

# REPORT ON MACHINERY.

Received at London Office **MUN. 18 JUL 1910**

Date of writing Report 11th July 1910 When handed in at Local Office 13th July 1910 Port of Leith

No. in Survey held at Leith Date, First Survey 7th March Last Survey 12th July 1910  
(Number of Visits 17)

Reg. Book. 114 on the steamer "Carnduff." Tons { Gross 259.03  
Net 97.34 When built 1910

Master \_\_\_\_\_ Built at Leith By whom built Ramsey & Fryson L.A. when made 1910

Engines made at Leith By whom made Ramsey & Fryson L.A. when made 1910

Boilers made at Leith By whom made Ramsey & Fryson L.A. when made 1910

Registered Horse Power \_\_\_\_\_ Owners Howden Bros Port belonging to Belfast.

Nom. Horse Power as per Section 28 59 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

## ENGINES, &c.—Description of Engines Triple No. of Cylinders 2 No. of Cranks 2

Dia. of Cylinders 15" & 22" Length of Stroke 24" Revs. per minute \_\_\_\_\_ Dia. of Screw shaft as per rule 7 1/4" Material of screw shaft Iron  
as fitted 7 3/4"

Is the screw shaft fitted with a continuous liner the whole length of the stern tube no Is the after end of the liner made water tight in the propeller boss no

If the liner is in more than one length are the joints burned no 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 no

If two liners are fitted, is the shaft lapped or protected between the liners \_\_\_\_\_ Length of stern bush 2'-7"

Dia. of Tunnel shaft as per rule 6'-8 1/2" Dia. of Crank shaft journals as per rule 6'-7 1/2" Dia. of Crank pin 6 3/8" Size of Crank webs 4 1/2" x 11" Dia. of thrust shaft under collars 7 1/4" Dia. of screw 8'-9" Pitch of Screw 8'-9" No. of Blades 4 State whether moveable no Total surface 22 1/2'

No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 13" Can one be overhauled while the other is at work no

No. of Bilge pumps 1 Diameter of ditto 2 1/2" Stroke 13" Can one be overhauled while the other is at work no

No. of Donkey Engines 2 Sizes of Pumps 7 x 4 1/2 x 8, 4 x 4 x 5 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room one 2" In Hold, &c. two 2"

No. of Bilge Injections 1 sizes 3" Connected to condenser or to circulating pump no Is a separate Donkey Suction fitted in Engine room & size no 2"

Are all the bilge suction pipes fitted with roses no Are the roses in Engine room always accessible no Are the sluices on Engine room bulkheads always accessible no

Are all connections with the sea direct on the skin of the ship no Are they Valves or Cocks both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates no 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 no Are the Blow Off Cocks fitted with a spigot and brass covering plate no

What pipes are carried through the bunkers Hold bilge suction pipes How are they protected Stump Wood Casings

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times no

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges no

Dates of examination of completion of fitting of Sea Connections 2/6/10 of Stern Tube 2/6/10 Screw shaft and Propeller 2/6/10

Is the Screw Shaft Tunnel watertight no Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

## BOILERS, &c.—(Letter for record S) Manufacturers of Steel Columbian

Total Heating Surface of Boilers 1144 1/2 Is Forced Draft fitted no No. and Description of Boilers one simple end

Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs Date of test 2/6/10 No. of Certificate 671

Can each boiler be worked separately no Area of fire grate in each boiler 38 1/2 No. and Description of Safety Valves to each boiler 2 Spring Valves Area of each valve 4.9 1/2" Pressure to which they are adjusted 135 lbs Are they fitted with easing gear no

Smallest distance between boilers or uptakes and bunkers or woodwork 4 1/2" Mean dia. of boilers 11-6" Length 10-0" Material of shell plates S

Thickness 3/32" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams both

long. seams A.V. 1/4" Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 4" Lap of plates or width of butt straps 10 1/2"

Per centages of strength of longitudinal joint rivets 78 Working pressure of shell by rules 133 Size of manhole in shell 12 x 16

Size of compensating ring 9 1/2" dia No. and Description of Furnaces in each boiler 2 Plain Material S Outside diameter 42"

Length of plain part top 6'-6" Thickness of plates crown 3/32" Description of longitudinal joint Welded No. of strengthening rings \_\_\_\_\_

Working pressure of furnace by the rules 141 Combustion chamber plates: Material S Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 13/16"

Pitch of stays to ditto: Sides 8 1/2" x 9" Back 9" x 9" Top 8" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 135

Material of stays S Diameter at smallest part 1.45" Area supported by each stay 81" Working pressure by rules 143 End plates in steam space: Material S Thickness 7/8" Pitch of stays 16 x 16 How are stays secured to nuts Working pressure by rules 134 Material of stays S

Diameter at smallest part 3.67" Area supported by each stay 256" Working pressure by rules 148 Material of Front plates at bottom S

Thickness 7/8" Material of Lower back plate S Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 141

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates S Thickness: Front 7/8" Back 23/32" Mean pitch of stays 13 1/2" x 9"

Pitch across wide water spaces 14" Working pressures by rules 140 Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 x 1 3/8" Length as per rule 28' Distance apart 9" Number and pitch of stays in each 2, 8"

Working pressure by rules 132 Superheater or Steam chest; how connected to boiler no Can the superheater be shut off and the boiler worked separately no 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 no 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 \_\_\_\_\_

VERTICAL DONKEY BOILER— ~~Manufacturers of Steel~~ *Iron*

No. \_\_\_\_\_ Description \_\_\_\_\_

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of Safety \_\_\_\_\_

Valves \_\_\_\_\_ No. of Safety Valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ Date of adjustment \_\_\_\_\_

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 \_\_\_\_\_ Rivets \_\_\_\_\_ Plates \_\_\_\_\_

Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_

Working pressure of shell by rules \_\_\_\_\_ 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 \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_

Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_ Dates of survey \_\_\_\_\_

SPARE GEAR. State the articles supplied: *Two top end & two bottom end connecting and bolts & nuts, two main bearing bolts, one set coupling bolts, one set fuel & tiller pump valves, assorted bolts & nuts, 200 of various sizes.*

The foregoing is a correct description,

*RAMADAN & PERROUD, Limited.*  
*M. A. K. K. K.*  
 Manufacturer.

Dates of Survey while building: 1910 March 7-21-31 April 6-20-26 May 4-6-13-26 June 2-10  
 June 13-20-22-27 July 12

Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *4/5, 13/5/10* Slides *26/4, 4/5/10* Covers *26/4/10* Pistons *26/4, 13/5/10* Rods *20/4, 26/4/10*

Connecting rods *20/4, 26/4/10* Crank shaft *20/4, 26/4, 4/5/10* Thrust shaft *4/5/10* Tunnel shafts *Iron* Screw shaft *20/4, 26/5/10* Propeller *26/5/10*

Stern tube *4/5, 26/5/10* Steam pipes tested *20/6/10* Engine and boiler seatings *13/6/10* Engines holding down bolts *13/6/10*

Completion of pumping arrangements *22/6/10* Boilers fixed *13/6/10* Engines tried under steam *22/6/10*

Main boiler safety valves adjusted *22/6/10* Thickness of adjusting washers *10 7/16 inch 5 7/16 inch*

Material of Crank shaft *Iron* Identification Mark on Do. *202 GAH* Material of Thrust shaft *Iron* Identification Mark on Do. *202 GA*

Material of Tunnel shafts *Iron* Identification Marks on Do. \_\_\_\_\_ Material of Screw shafts *Iron* Identification Marks on Do. *202 GA*

Material of Steam Pipes *Copper* Test pressure *260 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c.)  
*The Machinery of this vessel has been examined under special survey. The materials and workmanship are sound and good and under the vessel fits in my opinion to have class of L.M.C 7. 10*

It is submitted that this vessel is eligible for THE RECORD. L.M.C 7. 10  
*G. R. D.*  
*19/7/10*

The amount of Entry Fee £ 1 : :  
 Special £ 8 : 17 :  
 Donkey Boiler Fee £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, *16.7.1910*  
 When received, *25.7.1910*

*G. A. Smith*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute  
 Assigned  
 TUES. 19 JUL 1910  
 + L.M.C 7. 10



Certificate (if required) to be sent to the Registrar of Shipping (The Surveyors are requested not to write on or below the space for Committee's Minute.)