

REPORT ON MACHINERY

No. 13196

Received at London Office FRI. NOV. 10 1922

Date of writing Report 19 When handed in at Local Office 9. 11. 22 Port of Aberdeen

No. in Survey held at Aberdeen Date, First Survey 13th January 1921 Last Survey 5th November 1922
 Reg. Book. 48884 in Supp the (Number of Visits 1/0)

S.S. "ELAINE LLEWELLYN" Tons } Gross 2141
 Net 1336

Master ✓ Built at Aberdeen By whom built John Lewis & Sons Ltd No 88 When built 1922

Engines made at Aberdeen By whom made John Lewis & Sons Ltd No 159 when made 1922

Boilers made at do By whom made do do No 121+3 when made 1922

Registered Horse Power 230 Owners Llewellyn Shipping Co Ltd Port belonging to Cardiff

Nom. Horse Power as per Section 28 230 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 21", 34", 56" Length of Stroke 39" Revs. per minute 65 Dia. of Screw shaft as per rule 12.22 Material of screw shaft steel
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube no liner 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 4' 3"

Dia. of Tunnel shaft as per rule 10.49 Dia. of Crank shaft journals as per rule 11.91 Dia. of Crank pin 11 1/2" Size of Crank webs 16 3/4" x 1 1/2" Dia. of thrust shaft under collars 11 1/4" Dia. of screw 14' 0" Pitch of Screw 1 1/2' 0" No. of Blades 4 State whether moveable no Total surface 40 #

No. of Feed pumps 2 Diameter of ditto 3 3/8" Stroke 20" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 3 3/8" Stroke 20" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps BALLAST. 8" x 9" x 8" VERT. DUPLEX No. and size of Suctions connected to both Bilge and Donkey pumps Ballast
GEN. SERVICE. 6" x 4 1/2" x 6" - 11 - 11
AUX. FEED. 6" x 4 1/2" x 10" WEIR. SINGLE

In Engine Room three of 2 3/4" In Holds, &c. No. 1 Hold. 2 of 2 3/4" - No 2 Hold. 3 of 2 3/4"

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

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 valves & cocks

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 Sucs from No 1 Hold How are they protected strong 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

Is the Screw Shaft Tunnel watertight apparently Is it fitted with a watertight door yes worked from upper grating in engine room

BOILERS, &c.—(Letter for record S) Manufacturers of Steel W. Beardmore & Co Ltd & The Steel Co of Scotland Ltd

Total Heating Surface of Boilers 3488 # Is Forced Draft fitted no No. and Description of Boilers 2-cyl, mult, single ended

Working Pressure 180 lbs Tested by hydraulic pressure to 320 lbs Dates of tests No 121-31.8.21 No 123-28.11.21 No. of Certificate No 121-1010- No 123-1011-

Can each boiler be worked separately yes Area of fire grate in each boiler 54 # No. and Description of Safety Valves to each boiler 2-direct spring Area of each valve 5.94 # 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 no side bunker Mean dia. of boilers 13' 9" Length 10' 6" Material of shell plates S

Thickness 1/2" Range of tensile strength 28-32 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. 7/8 lap
 long. seams T.R. double strap Diameter of rivet holes in long. seams 1 3/16" Pitch of rivets 8 1/2" 4 1/2" Lap of plates or width of butt straps 14 3/8" x 1/32"

Per centages of strength of longitudinal joint rivets 88.14 Working pressure of shell by rules 185 Size of manhole in shell 16" x 12"
 plate 85.6

Size of compensating ring no No. and Description of Furnaces in each boiler 3-plain Material S Outside diameter 40 3/4"

Length of plain part top 80" Thickness of plates bottom 32" Description of longitudinal joint weld No. of strengthening rings 3 1/2 x 3 1/2 x 1/4"
bottom 32"

Working pressure of furnace by the rules 188 Combustion chamber plates: Material S Thickness: Sides 3/32" Back 1/16" Top 3/32" Bottom 3/32"

Pitch of stays to ditto: Sides 9 1/4" x 9 1/4" Back 9 1/4" x 9 1/4" Top 9 1/4" x 11 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 184

Material of stays S Area at smallest part 1.46 # Area supported by each stay 85.5 # Working pressure by rules 185 End plates in steam space: Material S Thickness 1 3/16" Pitch of stays 19 1/2" x 18 1/2" How are stays secured as per rule Working pressure by rules 185 Material of stays S

Area at smallest part 6.33 # Area supported by each stay 361. # Working pressure by rules 185 Material of Front plates at bottom S

Thickness 1 1/2" Material of Lower back plate S Thickness 1 3/16" Greatest pitch of stays 14" x 1 1/4" Working pressure of plate by rules 254

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

Pitch across wide water spaces 14 1/2" Working pressures by rules F 267-B. 215 Girders to Chamber tops: Material S Depth and thickness of girder at centre 10" x 1 1/4" Length as per rule 29 5/8" Distance apart 11 1/2" Number and pitch of stays in each two-9 1/4"

Working pressure by rules 192 Steam dome: description of joint to shell NONE % of strength of joint ✓

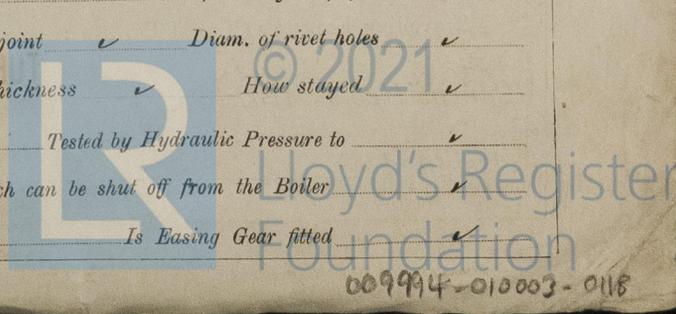
Diameter ✓ Thickness of shell plates ✓ Material ✓ Description of longitudinal joint ✓ Diam. of rivet holes ✓

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

SUPERHEATER. Type NONE 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 ✓



IS A DONKEY BOILER FITTED?

No.

If so, is a report now forwarded? ✓

SPARE GEAR. State the articles supplied:— Two top & 2 bottom end bolts & nuts; 2 main bearings and 1 set coupling bolts & nuts; 1 set each, Air, Feed & Bilge pump valves; one each, main and donkey check valve; 2 safety valve springs; bolts and nuts assorted; 6 condenser tubes, and iron of various sizes. ✓

The foregoing is a correct description,
For JOHN LEWIS & SONS, LTD.,

John J. Donald SECTY.

Manufacturers of Main Engines & Boilers.

Dates of Survey while building
During progress of work in shops - - - 1921. Jan 13, 26, 31 - Feb 4, 9, 14, 20, 21, 24 - Mar 1, 8, 14, 18, 22, 28 - Apr 4, 14, 20, 26 - May 5, 11, 25 - June 6, 9 - July 12, 25, 26 - Aug 1, 3, 5, 8, 10, 14, 24, 26, 29, 31 - Sept 2, 5, 7, 8, 9, 12, 14, 16, 19, 21, 23, 24, 28, 29 - Oct 5, 10, 12, 14, 18, 21 - Nov 1, 2, 4, 7, 15, 21, 25, 28, 29 - Dec 6, 9, 22 -
During erection on board vessel - - - 1922. Aug 26 - Sept 8, 13, 15, 19, 20, 21, 22, 26, 28 - Oct 4, 6, 11, 12, 14, 20, 25, 27 - Nov 3 /
Total No. of visits 46

Is the approved plan of main boiler forwarded herewith yes.

“ “ “ donkey “ “ “ ✓

Dates of Examination of principal parts—Cylinders 1. 3. 21 Slides 11. 6. 21 Covers 28. 3. 21 Pistons 5. 5. 21 Rods 5. 5. 21
Connecting rods 20. 4. 21 Crank shaft KIRKCALDY Thrust shaft 28. 3. 21 Tunnel shafts 28. 3. 21 Screw shaft 5. 12. 21 Propeller 5. 12. 21
Stern tube 23. 9. 21 Steam pipes tested 6. 10. 22. Engine and boiler seatings 20. 9. 22. Engines holding down bolts 6. 10. 22
Completion of pumping arrangements 19. 9. 22. Boilers fixed 12. 10. 22. Engines tried under steam 3. 11. 22. ✓
Completion of fitting sea connections 19. 9. 22. Stern tube 30. 8. 22. Screw shaft and propeller 19. 9. 22.
Main boiler safety valves adjusted 3. 11. 22. ✓ Thickness of adjusting washers Port Boiler Port 3/2" Star Boiler Port 5/16" base Star 3/2"
Material of Crank shaft steel. Identification Mark on Do. 5214 E.E.B. Material of Thrust shaft steel. Identification Mark on Do. 1344 A.W.W.
Material of Tunnel shafts steel. Identification Marks on Do. * Material of Screw shafts steel. Identification Marks on Do.
Material of Steam Pipes Copper solid drawn 4" bore, No. 6. W.G. Test pressure 360 lbs per sq inch. ✓
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.)

* Identification marks on Tunnel shafts N^o 1348A, 1349A, 1350A, 1359A, 1360A, 1361A - 23. 3. 21. W.W.

These Engines and Boilers have been constructed under Special Survey, and in accordance with the Secretary's letters, the Rules, and approved plans. The materials, and workmanship are good, and the stern & feed pipes have been tested, as required by the Rules - When completed, and properly fitted on board, they were tried under steam with satisfactory results, and are now in good order, and in my opinion entitled to the record * L.M.C. 11.22 in Red. in the Register Book.

An electric light installation has been fitted on board, a report on which will follow in due course.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 11.22. **OG**

Ans. J.H.B.
13/11/22

Ridley Yowell.
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : : When applied for,
Special ... £ 54 : 10 : 9. 11. 1922.
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : 1. 23. 1922

TUE. 14 NOV. 1922

Committee's Minute

Assigned

+ L.M.C. 11.22



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Aberdeen Office.

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