

# REPORT ON MACHINERY.

Received at London Office 25 OCT 1924

Date of writing Report 19 When handed in at Local Office 24 OCT 1924 Port of Sunderland

No. in Survey held at Sunderland Date, First Survey 21st Nov 24 Last Survey 9 Oct 1924  
 Reg. Book. on the new steel S/S "QUEENWORTH" (Number of Visits 3)

Master Built at Sunderland By whom built S.P. Austin & Sons Ltd (S/S No 307) When built 1924

Engines made at Sunderland By whom made J. Dickinson & Sons Ltd (No 876) when made 1924

Boilers made at Sunderland By whom made J. Dickinson & Sons Ltd (No 876) when made 1924

Registered Horse Power Owners Watergate S.S. Co. Ltd. Port belonging to Newcastle

Nom. Horse Power as per Section 28 222 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" 35" 57" Length of Stroke 36" Revs. per minute 72 Dia. of Screw shaft as per rule 11.4" Material of screw shaft Steel  
 as fitted 11.3/4"

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 4.0"

Dia. of Tunnel shaft as per rule 10.15" Dia. of Crank shaft journals as per rule 10.66" Dia. of Crank pin 10 7/8" Size of Crank webs 6 3/4" x 19 3/4" Dia. of thrust shaft under collars 10 7/8" Dia. of screw 15.0" Pitch of Screw 14.9" No. of Blades 4 State whether moceable no Total surface 680 sq. ft.

No. of Feed pumps 2 Diameter of ditto 3" Stroke 18" Can one be overhauled while the other is at work yes

No. of Bilge pumps 2 Diameter of ditto 4" Stroke 18" Can one be overhauled while the other is at work yes

No. of Donkey Engines 3 Sizes of Pumps 2 @ 6" x 4" x 6" 1 @ 8" x 7" x 8" No. and size of Suctions connected to both Bilge and Donkey pumps In Engine Room 2 @ 3" & 1 @ 2 1/2" In Holds, &c. Fore hold - 2 @ 3" Aft hold - 2 @ 3"

No. of Bilge Injections 1 sizes 5" Connected to condenser, or to circulating pump to C.P. 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 stoves 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 hold suction 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

Is the Screw Shaft Tunnel watertight none Is it fitted with a watertight door mechanically worked from

**BOILERS, &c.**—(Letter for record (S)) Manufacturers of Steel Steel Company of Scotland Ltd & John Pender & Sons Ltd

Total Heating Surface of Boilers 3560 sq. ft. Is Forced Draft fitted no No. and Description of Boilers two single ended marine

Working Pressure 180 Tested by hydraulic pressure to 320 Date of test 10-7-24 No. of Certificate 3889

Can each boiler be worked separately yes Area of fire grate in each boiler 490 sq. ft. No. and Description of Safety Valves to each boiler two direct spring Area of each valve 5.950" Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers or woodwork 6.0" Heat dia. of boilers 14.0" Length 10.6" Material of shell plates steel

Thickness 1 1/8" Range of tensile strength 28 1/2 - 32 1/2 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams DR  
 long. seams W.B.S.T.R. Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 3/8" Lap of plates or width of butt straps 18 1/4"

Per centages of strength of longitudinal joint rivets 98.9 Working pressure of shell by rules 180 Size of manhole in shell 16" x 12"  
 plate 85 3cf.

Size of compensating ring 8 1/2" x 1 1/8" No. and Description of Furnaces in each boiler 3 Morrison Material steel Outside diameter 3.6"

Length of plain part top 1 1/2" Thickness of plates bottom 1 1/2" Description of longitudinal joint welded No. of strengthening rings 1

Working pressure of furnace by the rules 185 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 11/16"

Pitch of stays to ditto: Sides 9 3/4" x 9 3/8" Back 9 7/8" x 9 1/4" Top 9 7/8" x 9" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180

Material of stays steel Area at smallest part 2.030" Area supported by each stay 990" Working pressure by rules 182 End plates in steam space: Material steel Thickness 1 1/32" Pitch of stays 18" x 17" How are stays secured W.N.W. Working pressure by rules 186 Material of stays steel

Area at smallest part 5.050" Area supported by each stay 3060" Working pressure by rules 180 Material of Front plates at bottom steel

Thickness 7/8" Material of Lower back plate steel Thickness 25/32" Greatest pitch of stays 13 1/4" x 9 7/8" Working pressure of plate by rules 181

Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9" x 11 1/4"

Pitch across wide water spaces 4 1/4" (16 DP) Working pressures by rules 182 Girders to Chamber tops: Material steel Depth and thickness of girder at centre 2 @ 6 3/4" x 1" Length as per rule 30 3/32" Distance apart 9" Number and pitch of stays in each 2 @ 9 3/8"

Working pressure by rules 193 Steam dome: description of joint to shell % 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 \_\_\_\_\_ 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 \_\_\_\_\_



W210-0105

IS A DONKEY BOILER FITTED? - **no** ✓

If so, is a report now forwarded? **no**

SPARE GEAR. State the articles supplied:— **Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, iron and bolts of various sizes, one propeller**

For  
The foregoing is a correct description,

*[Signature]*  
Director.

Manufacturer.

Dates of Survey while building  
During progress of work in shops: 1924. **Mar. 21, May 7, 20, 26, 28, 30, June 4, 12, July 2, 3, 10, 12, 15, 28, Aug. 5, 6, 8, 11, 13, 18, 22.**  
During erection on board vessel: **27, Sep. 3, 10, 15, 22, 24, 26, Oct. 3, 7, 9.**  
Total No. of visits: **31**

Is the approved plan of main boiler forwarded herewith **yes** ✓

Is the plan of donkey boiler forwarded herewith **no**

Dates of Examination of principal parts—Cylinders **2-7-24** Slides **28-7-24** Covers **12-6-24** Pistons **28-7-24** Rods **30-5-24**  
Connecting rods **12-6-24** Crank shaft **12-7-24** Thrust shaft **12-7-24** Tunnel shafts **none** Screw shaft **13-8-24** Propeller **15-7-24**  
Stern tube **27-8-24** Steam pipes tested **3 & 22-9-24** Engine and boiler seatings **22-9-24** Engines holding down bolts **24-9-24**  
Completion of pumping arrangements **26-9-24** Boilers fixed **24-9-24** Engines tried under steam **26-9-24**  
Completion of fitting sea connections **10-9-24** Stern tube **22-9-24** Screw shaft and propeller **22-9-24**  
Main boiler safety valves adjusted **26-9-24** Thickness of adjusting washers **Port boiler - bolt 3/8" star boiler both 1/2"**  
Material of Crank shaft **1. steel** Identification Mark on Do. **LLOYD'S NO 82 L.C.D. 12-7-24** Material of Thrust shaft **1. steel** Identification Mark on Do. **LLOYD'S NO 82 L.C.D. 12-7-24**  
Material of Tunnel shafts **none** Identification Marks on Do. **LLOYD'S NO 82 L.C.D. 12-7-24** Material of Screw shafts **1. steel** Identification Marks on Do. **LLOYD'S NO 82 L.C.D. 12-7-24**  
Material of Steam Pipes **6 copper** Test pressure **400 lbs per sq"**

Is an installation fitted for burning oil fuel **no** ✓ Is the flash point of the oil to be used over 150°F. **no**

Have the requirements of Section 49 of the Rules been complied with **no**

Is this machinery duplicate of a previous case **no** ✓ If so, state name of vessel **no**

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

**The materials and workmanship are good. The machinery has been constructed under special survey and is eligible in my opinion for Classification and the Record + LMC 10, 24.**

**It is submitted that this vessel is eligible for THE RECORD. + LMC 10. 24. CL.**

*[Signature]*  
27/10/24

*[Signature]*  
S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 4 : : When applied for, **15 OCT 1924**  
Special ... £ 55 : 10 : :  
Donkey Boiler Fee ... £ : : :  
Travelling Expenses (if any) £ : : : **17 OCT 1924**

Committee's Minute **TUES. 28 OCT 1924**

Assigned **+ LMC 10. 24 C.L.**

**TUES. 21 JUL 1925**



© 2020

Lloyd's Register Foundation

WRITTEN.

GUNDERLAND.

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