

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. 1922 Port of Aberdeen

No. in Survey held at
Reg. Book.

Aberdeen.

Date, First Survey 13th January 1921 Last Survey 3rd November 1922

(Number of Visits 76.)

48884 in Sup. the

S.S. "ELAINE LLEWELLYN."

Tons { Gross 2141.
Net 1336.

Master ✓

Built at Aberdeen

By whom built John Lewis & Sons Ltd N^o 88.

When built 1922

Engines made at Aberdeen

By whom made

John Lewis & Sons Ltd N^o 159.

when made 1922.

Boilers made at do

By whom made

do

do

N^o 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

as fitted 10 3/4"

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
GEN. SERVICE. 6" x 4" x 6" — — —
AUX. FEED. 6" x 4" x 10" VERT. SINGLE.

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room three of 2 3/4" — Tunnel well one 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 1/2" ✓ 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^s, mult^r, single ended.

Working Pressure 180 lbs. ✓

Tested by hydraulic pressure to 320. lbs. ✓

Dates of tests N^o 121. 3.8.21No. of Certificate N^o 123. 10.10-

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 1/2"

Per centages of strength of longitudinal joint

rivets 88.14

Working pressure of shell by rules 184. lbs

Size of manhole in shell 16" x 12"

Size of compensating ring no veil.

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 crown 25"

Description of longitudinal joint weld.

No. of strengthening rings 3 1/2 x 3 1/2 x 1/2"

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 a.n.w.

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 1/32"

Material of Lower back plate S.

Thickness 1 3/16"

Greatest pitch of stays 14" x 14"

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 1/32"

Back 1/16"

Mean pitch of stays 8 1/8"

Pitch across wide water spaces 14 1/2"

Working pressures by rules F 262. 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 ✓

009994-010003-0116

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 bearing 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 I. Donald SECT.

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, 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 " " " *yes.*

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° 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.**

The amount of Entry Fee ... £ *4 :* : *9. 11. 1922.*
Special ... £ *54 : 10 :*
Donkey Boiler Fee ... £ : :
Travelling Expenses (if any) £ : : *23/6*

Committee's Minute

Assigned

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



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Foundation