

# REPORT ON MACHINERY.

No. 42635

WED. 31. DEC. 1919

Port of NEWCASTLE ON TYNE.

Received at London Office

No. in Survey held at South Shields Date, first Survey 2nd Dec Last Survey 23rd Dec 1919  
 Book. SS "Dreconell" ex SS "War Stag" (Number of Vols. 4)  
 on the SS "Dreconell" ex SS "War Stag" Tons Gross 5249  
 Built at Sunderland By whom built W. Doxford & Son Ltd. Net 3178  
 When built 1918  
 Lines made at Sunderland By whom made W. Doxford & Son Ltd. when made 1918  
 Moulders made at Sunderland By whom made W. Doxford & Son Ltd. when made 1918  
 Registered Horse Power 517 Owners Hain SS Co Ltd (E. Hain & Son Mgrs) Port belonging to St. Jans  
 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

**FINES, &c.**—Description of Engines Triple Expansion No. of Cylinders 3 No. of Cranks 3  
 No. of Cylinders 27 44 73 Length of Stroke 48 Revs. per minute 77 Dia. of Screw shaft as per rule 14.66 Material of S  
 (as fitted 15.5 screw shaft)  
 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  
 the propeller boss Yes If the liner is in more than one length are the joints burned Yes 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  
 cranks are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5'-0 1/2  
 Dia. of Tunnel shaft as per rule 13.33 Dia. of Crank shaft journals as per rule 14.7 Dia. of Crank pin 14 1/2 Size of Crank webs 9x22 1/2 Dia. of thrust shaft under  
 cranks 14 3/4 Dia. of screw 17.6 Pitch of Screw 16-6 No. of Blades 4 State whether moveable No Total surface 98.2 sq ft  
 No. of Feed pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Bilge pumps 2 Diameter of ditto 4" Stroke 24" Can one be overhauled while the other is at work Yes  
 No. of Donkey Engines 3 Sizes of Pumps Field 9 1/2 x 7 x 18 No. and size of Suctions connected to both Bilge and Donkey pumps  
 Engine Room Three 3 1/2" General Service 9 1/2 x 7 x 18 Ballast 10 1/2 x 14 x 24 In Holds, &c. Two 3 1/2" in Nos 1, 2, 3, holds + 1 in No 4  
old 3 1/2" and one in tunnel well 3" dia.  
 No. of Bilge Injections One sizes 10 1/2" Connected to condenser, or to circulating pump Yes 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 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 Both  
 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  
 Dates of examination of completion of fitting of Sea Connections Yes of Stern Tube Yes Screw shaft and Propeller Yes  
 Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform

**BOILERS, &c.**—(Letter for record S) Manufacturers of Steel Yes  
 Total Heating Surface of Boilers 7668 sq ft Is Forced Draft fitted Yes No. and Description of Boilers 3 Single Ended  
 Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbs Date of test Yes No. of Certificate Yes  
 Can each boiler be worked separately Yes Area of fire grate in each boiler 63.3 sq ft No. and Description of Safety Valves to  
 each boiler Two Spring Area of each valve 9.6 sq in 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 2' 3" Mean dia. of boilers 15'-6" Length 11'-6" Material of shell plates S  
 Thickness 1 1/4" Range of tensile strength 28/32 Are the shell plates welded or flanged No Descrip. of riveting: cir. seams lap  
 Long. seams BSR Diameter of rivet holes in long. seams 1 5/16 Pitch of rivets 9 1/8 Lap of plates or width of butt straps 19 1/2"  
 Percentages of strength of longitudinal joint 88.5 Working pressure of shell by rules 182 Size of manhole in shell 16" x 12"  
 Use of compensating ring Flanged No. and Description of Furnaces in each boiler 3 Brighton Material S Outside diameter 50 3/16"  
 Length of plain part top 19" Thickness of plates bottom 3/32 Description of longitudinal joint Welded No. of strengthening rings Yes  
 Working pressure of furnace by the rules 188 lbs Combustion chamber plates: Material S Thickness: Sides 23/32 Back 1/16 Top 23/32 Bottom 23/32  
 Pitch of stays to ditto: Sides 10 9/8 x 9 1/2 Back 10 1/4 x 8 3/4 Top 10 7/8 x 9 1/4 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 181  
 Material of stays Steel Diameter at smallest part 2.39 Area supported by each stay 99.3 Working pressure by rules 216 End plates in steam space  
 Material Steel Thickness 1 1/32 Pitch of stays 21 3/4 x 21 3/4 How are stays secured 2 x 1/4 Working pressure by rules 180 Material of stays Steel  
 Diameter at smallest part 8.29 Area supported by each stay 473 Working pressure by rules 182 Material of Front plates at bottom Steel  
 Thickness 3/32 Material of Lower back plate Steel Thickness 27/32 Greatest pitch of stays 13 5/8 Working pressure of plate by rules 187  
 Diameter of tubes 2 3/4 Pitch of tubes 4" x 3 7/8 Material of tube plates Steel Thickness: Front 3/32 Back 3/4 Mean pitch of stays 9 7/8  
 Pitch across wide water spaces 13 5/8 Working pressures by rules 182 Girders to Chamber tops: Material Steel Depth and  
 Thickness of girder at centre 10" x 1 3/4 Length as per rule 35 1/2 Distance apart 10 5/8 Number and pitch of stays in each 3, 7 1/4"  
 Working pressure by rules 188 Superheater or Steam chest; how connected to boiler None Can the superheater be shut off and the boiler worked  
 separately Yes Diameter Yes Length Yes Thickness of shell plates Yes Material Yes Description of longitudinal joint Yes Diam. of rivet  
 holes Yes Pitch of rivets Yes Working pressure of shell by rules Yes Diameter of flue Yes Material of flue plates Yes Thickness Yes  
 Stiffened with rings Yes Distance between rings Yes Working pressure by rules Yes End plates: Thickness Yes How stayed Yes  
 Working pressure of end plates Yes Area of safety valves to superheater Yes Are they fitted with easing gear Yes

PLEASE WRITE ACROSS THE MARGIN. REQUESTED NOT TO WRITE ACROSS THE MARGIN.

Lloyd's Register Foundation

**VERTICAL DONKEY BOILER—** Manufacturers of Steel ✓

No. *100* Description *Donkey Boiler*  
 Made at *London* By whom made *W. L. Hall* When made *1919* Where fixed *on vessel*  
 Working pressure *150 lbs* tested by hydraulic pressure to *225 lbs* Date of test *2/12/19* No. of Certificate *100* Fire grate area *8 1/2* Description of Valves *3*  
 No. of Safety Valves *3* Area of each *1 1/2* Pressure to which they are adjusted *150 lbs* Date of adjustment *2/12/19*  
 If fitted with easing gear *✓* If steam from main boilers can enter the donkey boiler *✓* Dia. of donkey boiler *18"* Length *10'*  
 Material of shell plates *Steel* Thickness *3/8"* Range of tensile strength *30-40 tons* Descrip. of riveting long. seams *✓*  
 Dia. of rivet holes *1/2"* Whether punched or drilled *✓* Pitch of rivets *2"* Lap of plating *✓* Per centage of strength of joint *80%*  
 Working pressure of shell by rules *150 lbs* Thickness of shell crown plates *3/8"* Radius of do. *18"* No. of stays to do. *6* Dia. of stays *1 1/2"*  
 Diameter of furnace Top *18"* Bottom *18"* Length of furnace *10'* Thickness of furnace plates *3/8"* Description of joint *✓*  
 Working pressure of furnace by rules *150 lbs* Thickness of furnace crown plates *3/8"* Stayed by *✓*  
 Diameter of uptake *18"* Thickness of uptake plates *3/8"* Thickness of water tubes *3/8"* Dates of survey *2/12/19*

**SPARE GEAR.** State the articles supplied:— *Two top + bottom end bolts + nuts, 2 main bearing bolts + bolts + nuts for couplings, 1 Section + delivery valves for feed pumps + same for bilge pumps, check valves, + 3 donkey check valves, 24 assorted bolts + nuts, 6 cylinder cover studs + nuts + 6 chests, 12 junkering studs + nuts, 5 Bars of round iron 3/8 1/2 5/8 3/4 and 1"*  
 The foregoing is a correct description,

Manufacturer.

Dates of Survey while building *2/12/19* During progress of work in shops *2/12/19* During erection on board vessel *2/12/19* Total No. of visits *1*

Is the approved plan of main boiler forwarded herewith *✓*  
 " " " donkey " " " *✓*

Dates of Examination of principal parts—Cylinders *2/12/19* Slides *2/12/19* Covers *2/12/19* Pistons *2/12/19* Rods *2/12/19*  
 Connecting rods *2/12/19* Crank shaft *2/12/19* Thrust shaft *2/12/19* Tunnel shafts *2/12/19* Screw shaft *8/12/19* Propeller *2/12/19*  
 Stern tube *8/12/19* Steam pipes tested *✓* Engine and boiler seatings *11/12/19* Engines holding down bolts *2/12/19*  
 Completion of pumping arrangements *✓* Boilers fixed *✓* Engines tried under steam *✓*  
 Main boiler safety valves adjusted *23/12/19* Thickness of adjusting washers *1/2" 3/8" 3/8" 7/16" 1/2"*  
 Material of Crank shaft *Steel* Identification Mark on Do. *BC* Material of Thrust shaft *Steel* Identification Mark on Do. *BC*  
 Material of Tunnel shafts *✓* Identification Marks on Do. *BC* Material of Screw shafts *✓* Identification Marks on Do. *BC*  
 Material of Steam Pipes *Iron* Test pressure *✓*

**General Remarks** (State quality of workmanship, opinions as to class, &c. (*Standard B Type*))  
*The machinery of this vessel has been constructed under the supervision of the British Corporation Surveyors in accordance with the approved plans and Specification for the A Type of Standard vessel.*

*The machinery has been examined and found in good order see Report No. 72634*

Certificate (Lloyd's Register of Shipping)

The amount of Entry Fee... £ *40* When applied for, *1919*  
 Special *40* When received, *2/12/19*  
 Donkey Boiler Fee *40*  
 Travelling Expenses (if any) £ *0*

Committee's Minute  
 Assigned *2/12/19*

*W. L. Hall*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping



Dear Sirs,

I am instant with during const D. Rowan & Co by Messrs. W. Corporation. certificate I have to approved, British Cor

The Surveyor  
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