

Rpt. 4.

## REPORT ON MACHINERY.

No. 16052

Date of writing Report 20 Dec 1922 When handed in at Local Office 20 Dec 1922 Port of WEST HARTLEPOOL  
 No. in Survey held at West Hartlepool Date, First Survey 18 Nov 1921 Last Survey Dec 1922  
 Reg. Book. 6460 on the SS "KENMORE" (No 2547)  
 Master Built at Middlesbro. By whom built Furness S B & Co Ltd  
 Engines made at Hartlepool By whom made Richardsons Westgarth & Co Ltd when made 1922  
 Boilers made at ditto By whom made ditto when made 1922  
 Registered Horse Power Owners Johnston Line Ltd (Furness Withy & Co Ltd) Port belonging to Liverpool  
 Nom. Horse Power as per Section 28 545 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3  
 Dia. of Cylinders 26"-43"-73" Length of Stroke 48" Revs. per minute 73 Dia. of Screw shaft as per rule 14.63 Material of Lock fast 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 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 Length of stern bush 62 1/4"  
 Dia. of Tunnel shaft as per rule 13.97 Dia. of Crank shaft journals as per rule 13.73 Dia. of Crank pin 14 1/2" Size of Crank webs 22 1/2" x 9" Dia. of thrust shaft under  
 collars 14 1/4" Dia. of screw 17-9" Pitch of Screw 18-0" No. of Blades 4 State whether moveable no Total surface 100 ft<sup>2</sup>  
 No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work 2 Independent  
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 27" Can one be overhauled while the other is at work yes 11 1/2" x 21"  
 No. of Donkey Engines 4 Sizes of Pumps General 8" 5 1/2" x 8" duplex 2 Transfer pumps 7" x 8" x 18"  
 In Engine Room 4 of 3 1/2" Eng. bilge pump 19 1/2" In Holds, &c. In No 5 hold one of 3 1/2". In other  
 holds two of 3 1/2"  
 No. of Bilge Injections 1 sizes 8" Connected to condenser, or to circulating pump C.P. Is a separate Donkey Suction fitted in Engine room & size 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 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  
 Is the Screw Shaft Tunnel watertight see ship reports it fitted with a watertight door yes worked from Top platform

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

Total Heating Surface of Boilers 8323 ft<sup>2</sup> Is Forced Draft fitted yes No. and Description of Boilers Three single ended.  
 Working Pressure 180 lb. Tested by hydraulic pressure to 320 lb. Date of test 19.7.22 No. of Certificate 3615.  
 Can each boiler be worked separately yes Area of fire grate in each boiler 62.5 ft<sup>2</sup> No. and Description of Safety Valves to  
 each boiler 2 direct spring Area of each valve 12.56 in<sup>2</sup> Pressure to which they are adjusted 185 lb. Are they fitted with easing gear yes  
 Smallest distance between boilers or uptakes and bunkers or woodwork 1'-8" Mean dia. of boilers 15'-9" Length 12'-0" Material of shell plates Steel  
 Thickness 1 1/4" Range of tensile strength 29/33 Are the shell plates welded or flanged no Descrip. of riveting: cir. seams D.R. Lap.  
 long. seams J.R. D.B.S. Diameter of rivet holes in long. seams 1 1/16" Pitch of rivets 9 5/8" Top of plates or width of butt straps 19 1/8"  
 Per centages of strength of longitudinal joint rivets 88.2 plate 85.62 Working pressure of shell by rules 188 Size of manhole in shell 13" x 16 1/2"  
 Size of compensating ring 2'-5 1/2" x 2'-7" x 1 1/4" No. and Description of Furnaces in each boiler 3 Deightons Material Steel Outside diameter 46 1/8"  
 Length of plain part top 2'-1" Thickness of plates crown 3/32" Description of longitudinal joint Welded No. of strengthening rings  
 bottom 1'-11" bottom 3/32"  
 Working pressure of furnace by the rules 205 Combustion chamber plates: Material Steel Thickness: Sides 19" Back 32" Top 32" Bottom 3 1/4"  
 Pitch of stays to ditto: Sides 7 1/2" x 8" Back 7 1/8" x 8 1/2" Top 7 1/2" x 8 5/8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 181  
 Material of stays Steel Area at smallest part 1 3/8" Area supported by each stay 8 1/2" x 7 7/8" Working pressure by rules 187 End plates in steam space:  
 Material Steel Thickness 1 3/16" Pitch of stays 15" x 22 5/16" How are stays secured D Nuts Working pressure by rules 180 Material of stays Steel  
 Area at smallest part 2 25/32" Area supported by each stay 22 5/8" x 15 3/4" Working pressure by rules 192 Material of Front plates at bottom Steel  
 Thickness 5/8" Material of Lower back plate Steel Thickness 13/16" Greatest pitch of stays 13 1/2" x 8" Working pressure of plate by rules 218  
 Diameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates Steel Thickness: Front 5/8" Back 3/4" Mean pitch of stays 9 3/8"  
 Pitch across wide water spaces 13 1/2" Working pressures by rules 220 Girders to Chamber tops: Material Steel Depth and  
 thickness of girder at centre 8 1/4" x 1 3/4" Length as per rule 31 7/8" Distance apart 8 5/8" Number and pitch of stays in each three 7 1/2"  
 Working pressure by rules 200 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

W1717-0145



IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— 2 Connec. rod top end bolts & nuts 2 bottom end ditto  
2 Main bearing ditto 1 set coupling ditto 1 set feed & bilge pump valves.  
1 propeller. 1 screw shaft. 1 pair crank pin bearings 1 eccentric strap.  
1 set rings & springs for H.P. piston. 1 set air pump valves. 1 circ. pump  
impeller shaft. 1 set valves for aux. feed pump. 2 safety valve springs  
2 feed check valves. 20 boiler tubes 12 condenser tubes. *W.M.*

The foregoing is a correct description,

FOR RICHARDSONS, WESTGARTH & CO. LIMITED.

*L.D. Muggill*

GENERAL MANAGER.  
(HARTLEPOOL WORKS)

Manufacturer.

Dates of Survey while building  
During progress of work in shops -- 1921. Nov 18. Dec 8. 22. 1922. Feb 13. 15. 17. 21. 27. Mar 6. 8. 10. 17. 22. 28. Apr 5. 12. 19. 21. May 3. 9. 17. 25. 30 Jun 1. 7. 15.  
During erection on board vessel -- 21. 28. July 5. 5. 10. 11. 14. 14. 17. 18. 19. 19. 21. 24. 26. 27. 28. 31. Aug 1. 2. 3. 4. 15. 28. Sep 1. 11. 26. 27. Oct 2. 3. 5. 9. 9. 13. 18.  
23. 24. 26. 27. 30. 30. 31. Nov 3. 10. 13. 14. 15. 17. 20. 21. 23. 24. 27. 28. 30. Dec 4. 5. 7. 12. 20.  
Total No. of visits 90. Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders 22/2-15/4 Slides 1-8-22 Covers 1-8-22 Pistons 4-8-22 Rods 28-7-22  
Connecting rods 2-8-22 Crank shaft 5-7-22 Thrust shaft 20-9-22 Tunnel shafts 20-9-22 Screw shaft 20-9-22 Propeller 28-8-22  
Stern tube 5-10-22 Steam pipes tested 31-10-22 Engine and boiler seatings 13-10-22 Engines holding down bolts 3-11-22  
Completion of pumping arrangements 4-12-22 Boilers fixed 24-10-22 Engines tried under steam 5-12-22  
Completion of fitting sea connections 21-2-23 Stern tube 18-10-22 Screw shaft and propeller 18-10-22  
Main boiler safety valves adjusted 5-12-22 Thickness of adjusting washers P.P. 11/32 S. 3/32 C.P. 5/16 S 5/16 S P 5/16 S 9/32  
Material of Crank shaft *Ing. Stl.* Identification Mark on Do. 6297 Material of Thrust shaft *Ing. Stl.* Identification Mark on Do. 6297  
Material of Tunnel shafts *Scrap I.* Identification Marks on Do. 6297 Material of Screw shafts *Lock fast iron* Identification Marks on Do. 6297  
Material of Steam Pipes *Lap welded steel* Test pressure 570 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 *—* If so, state name of vessel *—*

General Remarks (State quality of workmanship, opinions as to class, &c. *An evaporator and a feed heater fitted fitted, the bodies of which have been tested to 50 lbs. and the coils to 400 lbs per square inch.*

*A Wallsend Howden oil fuel unit fitted.*

*In the H.P. cylinder, jointing face for the piston rod stuffing box, cavities have been made good by electric welding, with the consent of the Owners. This vessel's machinery has been built and installed under Special Survey. The materials and workmanship are good. On completion it was examined at work under full steam at moorings, and the vessel will be eligible to have the notation L.M.C. with date on completion of the survey*

*The vessel has returned to Middlesbrough. To complete the survey the pumping connections in tunnel are to complete and the oil fuel pipes in tunnel to be tested. Spare gear to be placed on board.*

The amount of Entry Fee ... £ 6 : 0 :  
Special ... £ 102 : 5 :  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : :  
When applied for, 30 Dec 22.  
When received, 29 Dec 19. 22 per Ton Fr

*R.D. Shilston.*

Engineer Surveyor to Lloyd's Register of Shipping.

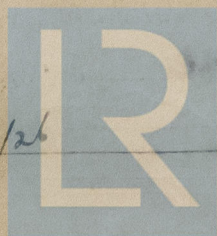
Committee's Minute

FRI. 23 MAR. 1923

Assigned

*+ L.M.C. 2.23  
F.D. C.L.*

*Listed for oil fuel 2.23  
F.P. above 150°F.*



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Foundation