

Date of writing Report 16<sup>th</sup> Jan 1918 When handed in at Local Office 10 Port of NEWCASTLE ON TYNE  
 No. in Survey held at Newcastle Date, First Survey 30<sup>th</sup> Mar 1915 Last Survey 16<sup>th</sup> Jan 1918  
 Reg. Book. on the S.S. "Wellingtonia" (Number of Plates 3228)

Built at Newcastle By whom built Johnston & Co. When built 1918  
 Engines made at Newcastle By whom made H. E. Mainwaring & Co. No. 2218 when made 1918  
 Boilers made at do By whom made do when made 1918

Registered Horse Power 298 Owners Essex Shipping Co. Ltd. Port belonging to Newcastle  
 Nom. Horse Power as per Section 28 298 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 24"-40"-65" Length of Stroke 42" Revs. per minute 60 Dia. of Screw shaft as per rule 12.4.2" Material of Iron  
 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 Yes 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 Yes If two  
 liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-2"  
 Dia. of Tunnel shaft as per rule 11.8.3" Dia. of Crank shaft journals as per rule 12.4.2" Dia. of Crank pin 12 5/8" Size of Crank webs 20 1/4" x 23 1/4" Dia. of thrust shaft under  
 collars 12 5/8" Dia. of screw 16'-9" Pitch of Screw 17'-6" No. of Blades 4 State whether moveable No Total surface 87 f  
 No. of Feed pumps 2 Diameter of ditto 3 1/4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 3 1/2" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 2 Sizes of Pumps 7 1/4" x 9" x 10" + 7 1/2" x 5" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room Four 3" In Holds, &c. No. 1 hold 2-3", No. 2 hold 2-3",  
No. 4 hold 2-3", No. 5 hold 2, 2 1/2", Hold Well 1-3 1/2", Tunnel Well 1-2 1/2"  
 No. of Bilge Injections 1 sizes 6" Connected to condenser, or to circulating pump Yes Is a separate Donkey Suction fitted in Engine room & size Yes 3 1/2"  
 Are all the bilge suction pipes fitted with roses Yes Are the roses in Engine room always accessible Yes Are the sluices on Engine room bulkheads always accessible None  
 Are all connections with the sea direct on the skin of the ship Yes 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 Above  
 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 suction to forehold How are they protected Wood casing  
 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  
 Dates of examination of completion of fitting of Sea Connections 2-11-17 of Stern Tube 2-11-17 Screw shaft and Propeller 4-12-17  
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Lap platform

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel J. Spence & Sons  
 Total Heating Surface of Boilers 4618 f Is Forced Draft fitted No No. and Description of Boilers 2 - single-ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 6-2-17 No. of Certificate 8931  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 59 f No. and Description of Safety Valves to  
 each boiler Two, Spring Area of each valve 7.07 sq Pressure to which they are adjusted 185 lbs Are they fitted with easing gear Yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 18" Mean dia. of boilers 15'-3 1/4" Length 10'-6" Material of shell plates Steel  
 Thickness 1 5/32" Range of tensile strength 29 3/4 - 33 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams 3 Lap  
 long. seams 8 BS & Rivet Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 9" Lap of plates or width of butt straps 18 1/2"  
 Per centages of strength of longitudinal joint 88-4 Working pressure of shell by rules 180 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Heightone Material Steel Outside diameter 49"  
 Length of plain part top 9 1/16" Thickness of plates bottom 9 1/16" Description of longitudinal joint Welded No. of strengthening rings 1  
 Working pressure of furnace by the rules 180 lbs Combustion chamber plates: Material Steel Thickness: Sides 23 1/32" Back 23 1/32" Top 23 1/32" Bottom 1 1/32"  
 Pitch of stays to ditto: Sides 10 1/2" x 9 3/8" Back 10 1/4" x 9 1/2" Top 10 1/2" x 9 3/8" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 180 lbs  
 Material of stays Steel Diameter at smallest part 2.03" Area supported by each stay 98.4 sq Working pressure by rules 185 lbs End plates in steam space:  
 Material Steel Thickness 1 1/16" Pitch of stays 26 3/8" x 24" How are stays secured 8 N & W Working pressure by rules 181 lbs Material of stays Steel  
 Diameter at smallest part 11.04" Area supported by each stay 633 sq Working pressure by rules 181 lbs Material of Front plates at bottom Steel  
 Thickness 1" Material of Lower back plate Steel Thickness 29 1/32" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 182 lbs  
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 3/8" Material of tube plates Steel Thickness: Front 1" Back 3/4" Mean pitch of stays 8 7/8"  
 Pitch across wide water spaces 14 1/2" Working pressures by rules 182 lbs Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 8" x 1 1/2" Length as per rule 3'0" Distance apart 9 3/8" Number and pitch of stays in each 2-10 1/2"  
 Working pressure by rules 187 lbs Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 If stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes



yes ✓

yes

*SPARE GEAR.*

State the articles supplied:—

Two top end, two bottom end & two  
nuts, a set of coupling bolts, a set  
of valves, a quantity of assorted bolts  
etc.

*The foregoing is a correct description.*

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LD.

*S. J. Harrison*

*Manufacturer.*

		1915	1916
Dates of Survey while building	During progress of work in shops - -	Mar 30. Jul. 14. 21. Aug. 19. 23. Dec. 23. 24	Jan 7. 28. April 14. 18. 27. May 8. 10. 26. June 13. 20.
	During erection on board vessel - - -	Jul. 12. Aug. 23. Sep. 25. 28. Oct. 6. 16. Nov. 9. 13. 16. 20. 24. 27. Dec. 7. 11. 22. 1917 Jan. 12. 19. 25. 26. 29. Feb. 5. 6. 13. Mar. 2. 5. 6. 7. 9. May 1. 2. 3. 29. Jun. 19. 22. 25. Jul. 30. Aug. 2. 28. Sep. 12. 13. 17. 19. Oct. 10.	
	Total No. of visits	70	Is the approved plan of main boiler forwarded herewith

Is the approved plan of main boiler forwarded herewith

donkey

Dates of Examination of principal parts—Cylinders 23-8-15 Slides 13-2-17 Covers 12-7-16 Pistons 12-7-16 Rods 12-7-16  
Connecting rods 12-7-16 Crank shaft 23-8-16 Thrust shaft 3-5-17 Tunnel shafts 19-9-17 Screw shaft 17-9-17 Propeller 25-6-17  
Stern tube 5-3-17 Steam pipes tested 19-12-17 Engine and boiler seatings 10-12-17 Engines holding down bolts 18-12-17  
Completion of pumping arrangements 21-12-17 Boilers fixed 18-12-17 Engines tried under steam 21-12-17  
Main boiler safety valves adjusted 21-12-17 Thickness of adjusting washers P.B.  $P \frac{7}{32}$  S  $\frac{7}{32}$  S.B.  $P \frac{3}{8}$  S  $\frac{5}{16}$   
Material of Crank shaft Steel Identification Mark on Do. L.H. 8-16 Material of Thrust shaft Steel Identification Mark on Do. L.H. 5-17  
Material of Tunnel shafts Steel Identification Marks on Do. L.H. 9-17 Material of Screw shafts Iron Identification Marks on Do. L.H. 9-17  
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*

Yes ✓ If so, state name of vessel S. S. "Camsewan"

**General Remarks** (State quality of workmanship, opinions as to class, &c. The engines & boilers of this vessel have been constructed under special survey & the materials & workmanship are found to be good. The engines have been tried under steam & the safety valves adjusted. The machinery is now in good & safe working condition & eligible in my opinion to have the notation of +LMC 1-18. A report on the electric installation will be forwarded when received from the Electricians. (forwarded herewith "2-18")

It is submitted that  
this vessel is eligible for  
THE RECORD. + L M C T. 18.

JUD. 13/24/18

The amount of Entry Fee ...	£ 2 : 0 0	} When applied for. <b>11 FEB 1918</b> 19 .....
Special ...	£ 34 : 18 0	
Donkey Boiler Fee ...	£ .....	
Travelling Expenses (if any) £	.....	
		When received. 13-2-1918

When applied for,  
1 FEB 1918

When received, ...  
3-7-18

Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. 15 FEB. 1918

Assigned \_\_\_\_\_ + Lm 6.118

8. **MACHINERY CERTIFICATE**  
**WRITTEN**



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Foundation