

REPORT ON MACHINERY.

Received at London Office

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* Date, First Survey *December 30, 1926* Last Survey *6 February 1928*

Reg. Book. on the *T. S. S. Vynes Brooke* (Number of Visits *41*)

Tons Gross *1669.76* Net *712.52* When built *1928*

Master Built at *Leith* By whom built *Ramage & Ferguson Ltd*

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.3)* when made *1927*

Registered Horse Power 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 *110* Dia. of Screw shaft as per rule *8.81* 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 as per rule *7.98* Dia. of Crank shaft journals as per rule *8.37* Dia. of Crank pin *8 7/8"* Size of Crank webs *5 3/8" x 16 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* Diameter of ditto *6" x 4"* Stroke *18"* 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", 3 1/2" x 3 1/2" 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 1/2"* In Holds, &c. *N°1 1-2", N°2 3-2 1/2", N°3 1-2 1/2"*

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 cessel 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 opening boiler*

Area of each valve *7.06 sq ft* 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 Length Material of shell plates

Thickness Range of tensile strength Are the shell plates welded or flanged Descrip. of riveting: cir. seams

long. seams Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

Per centages of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

Size of compensating ring No. and Description of Furnaces in each boiler Material Outside diameter

Length of plain part top Thickness of plates crown Description of longitudinal joint No. of strengthening rings

Working pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

Pitch of stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

Material of stays Area at smallest part Area supported by each stay Working pressure by rules End plates in steam space:

Material Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

Area at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Thickness Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

Diameter of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

Pitch across wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

thickness of girder at centre Length as per rule Distance apart Number and pitch of stays in each

Working pressure by rules Steam dome: description of joint to shell % of strength of joint

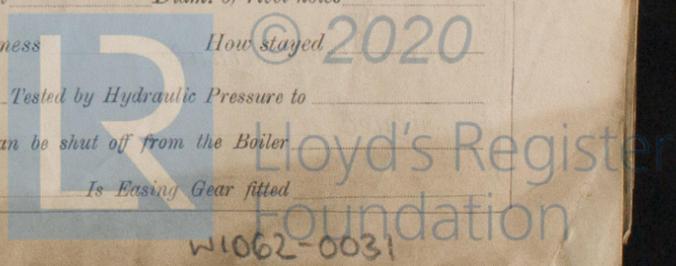
Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted



W1062-0031

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. Stewart

Manufacturer.

Dates of Survey while building	During progress of work in shops -- During erection on board vessel --- Total No. of visits	1926 Dec 30: Jan 27. Feb 21. Nov 14. Apr. 2. May 17. 23. 30. June 9. 21. July 21. 22. Aug 3. 17. Apr 2. 14. 20. 24. 10. 1927	
		1927 Mar 14. 15. 21. 24. 28. 29. 30. Dec 1. 7. 8. 14. 16. 22. 28. Jan 5. 11. 19. 30. Feb 1. 10. 16.	
		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 17/32; Star BL 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. *1626* Material of Screw shafts *steel* Identification Marks on Do. *1622*
 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 180^{lbs} 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.

Edw. Stewart
20/2/28.

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

The amount of Entry Fee ...	£ 4 : -	When applied for, 18/2 19 28
<i>One Rate</i>	42 8	
Special	27 3	
<i>One Rate for Donkey Boiler Fee</i>	See Report	
Travelling Expenses (if any) £		When received, 21.2.28

Committee's Minute **TUES. 21 FEB 1928** ✓

Assigned *+ LMC 2:28*

CERTIFICATE WRITTEN



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