Rpt. 4.

REPORT ON MACHINERY.

No. 18247

Date of writing Report 12 - 5 - 1924 When handed in at Local Office 20th June 1924 Port of GREENOCK Received at London WED. JUL 2 1924

No. in Reg. Book. Survey held at Greenock Date, First Survey 31st October 1919 Last Survey 6th June 1924 (Number of Visits 189.)

on the S/S "Liscomore"

Tons Gross 606 Net 238

Master Built at Ardrossan By whom built Ardrossan Sh. B. Co. L. (S/S 333) When built 1924

Engines made at Greenock By whom made John G Kincaid & Co. Ld. (esc 530) 605 when made 1924

Boilers made at ditto By whom made ditto (esc 530) 605 when made 1924

Registered Horse Power Owners Port belonging to

Nom. Horse Power as per Section 28 142 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3

Dia. of Cylinders 18"-30"-50" Length of Stroke 33 Revs. per minute 90 Dia. of Screw shaft as per rule 9.88 9.93 as fitted 10 3/4 Material of screw shaft S

Is the screw shaft fitted with a continuous liner the whole length of the stern tube Yes Is the after end of the liner made water tight in the propeller boss Yes 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 43"

Dia. of Tunnel shaft as per rule 9.03 as fitted 9 1/8" Dia. of Crank shaft journals as per rule 9.48 as fitted 9 3/4" Dia. of Crank pin 9 3/4" Size of Crank webs 18"x6" Dia. of thrust shaft under collars 9 3/4" Dia. of screw 11.8" Pitch of Screw 14.6" No. of Blades 4 State whether moveable no Total surface 53 □'

No. of Feed pumps 2 Diameter of ditto 2 1/2" Stroke 18 Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2. Sizes of Pumps Ballast 7"x8"x8" General Service 7"x5"x10" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room 3. 2" Bunker 1. 2 1/2 In Holds, &c. Fore Hold 1. 2 1/2 Fore Hold Well 1. 3"

After Hold 1. 2 Tunnel Well 1. 2 1/2"

No. of Bilge Injections one sizes 4 1/2" Connected ~~to condenser, or~~ to circulating pump pump Is a separate Donkey Suction fitted in Engine room & size Yes 2 1/2"

Are all the bilge suction pipes fitted with roses Yes 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 Yes Are the Discharge Pipes above or below the deep water line below

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers Bilge Suctions How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges Yes

Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from T Eng R. Platform

BOILERS, &c.—(Letter for record S) Manufacturers of Steel Spencer, Steel Co. of Scotland, Glas I S Steel Co.

Total Heating Surface of Boilers 2886 □' Is Forced Draft fitted no No. and Description of Boilers Two Single Ended 2 SB.

Working Pressure 180 Tested by hydraulic pressure to 360 Date of test 21. 4. 24 No. of Certificate 1637

Can each boiler be worked separately Yes Area of fire grate in each boiler 48.56 □' No. and Description of Safety Valves to each boiler Double Spring Area of each valve 4.91 □" Pressure to which they are adjusted 185 Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 10" Mean dia. of boilers 13'.0" Length 10'-6" Material of shell plates S

Thickness 1 1/16" Range of tensile strength 28/32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR long. seams TR. DBS Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 8" ~~Lap of plates or~~ width of butt straps 16 7/8"

Per centages of strength of longitudinal joint rivets 86.98 % plate 85.93 % Working pressure of shell by rules 182 Size of manhole in shell 16"x12"

Size of compensating ring 2. 7 3/4 x 2. 3 3/4 x 1 1/16" No. and Description of Furnaces in each boiler 3 Corrugated Material S Outside diameter 41 1/4"

Length of plain part top bottom ✓ Thickness of plates crown bottom 1/2" Description of longitudinal joint weld No. of strengthening rings —

Working pressure of furnace by the rules 184 Combustion chamber plates: Material S Thickness: Sides 5/8 Back 5/8" Top 5/8 Bottom 11/16"

Pitch of stays to ditto: Sides 8 3/4 x 8 1/2" Back 8 7/8 x 8 3/8" Top 8 3/4 x 8 1/2 If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181

Material of stays S Area at smallest part 1.79 □" Area supported by each stay 77.4 □" Working pressure by rules 217 End plates in steam space: Material S Thickness 1 1/4" Pitch of stays 22 5/8 x 14 1/2 How are stays secured D N. Washers Working pressure by rules 181 Material of stays S

Area at smallest part 6.90 □" Area supported by each stay 396 □" Working pressure by rules 181 Material of Front plates at bottom S

Thickness 1" Material of Lower back plate S Thickness 13/16" Greatest pitch of stays 13" Working pressure of plate by rules 184

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2 x 4 7/16" Material of tube plates S Thickness: Front 1 Back 3/4" Mean pitch of stays 10 3/8"

Pitch across wide water spaces 14" Working pressures by rules 183 Girders to Chamber tops: Material S Depth and thickness of girder at centre 8 5/8 x 1 3/8" Length as per rule 30 5/8 Distance apart 8 3/4" Number and pitch of stays in each 2 at 8 1/2

Working pressure by rules 184 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

No. of Visits 39

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

...neek

W709-0079

IS A DONKEY BOILER FITTED? No ✓ If so, is a report now forwarded? —

SPARE GEAR. State the articles supplied :— 2 Connecting Rod bolts & nuts for top End ditto for bottom end ✓ 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,
FOR JOHN G. KINCAID & COY., LIMITED.
Robert Greer
~~Secretary.~~ Manufacturer.

Dates of Survey while building
During progress of work in shops - - / During erection on board vessel - - -
1918· Oct 31· Nov 7·14· Dec: 25· 1919· Jan 13·20·31· Feb 5·11·20·26·28· Mar 3·28· Apl 10·30· May 5· June 9· Aug 8·13·15·18·26·27· Sept 1·2·5·11·13·19·24·
Oct 13·15·17·23·29· Nov 4·5·6·21·27· Dec: 1·5·9·19·24·29· 1920· Jan 7·22·29· Feb 2·4·16·18·20·23·26·27· Mar 2·5·9·11·15·17·19·23·25·29· Apl 5·13·15·19·
23·30· May 3·11· June 7·9·17·21·23· Aug 23·25·30· Sept 2·4·7·13·15·17·22·23·27· Oct 1·5·8·13·19·20·25·27· Nov 2·16·19·23·26· Dec: 7·9·10·13·17·21·28·28·
1921 Jan 13·18·21·25·26·28· Feb 1·4·8·10·14·16·18·22·25· Mar 1·7·9·11·18·22·30· Apl 7· May 2·11·14· July 25· 1922 July 19· Dec: 18·21· 1923 Jan 18·22·26· Apr 24·30·
May 18·21·28·30· June 5·11·18·20· July 23·30· Oct 22·26·31· Nov 7·12 Dec: 13·14·27· 1924· Jan 9·21· Feb 4·6·18·27· Mar 17·27· Apr 3·10·18·21·23· May 1·6·8·12·14·15·20·2[illegible]
Total No. of visits Gls June 6 189. Is the approved plan of main boiler forwarded herewith Yes ✓
" " " donkey " " "

Dates of Examination of principal parts—Cylinders 27. 12. 23 Slides 18 - 2 - 24 Covers 27. 12. 23 Pistons 18. 2 - 24 Rods 18. 2. 24
Connecting rods 19-11-20 Crank shaft 26. 2. 20 Thrust shaft 10. 4 - 24 Tunnel shafts 27. 3 - 24 Screw shaft 27. 3 - 24 Propeller 3. 4. 24
Stern tube 14. 3. 24 Steam pipes tested 12. 5. 24 Engine and boiler seatings see Gls Rept. Engines holding down bolts 12. 5. 24
Completion of pumping arrangements 20 - 5 - 24 Boilers fixed 20. 5 - 24 Engines tried under steam 19. 6 - 24
Completion of fitting sea connections see Gls Rept Stern tube see Gls Rept Screw shaft and propeller see Gls Rept
Main boiler safety valves adjusted 20. 5. 24 Thickness of adjusting washers PB P 5/16 S 7/16" SB P 13/32 S 5/16"
Material of Crank shaft S Identification Mark on Do. LLOYDS J9 605 Material of Thrust shaft S Identification Mark on Do. LLOYDS 780 342 JJ
Material of Tunnel shafts S Identification Marks on Do. LLOYDS 3428 J. Material of Screw shafts S Identification Marks on Do. LLOYDS 2313 WGM
Material of Steam Pipes Iron ✓ Test pressure 540 lbs ✓
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. These Engines & Boilers have been built under Special Survey in accordance with the approved plans & the workmanship & material are of good quality, they have now been securely fitted on board tried under steam & found satisfactory
The Machinery is eligible in my opinion for the record of ✠ LMC 6-24

It is submitted that this vessel is eligible for THE RECORD. + LMC 6. 24. CL.
[initials] 7/7/24

The amount of Entry Fee ...	£ 3 : — :	When applied for, 20 - 6 - 1924.
Special	£ 43 : — :	
Donkey Boiler Fee ...	£ : :	When received, 30 · 6 · 24
Travelling Expenses (if any) See Gls Rept	£ : — :	

Wm. Gordon-Munchin
Engineer Surveyor to Lloyd's Register of Shipping.

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

Committee's Minute GLASGOW [initials] 1924 TUES. 22 JUL 1924

Assigned + LMC 6,24 WJM.

CERTIFICATE WRITTEN 6. 8. 24