

20 FEB 1928

Date of writing Report *18/2 1928* When handed in at Local Office *18/2/ 1928* Port of *Leith*No. in Survey held at *Leith*
Reg. Book.Date, First Survey *December 30, 1926* Last Survey *16 February 1928*
(Number of Visits *41*)on the *T. S. S. Vyner Brooke*Master ☒ Built at *Leith* By whom built *Ramage & Ferguson Ltd* When built *1928*Engines made at *Leith* By whom made *Ramage & Ferguson Ltd (Leith)* when made *1928*Boilers made at *Glasgow* By whom made *Barclay Curle & Co Ltd (R.F.S.)* when made *1927*Registered Horse Power *297* Owners *Sarawak S. S. Co Ltd* Port belonging to *Kuching*Nom. Horse Power as per Section 28 *297* Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒

ENGINES, &c.—Description of Engines *Triple Expansion* No. of Cylinders *6* No. of Cranks *6*
Dia. of Cylinders *16", 27", 44"* Length of Stroke *30"* Revs. per minute *94/120* Dia. of Screw shaft *8-8 1/2"* Material of screw shaft *Steel*
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 *36"*
Dia. of Tunnel shaft *7-9 1/8"* Dia. of Crank shaft journals *8-3 1/2"* Dia. of Crank pin *8 7/8"* Size of Crank webs *5 3/8" x 6 3/8"* Dia. of thrust shaft under collars *8 1/2"* Dia. of screw *10-0"* Pitch of Screw *13-0"* No. of Blades *4* State whether moveable ☒ Total surface *33 sq ft*
No. of Feed pumps *2 main* Diameter of ditto *6" x 4"* Stroke *12"* Can one be overhauled while the other is at work ☒
No. of Bilge pumps *2 on each Eng.* Diameter of ditto *3"* Stroke *15"* Can one be overhauled while the other is at work ☒
No. of Donkey Engines *4* Sizes of Pumps *6" x 6" x 6": 8" x 5 1/2" x 8": 4 1/2" x 3 1/2" x 4": 5 1/4" x 3 1/4" x 5"* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *2 Blk Rooms: 2-2": 3-2 1/4": 1 independent 3 1/4"* In Holds, &c. *Nº 1 1-2": Nº 2 3-2 1/2": Nº 3 1-2 1/2"*
Tunnel Hull 1-2 1/4"
No. of Bilge Injections *2* sizes *5"* Connected to condenser, or to circulating pump ☒ Is a separate Donkey Suction fitted in Engine room & size *yes - 3 1/4"*
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 *both*
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 *above*
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 *none* 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 ☒
Is the Screw Shaft Tunnel watertight ☒ Is it fitted with a watertight door ☒ worked from *upper deck.*

BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *Wm Beardmore & Co Ltd*
Total Heating Surface of Boilers *4390 sq ft* Is Forced Draft fitted ☒ No. and Description of Boilers *2 Single Ended*
Working Pressure *180 lbs* Tested by hydraulic pressure to *300 lbs* Date of test *2.11.27* No. of Certificate *17667*
Can each boiler be worked separately ☒ Area of fire grate in each boiler *60-48 sq ft* No. and Description of Safety Valves to each boiler *double spring loaded* Area of each valve *7-06 sq in* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear ☒
Smallest distance between boilers or uptakes and bunkers or woodwork *abt 13"* Mean dia. of boilers *36"* Length *12'* Material of shell plates *Steel*
Thickness *3/16"* Range of tensile strength *45,000 lbs* Are the shell plates welded or flanged ☒ Descrip. of riveting: cir. seams *yes*
long. seams *yes* Diameter of rivet holes in long. seams *3/16"* Pitch of rivets *2"* Lap of plates or width of butt straps *1"*
Per centages of strength of longitudinal joint *85%* Working pressure of shell by rules *180 lbs* Size of manhole in shell *18"*
Size of compensating ring *18"* No. and Description of Furnaces in each boiler *2* Material *Steel* Outside diameter *36"*
Length of plain part *10'* Thickness of plates *3/16"* Description of longitudinal joint *butt* No. of strengthening rings *2*
Working pressure of furnace by the rules *180 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *3/16"* Back *3/16"* Top *3/16"* Bottom *3/16"*
Pitch of stays to ditto: Sides *12"* Back *12"* Top *12"* If stays are fitted with nuts or riveted heads ☒ Working pressure by rules *180 lbs*
Material of stays *Steel* Area at smallest part *12"* Area supported by each stay *12"* Working pressure by rules *180 lbs* End plates in steam space: *yes*
Material *Steel* Thickness *3/16"* Pitch of stays *12"* How are stays secured *by nuts* Working pressure by rules *180 lbs* Material of stays *Steel*
Area at smallest part *12"* Area supported by each stay *12"* Working pressure by rules *180 lbs* Material of Front plates at bottom *Steel*
Thickness *3/16"* Material of Lower back plate *Steel* Thickness *3/16"* Greatest pitch of stays *12"* Working pressure of plate by rules *180 lbs*
Diameter of tubes *2"* Pitch of tubes *12"* Material of tube plates *Steel* Thickness: Front *3/16"* Back *3/16"* Mean pitch of stays *12"*
Pitch across wide water spaces *12"* Working pressures by rules *180 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness of girder at centre *12"* Length as per rule *12"* Distance apart *12"* Number and pitch of stays in each *12"*
Working pressure by rules *180 lbs* Steam dome: description of joint to shell *butt* % of strength of joint *85%*
Diameter *12"* Thickness of shell plates *3/16"* Material *Steel* Description of longitudinal joint *butt* Diam. of rivet holes *3/16"*
Pitch of rivets *2"* Working pressure of shell by rules *180 lbs* Crown plates *yes* Thickness *3/16"* How stayed *yes*

UPERHEATER. Type *Horizontal* Date of Approval of Plan *2.11.27* Tested by Hydraulic Pressure to *180 lbs*
Date of Test *2.11.27* Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ☒
Diameter of Safety Valve *1 1/2"* Pressure to which each is adjusted *180 lbs* Is Easing Gear fitted ☒

IS A DONKEY BOILER FITTED? *yes* ✓

If so, is a report now forwarded? *yes* ✓

SPARE GEAR. State the articles supplied:— 2 Connecting rod top end bolts & nuts: 2 Connecting rod bottom end bolts & nuts: 2 main bearing bolts: 1 set of coupling bolts: 1 set of feed & bilge pump valves: a quantity of assorted bolts & nuts: iron of various sizes ✓

The foregoing is a correct description,

Edw. Stewar

Manufacturer.

Dates of Survey while building
During progress of work in shops -- 1926 1927
During erection on board vessel --
Total No. of visits 41

Is the approved plan of main boiler forwarded herewith *yes* ✓

" " " donkey " " " *yes* ✓

Dates of Examination of principal parts—Cylinders 12.4.27 Slides 12.4.27 Covers 12.4.27 Pistons 17.5.27 Rods 21.7.27
Connecting rods 21.6.27 Crank shaft 21.7.27 Thrust shaft 5.10.27 Tunnel shafts 21.7.27 Screw shaft 5.10.27 Propeller 19.10.27
Stern tube 19.10.27 Steam pipes tested 30.11.27 Engine and boiler seatings 3.11.27 Engines holding down bolts 28.11.27

Completion of pumping arrangements 10.2.28 Boilers fixed 28.11.27 Engines tried under steam 10.2.28

Completion of fitting sea connections 9.11.27 Stern tube 9.11.27 Screw shaft and propeller 9.11.27

Main boiler safety valves adjusted 19.1.28 Thickness of adjusting washers Port BL $\frac{17}{32}$ " : Star BL $\frac{17}{32}$ "

Material of Crank shaft *steel* Identification Mark on Do. 1476 Material of Thrust shaft *steel* Identification Mark on Do. 1624

Material of Tunnel shafts *steel* Identification Marks on Do. 1627 Material of Screw shafts *steel* Identification Marks on Do. 1623

Material of Steam Pipes *Copper* ✓ Test pressure 360 lbs per sq. in.

Is an installation fitted for burning oil fuel *no* ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case *no* ✓ If so, state name of vessel ✓

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

The machinery of this Vessel has been built under special survey, the material & workmanship are good and proved satisfactory on Steam Trial. The safety valves have been adjusted to 180th pressure under steam. It is submitted that this Vessel be eligible to a record of + LMC 2-28 in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD. + LMC 2.28. FD. CL.

W.D. J.
20/2/28.

The amount of Entry Fee ... £ 4 : - :
Special ... £ 42 : 8 :
Donkey Boiler Fee ... £ 27 : 3 :
Travelling Expenses (if any) £

When applied for, 18/2 1928

When received, 21.2.28

A.T. Thomas
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES. 21 FEB 1928 ✓

Assigned + LMC 2.28

CERTIFICATE WRITTEN



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Foundation