. of rivet	
Pitch of rivets	Pitch of rivets	
Working pressure of shell by rules	Working pressure of shell by rules	
Diameter of flue	Diameter of flue	
Material of flue plates	Material of flue plates	
Thickness	Thickness	
Stiffened with rings	Stiffened with rings	
Distance between rings	Distance between rings	
Working pressure by rules	Working pressure by rules	
End plates: Thickness	End plates: Thickness	
How stayed	How stayed	
Working pressure of end plates	Working pressure of end plates	
Area of safety valves to superheater	Area of safety valves to superheater	
Are they fitted with casing gear	Are they fitted with casing gear	



DONKEY BOILER— 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 _____
 Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
 Description of riveting long. seams _____ Diameter 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 - 1900. March 21. April 12. 24. May 4. 7. 9. 10. 11.
 { During erection on board vessel - -
 Total No. of visits 8.

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

ENGINES—Length of stern bush _____ Diameter of crank shaft journals _____ as per rule _____ Diameter of thrust shaft under collars _____ as fitted _____

BOILERS—Range of tensile strength _____ Are they welded or flanged _____ **DONKEY BOILERS**—No. _____ Range of tensile strength _____

Is the approved plan of main boiler forwarded herewith _____

Is the approved plan of donkey boiler forwarded herewith _____

Stern tube, screw shaft, propeller and sea connections in place and found in order.

This vessel proceeds to Glasgow to receive her machinery.

Certificate (if required) to be sent to

The Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee. £	:	:	When applied for,
Special £	:	:18.....
Donkey Boiler Fee £	:	:	When received,
Travelling Expenses (if any) £	:	:18.....

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

Committee's Minute

Assigned *See Minutes of the Glasgow Report 2^d 1888*



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