

## REPORT ON MACHINERY.

No. 65293  
FRI. DEC. 19. 1913

Received at London Office

Date of writing Report 15<sup>th</sup> Dec 1913 When handed in at Local Office 17<sup>th</sup> Dec 1913 Port of Newcastle on TyneNo. in Survey held at Newcastle Date, First Survey 10<sup>th</sup> March 1911 Last Survey 10<sup>th</sup> Dec 1913  
Reg. Book. 525 on the Machinery of the S.S. Elsinore (Number of Visits 46)Master Built at Newcastle By whom built Swain, Hunter & Co. Tons { Gross 6542  
Net 4169  
When built 1913

Engines made at Newcastle By whom made Wallsend Shipway &amp; Eng. Co. when made 1913

Boilers made at " By whom made " when made 1913

Registered Horse Power Owners C. J. Bowring &amp; Co. Port belonging to Liverpool

Nom. Horse Power as per Section 28 484 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 27" 45" 75" Length of Stroke 48" Revs. per minute 65 Dia. of Screw shaft as per rule 15.1 Material of screw shaft as fitted 15 1/2  
 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 5'-6"  
 Dia. of Tunnel shaft as per rule 13.4 Dia. of Crank shaft journals as per rule 14.1 Dia. of Crank pin 14 1/4 Size of Crank webs 22 1/2 x 9 1/2 Dia. of thrust shaft under collars 14 1/4 Dia. of screw 18'-9" Pitch of Screw 17'-9" No. of Blades 4 State whether moveable Yes Total surface 112 sq ft  
 No. of Feed pumps 2 Wais Diameter of ditto 7" Stroke 21" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps 2 of 7 1/2 x 5 x 6 & 1 of 10 x 12 x 12 No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 3 of 3 1/2 In Holds, &c. Oil cargo pumps

No. of Bilge Injections 2 sizes 12 Connected to condenser, or to circulating pump pumps Is a separate Donkey Suction fitted in Engine room & size Yes 9"  
 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 Yes  
 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 other above main 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 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 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 30/10/13 of Stern Tube 30/10/13 Screw shaft and Propeller 30/10/13  
 Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door worked from

BOILERS, &amp;c.—(Letter for record r) Manufacturers of Steel J. Spencer &amp; Sons

Total Heating Surface of Boilers 8296 Is Forced Draft fitted no No. and Description of Boilers 3 Single-ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test 14/8/13 No. of Certificate 8545  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 71.5 sq ft No. and Description of Safety Valves to each boiler 2 Direct spring Area of each valve 8.29 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 3'-6" Mean dia. of boilers 16'-6 1/8" Length 11'-0" Material of shell plates steel  
 Thickness 1 1/16" Range of tensile strength 29 1/2-33 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams d. r. lap  
 long. seams E.T.D. butt Diameter of rivet holes in long. seams 1 1/32" Pitch of rivets 10 1/4" Lap of plates or width of butt straps 22 3/16"  
 Per centages of strength of longitudinal joint rivets 92.9 Working pressure of shell by rules 208.8 lbs Size of manhole in shell 16" x 12"  
 plate 85.0  
 Size of compensating ring flanged No. and Description of Furnaces in each boiler 3 Horizons Material steel Outside diameter 52 1/4"  
 Length of plain part top Thickness of plates crown 3/32 Description of longitudinal joint welded No. of strengthening rings  
 bottom  
 Working pressure of furnace by the rules 204 lbs Combustion chamber plates: Material steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 1 1/32"  
 Pitch of stays to ditto: Sides 7 5/8" x 7 1/2" Back 8" x 7 1/2" Top 7 1/4" x 7 1/2" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 212 lbs  
 Material of stays iron Diameter at smallest part 2.03 Area supported by each stay 63.5 Working pressure by rules 192 lbs End plates in steam space:  
 Material steel Thickness 1 5/16" Pitch of stays 21 1/2" x 6 1/4" How are stays secured d. nuts Working pressure by rules 210 lbs Material of stays steel  
 Diameter at smallest part 8.48 Area supported by each stay 356 Working pressure by rules 246 lbs Material of Front plates at bottom steel  
 Thickness 1" Material of Lower back plate steel Thickness 1 5/16" Greatest pitch of stays 14 1/4" x 8" Working pressure of plate by rules 227 lbs  
 Diameter of tubes 3 Pitch of tubes 1 1/4" x 4 1/4" Material of tube plates steel Thickness: Front 1" Back 1 3/16" Mean pitch of stays 8 1/2"  
 Pitch across wide water spaces 13 3/4" Working pressures by rules 193 lbs Girders to Chamber tops: Material steel Depth and thickness of girder at centre 8 3/4" x 1 1/2" Length as per rule 32 1/16" Distance apart 7 3/4" Number and pitch of stays in each 3 of 7 1/2"  
 Working pressure by rules 200 lbs Superheater or Steam chest; how connected to boiler none Can the superheater be shut off and the boiler worked separately  
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



IS A DONKEY BOILER FITTED? *Yes*

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

*Two top end & 2 bottom end bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 set of piston rings for I.P. & H.P. pistons, a quantity of assorted bolts nuts & iron, propeller shaft, valve spindle crank pin brasses, eccentric sheave, air pump rod & minor parts.*

The foregoing is a correct description,

FOR THE WALLSEND SLIPWAY & ENGINEERING CO. LIMITED.

Manufacturer.

*Andrew Loring*

DIRECTOR.

Dates of Survey while building  
During progress of work in shops - - -  
During erection on board vessel - - -  
Total No. of visits

1913

*Mar 10. Apr 9. 23. 30. May 5. 9. 23. Jun 6. 10. 18. 19. Jul 4. 9. 11. 14. 15. 19. 23. 31.*

*Aug 13. 14. 22. 25. 29. Sep 4. 8. 16. 18. 30. Oct 1. 6. 9. 13. 15. 20. 21. 22. 29. 30. Nov 11. 17. 21. 26. Dec 2. 8. 10.*

46

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *13/8/13* Slides *18/6/13* Covers *18/9/13* Pistons *19/7/13* Rods *23/5/13*  
Connecting rods *20/3/13* Crank shaft *23/4/13* Thrust shaft *10/3/13* Tunnel shafts *22/8/13* Screw shaft *25/8/13* Propeller *10/9/13*  
Stern tube *22/10/13* Steam pipes tested *21/3/13* Engine and boiler seatings *30/10/13* Engines holding down bolts *21/11/13*  
Completion of pumping arrangements *10/12/13* Boilers fixed *21/11/13* Engines tried under steam *2/12/13*  
Main boiler safety valves adjusted *2/12/13* Thickness of adjusting washers *P.P. 1/4" S. 5/16" S.P. 3/8" S. 5/16" Ford. F. 1/4" A. 5/16"*  
Material of Crank shaft *Steel* Identification Mark on Do. *22/8/13* Material of Thrust shaft *Steel* Identification Mark on Do. *22/8/13*  
Material of Tunnel shafts *Steel* Identification Marks on Do. *22/8/13* Material of Screw shafts *Steel* Identification Marks on Do. *4/9/13*  
Material of Steam Pipes *Lap welded iron* Test pressure *540 lbs*

Is an installation fitted for burning oil fuel *Yes* Is the flash point of the oil to be used over 150°F. *Yes*

Have the requirements of Section 49 of the Rules been complied with *Yes*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *"Roseline"*

General Remarks (State quality of workmanship, opinions as to class, &c.)

*The machinery of this vessel has been built under special survey, the materials used are good, and the workmanship is satisfactory, it has been properly fitted on board and secured, and the engines have been tried under full power. An oil fuel burning installation on the Wallsend System in accordance with the requirements for oil fuel over 150°F. has been fitted. In my opinion this vessel is eligible for the record of L.M.C. 12.13, fitted for oil fuel over 150°F.*

It is submitted that  
this vessel is eligible for  
THE RECORD. + L.M.C. 12.13.

Fitted for oil fuel 12.13, F.P. above 150°F.

The amount of Entry Fee ... £ 3 :  
Special ... £ 44 : 4  
Donkey Boiler Fee ... £ :  
Travelling Expenses (if any) £ :  
When applied for, DEC 17 1913  
When received, 14/11/1914

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

Committee's Minute TUE. DEC. 23. 1913

Assigned

*fitted for oil fuel 12.13 F.P. above 150°F*

MACHINERY CERTIFICATE  
WRITTEN.



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Foundation