

REPORT ON WATER TUBE BOILERS.

No. 51410

Received at London Office

22 APR 1931

Date of writing Report 7.4.1931 When handed in at Local Office 17.4.1931 Port of Glasgow

No. in Survey held at Blydebank Date, First Survey 19.6.28 Last Survey 13.4.1931
 Reg. Bk. on the Quadruple Screw "Empress of Britain" Number of Visits 12
 Master Blydebank Built at Blydebank By whom built John Brown & Co. Ltd. Tons { Gross
 Engines made at Blydebank By whom made John Brown & Co. Ltd. When built 1931 Net
 Boilers made at do By whom made do When made 1931
 Registered Horse Power ✓ Owners Canadian Pacific S.S. Co. Port belonging to London

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel John Brown & Co. Ltd.

(Letter for Record S.) Date of Approval of plan 6-12-29, 22-3-28 Number and Description or Type
 of Boilers 1-Johnson Working Pressure 425 Tested by Hydraulic Pressure to 688 Date of Test 16-8-28
 No. of Certificate 16008 Can each boiler be worked separately ✓ Total Heating Surface of Boilers 10680 ~~6840~~
 Is forced draught fitted Yes Area of fire grate (coal) in each Boiler ✓ Total grate area of boilers in vessel including
 Main and Auxiliary ✓ No. and type of burners (oil) in each boiler 6-Walton No. and description of safety valves on
 each boiler 3-S.L.J.H.L. Area of each valve 9.6211 Pressure to which they are adjusted 430
 Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler No
 Smallest distance between boilers or uptakes and bunkers or woodwork Well clay Height of Boiler 21'-6 5/8" Width and Length 16'-7" x 17'-5 1/2"
 Steam Drums:—Number in each boiler 1 Inside diameter 4'-4 1/2" Material of plates S Thickness 2 3/8"
 Range of Tensile Strength 28-32 Are drum shell plates welded or flanged No Description of riveting:—
 Cir. seams J.R. long. seams none Diameter of rivet holes in long. seams ✓ Pitch of Rivets ✓
 Lap of plate or width of butt straps none Thickness of straps ✓ Percentage strength of long. joint:—Plate ✓ Rivet ✓
 Diameter of tube holes in drum 2 1/2"-2 3/8"-1 3/8" Pitch of tube holes 4 3/8"-4 3/8"-2 7/8" Percentage strength of shell in way of tubes 42.9
 If Drum has a flat side state method of staying non flat Depth and thickness of girders at centre
 (if fitted) ✓ Distance apart ✓ Number and pitch of stays in each ✓ Working pressure
 by rules ✓ Steam Drum Heads or Ends:—Material S Thickness 1 23/32" Radius or how stayed 3'-7 1/2"
 Size of Manhole or Handhole 16" x 12" Water Drums:—Number in each boiler 1 Inside Diameter 4 1/2"
 Material of plates S Thickness 2 3/4" Range of tensile strength ✓ Are drum shell plates welded
 or flanged No Description of riveting:—Cir. seams lap J.R. long. seams ✓ Diameter of Rivet Holes in
 long. seams ✓ Pitch of rivets ✓ Lap of plates or width of butt straps ✓ Thickness of straps ✓
 Percentage strength of long. joint:—Plate ✓ Rivet ✓ Diameter of tube holes in drum ✓ Pitch of tube holes
 Percentage strength of drum shell in way of tubes 42.9 Water Drum Heads or Ends:—Material S Thickness 1 13/32"
 Radius or how stayed 3'-0" Size of manhole or handhole 16" x 12" Headers or Sections:—Number none
 Material S Thickness ✓ Tested by Hydraulic Pressure to ✓ Material of Stays ✓
 Area at smallest part ✓ Area supported by each stay ✓ Working Pressure by Rules ✓ Tubes:—Diameter
 Thickness ✓ Number ✓ Steam Dome or Collector:—Description of Joint to Shell non
 Percentage strength of Joint ✓ Diameter ✓ Thickness of shell plates ✓ Material
 Description of longitudinal joint ✓ Diameter of Rivet Holes ✓ Pitch of Rivets ✓ Working Pressure of shell
 by Rules ✓ Crown or End Plates:—Material ✓ Thickness ✓ How stayed ✓

SUPERHEATER. Type Johnson Date of Approval of Plan 6-12-29 Tested by Hydraulic Pressure to 688

Date of Test 16-8-28 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler No
 Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is easing gear fitted ✓
 Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 256-1 1/4" x 9 W.C.
 Spare Gear. Tubes ✓ Gaskets or joints:—Manhole ✓ Handhole ✓ Handhole plates ✓
See attached list

John Brown & Company, Limited.

The foregoing is a correct description,

[Signature] Manufacturer's
Glydebank Secretary

Dates of Survey } During progress of work in shops -- } 1928 June 19 26 July 28 27 Aug 10 16 Sep 13 13
 while building } During erection on board vessel -- } See accompanying machinery report... }
 Is the approved plan of boiler forwarded herewith Yes Total No. of visits 13

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been built under special survey in accordance with the approved plans, and the Society's Rules, and requirements, the materials and workmanship are good, it has been securely fitted on board, and the safety valves adjusted under steam.

Survey Fee £ : : } When applied for, 191
 Travelling Expenses (if any) £ : : } When received, 191

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 21 APR 1931**

Assigned SEE ACCOMPANYING MACHINERY REPORT.

