

# REPORT ON MACHINERY.

No. 40686

Received at London Office 1920

Writing Report  When handed in at Local Office 25/21 1920 Port of Glasgow  
 Survey held at Blydebank Date, First Survey 26-5-19 Last Survey 20-5-1920  
 on the "35 Dramatist" (Number of Visits 11)  
 Tons { Gross 5806  
           Net 3670  
 Built at Glasgow By whom built C. Cornell & Co (483) When built 1920  
 Engines made at Blydebank By whom made John Brown & Co. Ltd. (S.O. 12750 19) when made 1920  
 Boilers made at Glasgow By whom made Dunomonin Jackson when made 1920  
 Indicated Horse Power            Owners J. D. Harrison Port belonging to Liverpool  
 Horse Power at Full Power 3040 Is Refrigerating Machinery fitted for cargo purposes  Is Electric Light fitted

LINE ENGINES, &c.—Description of Engines Brown Curtis, Double Reduction Gears of Turbines (3) H.P. I.P. L.P.  
 Diameter of Rotor Shaft Journals, H.P. 3" I.P. 4 1/4" L.P. 7" Diameter of Pinion Shaft 1st Red H.P. I.P. 4" L.P. 5" 2nd Red 10 1/2"  
 Diameter of Journals 4" 5" 10 1/2" Distance between Centres of Bearings L.P. 22" H.P. 23" Diameter of Pitch Circle H.P. 7.43" L.P. 11.253" 2nd Red 15.314"  
 Diameter of Wheel Shaft 15 1/4" Distance between Centres of Bearings 1st Red 5'-1" 2nd Red 6' 3 1/2" Diameter of Pitch Circle of Wheel 2nd Red 92.25" 1st Red 39.661"  
 Diameter of Thrust Shaft under Collars            Diameter of Tunnel Shaft             
 Diameter of same            as per rule            as fitted             
 Diameter of Propeller            Pitch of Propeller             
 State whether Moveable            Total Surface            Diameter of Rotor Drum, H.P.            L.P.            Astern             
 Revs. per Minute at Full Power, Turbine H.P. I.P. 3630 Propeller L.P. 2400 75

## DETAILS OF BLADING.

EXPANSION	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.

size of Feed pumps             
 size of Bilge pumps             
 size of Bilge suction in Engine Room             
 In Holds, &c.             
 Bilge Injections            sizes            Connected to condenser, or to circulating pump            Is a separate Donkey Suction fitted in Engine Room & size             
 Are the bilge suction pipes fitted with roses            Are the roses in Engine room always accessible             
 connections with the sea direct on the skin of the ship            Are they Valves or Cocks             
 fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates            Are the Discharge Pipes above or below the deep water line             
 each fitted with a Discharge Valve always accessible on the plating of the vessel            Are the Blow Off Cocks fitted with a spigot and brass covering plate             
 How are they protected             
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times             
 Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges             
 Shaft Tunnel watertight            Is it fitted with a watertight door            worked from           

MANUFACTURERS, &c.—(Letter for record           ) Manufacturers of Steel             
 Heating Surface of Boilers            Is Forced Draft fitted            No. and Description of Boilers             
 Tested by hydraulic pressure to            Date of test            No. of Certificate             
 Area of fire grate in each boiler            No. and Description of Safety Valves to             
 Area of each valve            Pressure to which they are adjusted            Are they fitted with easing gear             
 Mean dia. of boilers            Length            Material of shell plates             
 Are the shell plates welded or flanged            Descrip. of riveting: cir. seams             
 Pitch of rivets            Lap of plates or width of butt straps             
 Working pressure of shell by rules            Size of manhole in shell             
 No. and Description of Furnaces in each Boiler            Material            Outside diameter             
 Description of longitudinal joint            No. of strengthening rings             
 Combustion chamber plates: Material            Thickness: Sides            Back            Top            Bottom             
 Working pressure by rules             
 Diameter at smallest part            Area supported by each stay            Working pressure by rules            End plates in steam space             
 How are stays secured            Working pressure by rules            Material of stays             
 Working pressure by rules            Material of Front plates at bottom             
 Working pressure of plate by rules             
 Material of tube plates            Thickness: Front            Back            Mean pitch of stays             
 Girders to Chamber tops: Material            Depth and             
 Distance apart            Number and pitch of stays in each             
 % of strength of joint            Diameter             
 Description of longitudinal joint            Diameter of rivet holes            Pitch of rivets             
 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 \_\_\_\_\_

**IS A DONKEY BOILER FITTED?** \_\_\_\_\_ If so, is a report now forwarded? \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:—

The foregoing is a correct description,  
 For **JOHN BROWN & COMPANY, Limited** Manufacturers.  
*R. MacLennan* Cashier.

Dates of Survey while building: During progress of work in shops -- 1919. May 26. Aug 6-8. Sept 19. Nov 5. Dec 29. 1920. May 3. 6. 13. 20.  
 During erection on board vessel ---  
 Total No. of visits 11

Is the approved plan of main boiler forwarded herewith   
 " " " donkey " " "   
 Dates of Examination of principal parts—Casings 4/8/19, 8/8/19 Rotors 5/4/19 Blading 26/5/19 Gearing 20/5/20, 29/12/19  
 Rotor shafts 5/4/19 Thrust shaft  Tunnel shafts  Screw shaft  Propeller   
 Stern tube  Steam pipes tested  Engine and boiler seatings  Engines holding down bolts   
 Completion of pumping arrangements  Boilers sized  Engines tried under steam   
 Main boiler safety valves adjusted  Thickness of adjusting washers   
 Material and tensile strength of Rotor shaft *Sumner Steel 41.5, 42.4, 33.7, 33.2* Identification Mark on Do. *2663, 2668, 2912, 3072*  
 Material and tensile strength of Pinion shaft *S. Nickel Steel 42 to 48 tons* Identification Mark on Do. *103, 104, 105, 106*  
 Material of Wheel shaft *Steel* Identification Mark on Do. *149, 150, 151, 152* Material of Thrust shaft  Identification Mark on Do.   
 Material of Tunnel shafts  Identification Marks on Do.  Material of Screw shafts  Identification Marks on Do.   
 Material of Steam Pipes  Test pressure   
 Is an installation fitted for burning oil fuel  Is the flash point of the oil to be used over 150°F.   
 Have the requirements of Section 49 of the Rules been complied with   
 Is this machinery a duplicate of a previous case  If so, state name of vessel \_\_\_\_\_

**General Remarks** (State quality of workmanship, opinions as to class, &c.)  
*These turbines and gearing have been constructed under special survey the materials and workmanship are of good description and are to be fitted on board the vessel by Messrs Dunsen & Jackson.*

The amount of Entry Fee	£	When applied for,
Special	£ <input checked="" type="checkbox"/>	19
Donkey Boiler Fee	£	When received, 19
Travelling Expenses (if any)	£	19

*A. M. Keane*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *Glasgow* 28 DEC 1920

Assigned *See attached machinery report*

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

27.12.20

Date of writing Rpt. \_\_\_\_\_  
 No. in Series \_\_\_\_\_  
 Reg. Book. \_\_\_\_\_  
 on the \_\_\_\_\_  
 Master \_\_\_\_\_  
 Engines made \_\_\_\_\_  
 Boilers made \_\_\_\_\_  
 Registered Ho \_\_\_\_\_  
**MULTITUBULAR**  
 (Letter for re \_\_\_\_\_)  
**Boilers** 1 \_\_\_\_\_  
 No. of Certificate \_\_\_\_\_  
 safety valves \_\_\_\_\_  
 Are they fitted \_\_\_\_\_  
 Smallest diameter \_\_\_\_\_  
 Material of \_\_\_\_\_  
 Descrip. of \_\_\_\_\_  
 Location of plates \_\_\_\_\_  
 rules 229 \_\_\_\_\_  
**boiler** 3 Co \_\_\_\_\_  
 Description of \_\_\_\_\_  
 plates: Mate \_\_\_\_\_  
 W = 10 1/4 x \_\_\_\_\_  
 Top C = 9 1/2 x 8 \_\_\_\_\_  
 smallest part \_\_\_\_\_  
 Pitch of stay \_\_\_\_\_  
 Area support \_\_\_\_\_  
 Lower back p \_\_\_\_\_  
 Pitch of tube \_\_\_\_\_  
 water spaces \_\_\_\_\_  
 girder at cen \_\_\_\_\_  
 Working pres \_\_\_\_\_  
 Diameter \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_  
**SUPERHEATER**  
 Date of Test \_\_\_\_\_  
 Diameter of Sa \_\_\_\_\_  
 \_\_\_\_\_  
 Dates of Survey while building } Du \_\_\_\_\_  
 while } w \_\_\_\_\_  
 building } Du \_\_\_\_\_  
**GENERAL**  
 Survey a \_\_\_\_\_  
 on Comple \_\_\_\_\_  
 Satisfac \_\_\_\_\_  
 tried u \_\_\_\_\_  
 Survey F \_\_\_\_\_  
 Travelling \_\_\_\_\_  
 Committe \_\_\_\_\_  
 Assigned \_\_\_\_\_