

REPORT ON MACHINERY.

No. 40643

WED. DEC. 17 1920

Received at London Office

Date of writing Report 29. 11. 1920 When handed in at Local Office 29. 11. 1920 Port of Glasgow
 No. in Survey held at Dumbarton Date, First Survey Oct 17th 1918 Last Survey Nov 26th 1920
 Reg. Book. 755 "Hibernia" (Number of Visits 68) Tons { Gross 3458
 Net 1408
 Master Built at Dumbarton By whom built Wm Denny & Bro^{rs} (1035) When built 1920
 Engines made at Dumbarton By whom made Wm Denny & Bro^{rs} (818) when made 1920
 Boilers made at Dumbarton By whom made Wm Denny & Bro^{rs} (818) when made 1920
 Registered Horse Power 2714 Owners not known R. Roode Port belonging to Dublin
 Shaft Horse Power at Full Power 14000 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

TURBINE ENGINES, &c.—Description of Engines Parsons' Single geared Turbine No. of Turbines 2 H.P. 2 L.P.
 Diameter of Rotor Shaft Journals, H.P. 6" L.P. 8" Diameter of Pinion Shaft 7"
 Diameter of Journals 7" Distance between Centres of Bearings 38" Diameter of Pitch Circle H.P. 9.09 L.P. 11.16
 Diameter of Wheel Shaft 13" Distance between Centres of Bearings 6" - 6 1/2" Diameter of Pitch Circle of Wheel 72.46
 Width of Face 49" Diameter of Thrust Shaft under Collars 12 1/2" Diameter of Tunnel Shaft as per rule 12" approved
 as fitted 12"
 No. of Screw Shafts Two Continuous Lines as per rule 13 1/4 app Diameter of Propeller 9-6" Pitch of Propeller 11' 0"
 as fitted 13 1/4
 No. of Blades 3 State whether Moveable no Total Surface 32 1/2 Diameter of Rotor Drum, H.P. 16 1/2" L.P. 47" Astern 33"
 Thickness at Bottom of Groove, H.P. Solid L.P. Astern Revs. per Minute at Full Power, Turbine H.P. 2232 L.P. 1816 Propeller 280

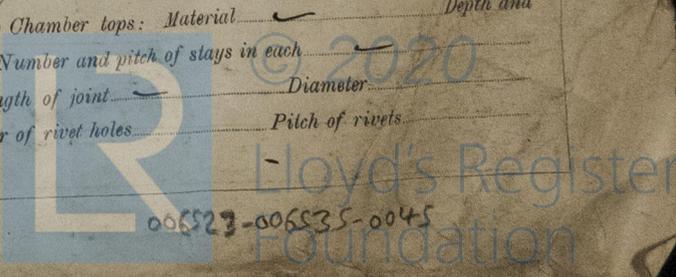
PARTICULARS OF BLADING.

	H. P.			L. P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION									
2ND									
3RD									
4TH									
5TH									
6TH									
7TH									
8TH									

No. and size of Feed pumps (3) 10" x 26"
 No. and size of Bilge pumps (2) 8 x 9 x 10"
 No. and size of Bilge suction in Engine Room Port (1) 3" S.D. (1) 3" Astern (1) 3" in each stokehold (2) 3"
 In Holds, &c. (1) in each 3"
 No. of Bilge Injections 5 (3 in Boiler Rooms) Connected to condenser, or to circulating pump no 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 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 no
 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 yes Is it fitted with a watertight door yes worked from upper platform

BOILERS, &c.—(Letter for record (5) Manufacturers of Steel D. Colvilly & Sons)
 Total Heating Surface of Boilers 33916 Is Forced Draft fitted yes No. and Description of Boilers 9 Water Tubes (2) 28" wide
 Working Pressure 200 Tested by hydraulic pressure to 400 Date of test 10/2/20 18/2/20 27/2/20 No. of Certificate 15032 15116 15155
 Can each boiler be worked separately yes Area of fire grate in each boiler (28 wide) (12 1/2) (23 wide) (105) No. and Description of Safety Valves to (2) 28" wide
 each boiler 23" 2" 3" Spring loaded Area of each valve 7.672 Pressure to which they are adjusted 205 Are they fitted with easing gear yes
 Smallest distance between boilers or uptakes and bunkers or woodwork well clear Mean dia. of boilers 3-0 Length 23-15 = 2 1/4 Material of shell plates steel
 Thickness 7/16 Range of tensile strength 26 to 30 tons Are the shell plates welded or flanged no Descrip. of riveting: cir. seams double lap
 long. seams double butt Diameter of rivet holes in long. seams 23/32 Pitch of rivets 3-42 3-133 Lap of plates or width of butt straps 8 1/2
 rivets 98% Working pressure of shell by rules 218 Size of manhole in end 16" x 11"
 plates 77%
 Size of compensating ring flanged No. and Description of Furnaces in each Boiler one Material iron Outside diameter no
 Length of plain part top Thickness of plates bottom Description of longitudinal joint no No. of strengthening rings no
 Working pressure of furnace by the rules no Combustion chamber plates: Material iron Thickness: Sides no Back no Top no Bottom no
 Pitch of stays to ditto: Sides no Back no Top no If stays are fitted with nuts or riveted heads no Working pressure by rules no End plates in steam space no
 Material of stays iron Diameter at smallest part no Area supported by each stay no Working pressure by rules no Material of stays iron
 Material steel Thickness 3/4" 1" Pitch of stays none How are stays secured no Working pressure by rules 405 Material of Front plates at bottom no
 Diameter at smallest part no Area supported by each stay no Working pressure by rules no Material of Front plates at bottom no
 Thickness no Material of Lower back plate no Thickness no Greatest pitch of stays no Working pressure of plate by rules no
 Diameter of tubes 3 1/2" 1 1/2" Pitch of tubes 7" Material of tube plates steel Thickness: Front 7/8" Back no Mean pitch of stays no
 Pitch across wide water spaces no Working pressures by rules no Girders to Chamber tops: Material no Depth and no
 thickness of girder at centre no Length as per rule no Distance apart no Number and pitch of stays in each no
 Working pressure by rules no Steam dome: description of joint to shell no % of strength of joint no Diameter no
 Thickness of shell plates no Material no Description of longitudinal joint no Diameter of rivet holes no Pitch of rivets no
 Working pressure of shell by rules no Crown plates: Thickness no How stayed no

Water Capacity
 Tons
 34.2
 68.0
 80.4
 70.8
 86
 W. W.



Clouds
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 _____

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? _____

SPARE GEAR. State the articles supplied:— as approved. One complete set for each two ships
see S.S. Anglia Report; (London letter 26/3/20)

The foregoing is a correct description,

OF WILLIAM DENNY & BROTHERS, LTD.

W. K. Wisnom Director

Manufacturer.

Engine Works
Dumbarton
15 Nov. 1920.

Dates of Survey while building
During progress of work in shops: 1918: Oct 17, 22, 31 Nov 8 Dec 3, 20 1919: Feb 20 Mar 5, 19 Apr 2, 14, 24 May 27 Jun 6, 9, 17 July 15 Aug 5, 12, 19, 26.
During erection on board vessel: Sep 18, 26, 30 Oct 2, 7, 10, 14, 24, 28 Nov 4, 13, 18, 27 Dec 2, 5, 11, 26, 30 1920: Jan 13, 23, 27, 30 Feb 3, 10, 13, 18, 20, 24, 27
Total No. of visits 68 Is the approved plan of main boiler forwarded herewith? No See Copy Report.

Dates of Examination of principal parts—Casings 27/8/19 Rotors 20/2/20 Blading 30/12/19 Gearing 30/12/19, 20/2/20

Rotor shafts 20/2/20 Thrust shaft 27/8/19 Tunnel shafts 27/8/19 Screw shaft 26/12/19 Propeller 26/12/19

Stern tube 26/12/19 Steam pipes tested 23/3/20, 21/5/20 Engine and boiler seatings 13/1/20 Engines holding down bolts 25/8/20

Completion of pumping arrangements 26/11/20 Boilers fixed 29/4/20 Engines tried under steam 26/11/20

Main boiler safety valves adjusted 7/1/20 Thickness of adjusting washers 1 1/2, 1 3/4, 2, 2 1/4, 2 1/2, 3, 3 1/4, 3 1/2, 4, 4 1/4, 4 1/2, 5, 5 1/4, 5 1/2, 6, 6 1/4, 6 1/2, 7, 7 1/4, 7 1/2, 8, 8 1/4, 8 1/2, 9, 9 1/4, 9 1/2, 10, 10 1/4, 10 1/2, 11, 11 1/4, 11 1/2, 12, 12 1/4, 12 1/2, 13, 13 1/4, 13 1/2, 14, 14 1/4, 14 1/2, 15, 15 1/4, 15 1/2, 16, 16 1/4, 16 1/2, 17, 17 1/4, 17 1/2, 18, 18 1/4, 18 1/2, 19, 19 1/4, 19 1/2, 20, 20 1/4, 20 1/2, 21, 21 1/4, 21 1/2, 22, 22 1/4, 22 1/2, 23, 23 1/4, 23 1/2, 24, 24 1/4, 24 1/2, 25, 25 1/4, 25 1/2, 26, 26 1/4, 26 1/2, 27, 27 1/4, 27 1/2, 28, 28 1/4, 28 1/2, 29, 29 1/4, 29 1/2, 30, 30 1/4, 30 1/2, 31, 31 1/4, 31 1/2, 32, 32 1/4, 32 1/2, 33, 33 1/4, 33 1/2, 34, 34 1/4, 34 1/2, 35, 35 1/4, 35 1/2, 36, 36 1/4, 36 1/2, 37, 37 1/4, 37 1/2, 38, 38 1/4, 38 1/2, 39, 39 1/4, 39 1/2, 40, 40 1/4, 40 1/2, 41, 41 1/4, 41 1/2, 42, 42 1/4, 42 1/2, 43, 43 1/4, 43 1/2, 44, 44 1/4, 44 1/2, 45, 45 1/4, 45 1/2, 46, 46 1/4, 46 1/2, 47, 47 1/4, 47 1/2, 48, 48 1/4, 48 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