Rpt. 5.

REPORT ON BOILERS.

No. 25226

Port of Glasgow Received at London Office THUR. 9 MAY 1907

No. in Reg. Book. Survey held at Glasgow Date, first Survey 25th July 06 Last Survey 1-5-1907 (Number of Visits)

on the S/S "Kazembe" Tons { Gross / Net

Master Built at Glasgow By whom built Alex Stephen & Sons Ld When built 1907

Engines made at Glasgow By whom made Alex Stephen & Sons Ld (421) when made 1907

Boilers made at ditto By whom made ditto (421) when made 1907

Registered Horse Power Owners Port belonging to

MULTITUBULAR BOILERS ~~MAIN~~, **AUXILIARY** ~~OR DONKEY~~.—Manufacturers of Steel Clydebridge & Caldebank

(Letter for record S.) **Total Heating Surface of Boilers** 1810 # Is forced draft fitted No **No. and Description of Boilers** One Single Ended **Working Pressure** 180 lb Tested by hydraulic pressure to 360 lb Date of test 14.3.07

No. of Certificate 8798 Can each boiler be worked separately Yes **Area of fire grate in each boiler** 52 # No. and Description of safety valves to each boiler 2 Double Springs Area of each valve 4.91 Pressure to which they are adjusted 180 lb

Are they fitted with easing gear Yes In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler —

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boilers 13'-6" Length 10'-6"

Material of shell plates S Thickness 17/64" Range of tensile strength 28-32 Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams Double long. seams T R. DBS Diameter of rivet holes in long. seams 15/32 Pitch of rivets 8 3/16"

~~Lap of plates or~~ width of butt straps 14 1/4" Per centages of strength of longitudinal joint rivets 86.2 plate 86.0 Working pressure of shell by rules 182 Size of manhole in shell 16 x 12" Size of compensating ring N-Neil **No. and Description of Furnaces in each boiler** 3 Deighton Material S Outside diameter 3'-6" Length of plain part top / bottom ✓ Thickness of plates crown / bottom 1/2"

Description of longitudinal joint welded No. of strengthening rings ✓ Working pressure of furnace by the rules 180 lb Combustion chamber plates: Material S Thickness: Sides 5/8" Back 5/8" Top 19/32" Bottom 3/4" Pitch of stays to ditto: Sides 8 1/2 x 8 3/4 Back 8 1/2 x 8 3/4

Top 8 1/2 x 7 3/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181 lb Material of stays S ~~Diameter~~ Section at smallest part 1.78" Area supported by each stay 8 1/2 x 8 3/4 Working pressure by rules 215 lb End plates in steam space: Material S Thickness 1 1/16"

Pitch of stays 19 x 14" How are stays secured D.N. Working pressure by rules 182 lb Material of stays S ~~Diameter~~ Section at smallest part 5.56

Area supported by each stay 19" x 14" Working pressure by rules 208 lb Material of Front plates at bottom S Thickness 7/8" Material of Lower back plate S Thickness 7/8" 27/32 Greatest pitch of stays 14" Working pressure of plate by rules 181 lb Diameter of tubes 3"

Pitch of tubes 4 1/8 x 4 1/8" Material of tube plates S Thickness: Front 7/8" Back 27/32" Mean pitch of stays 11 5/16" Pitch across wide water spaces 14" (5/8 Doubling) Working pressures by rules 180 lb Girders to Chamber tops: Material S Depth and thickness of girder at centre 7 x 1 3/4 Length as per rule 27' Distance apart 7 3/4" Number and pitch of Stays in each 2 — 8 1/2"

Working pressure by rules 219 lb 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

VERTICAL DONKEY BOILER— No. Description Manufacturers of steel 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 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 / Plates 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 Radius of do. Stayed by Diameter of uptake Thickness of uptake plates Thickness of water tubes

The foregoing is a correct description,
Alex. Stephen & Sons Ltd
Alex. Scott, Secy. Manufacturer.

Dates of Survey while building { During progress of work in shops - - / During erection on board vessel - - - } See accompanying report

Total No. of visits

Is the approved plan of main boiler forwarded herewith ✓

" " " donkey " " " ✓

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?

[Imp. Copyable Ink.]

GENERAL REMARKS (*State quality of workmanship, opinions as to class, &c.* This Boiler has been made under Special Survey in accordance with the approved plans & the Requirements of the Rules. The workmanship & material were found good. This Report accompanies that on the Engine & Boilers.

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

Certificate (if required) to be sent to.....

The amount of Entry Fee...	£	:	:	When applied for, ...19.....
Special	£	:	:	
Donkey Boiler Fee ...	£	:	:	When received, ...19.....
Travelling Expenses (if any))	£	:	:	

Glasgow - 7 MAY 1907

Committee's Minute

Assigned See accompanying report.

Wm Gordon Murchland

Engineer Surveyor to Lloyd's Register of British and Foreign Shipping