

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. # 7659

Received at London Office 7 MAR 1928

Date of writing Report 1-3-1928 When handed in at Local Office 1-3-1928 Port of Glasgow

No. in Reg. Bk. Survey held at Blydebank Date, First Survey 31-3-27 Last Survey 1st March 1928
 on the Triple Screw "Princess Elaine" Number of Visits 75 Tons { Gross 3027 Net 725
 Master Built at Blydebank By whom built J. Brown & Co. L^d When built 1928
 Engines made at Blydebank By whom made J. Brown & Co. L^d When made 1928
 Boilers made at Blydebank By whom made J. Brown & Co. L^d When made 1928
 Registered Horse Power. Owners Canadian Pacific Ry Co Port belonging to Vancouver

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel D. Colville & Sons L^d

(Letter for Record S.) Date of Approval of plan 19-1-27 Number and Description or Type of Boilers 2-Farrow Working Pressure 200 Tested by Hydraulic Pressure to 350 Date of Test 19-8-27

No. of Certificate 17546 Can each boiler be worked separately Yes Total Heating Surface of Boilers 12120
17559

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 12.56 Total grate area of boilers in vessel including Main and Auxiliary Yes No. and type of burners (oil) in each boiler 7. Wallsend No. and description of safety valves on each boiler 2-Spring loaded H.L. Area of each valve 12.56 Pressure to which they are adjusted 205

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler None

Smallest distance between boilers or uptakes and bunkers or woodwork 26" Height of Boiler 12-11 1/4" Width and Length 16-1 1/2" x 14-7 3/4"

Steam Drums:—Number in each boiler One Inside diameter 54" Material of plates S. Thickness 5/8"

Range of Tensile Strength 28-32 Are drum shell plates welded or flanged No Description of riveting:—

Cir. seams A.R. long. seams A.R. Diameter of rivet holes in long. seams 27/32" Pitch of Rivets 3.353"

Lap of plate or width of butt straps outer 8 3/4" Thickness of straps outer 1/2" Percentage strength of long. joint:—Plate 74.83 Rivet 82.17

Diameter of tube holes in drum 1 1/2" - 1 1/4" Pitch of tube holes 2 1/8" - 1 7/8" Percentage strength of shell in way of tubes 29.4

If Drum has a flat side state method of staying Yes Depth and thickness of girders at centre (if fitted) Yes Distance apart Yes Number and pitch of stays in each Yes Working pressure by rules Yes

Steam Drum Heads or Ends:—Material S Thickness 1"-1 1/8" Radius of head stayed 54"

Size of Manhole or Handhole 16" x 12" Water Drums:—Number in each boiler 2 Inside Diameter 30"

Material of plates S Thickness Lower 5/8" Range of tensile strength 26-30 Are drum shell plates welded or flanged No Description of riveting:—Cir. seams S.R. long. seams A.R. Diameter of Rivet Holes in long. seams 27/32" Pitch of rivets 3.137" Lap of plates or width of butt straps outer 8 5/8" Thickness of straps outer 1/2"

Percentage strength of long. joint:—Plate 73.1 Rivet 94.59 Diameter of tube holes in drum 1 1/2" - 1 1/4" Pitch of tube holes 2 1/8" - 1 7/8"

Percentage strength of drum shell in way of tubes 29.4 Water Drum Heads or Ends:—Material S Thickness 7/8"

Radius of head stayed 30" Size of manhole or handhole 16" x 12" Headers or Sections:—Number Yes

Material Yes Thickness Yes Tested by Hydraulic Pressure to Yes Material of Stays Yes

Area at smallest part Yes Area supported by each stay Yes Working Pressure by Rules Yes Tubes:—Diameter Yes

Thickness Yes Number Yes Steam Dome or Collector:—Description of Joint to Shell Yes

Percentage strength of Joint Yes Diameter Yes Thickness of shell plates Yes Material Yes

Description of longitudinal joint Yes Diameter of Rivet Holes Yes Pitch of Rivets Yes Working Pressure of shell by Rules Yes

Crown or End Plates:—Material Yes Thickness Yes How stayed Yes

SUPERHEATER. Type None Date of Approval of Plan Yes Tested by Hydraulic Pressure to Yes

Date of Test Yes Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve Yes Pressure to which each is adjusted Yes Is easing gear fitted Yes

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes Yes

Spare Gear. Tubes Yes Gaskets or joints:—Manhole Yes Handhole Yes Handhole plates Yes

John Brown & Company, Limited
The foregoing is a correct description,
J. J. Bairns Manufacturers.

Dates of Survey } During progress of work in shops -- } See accompanying machinery report
while building } During erection on board vessel --- }

Is the approved plan of boiler forwarded herewith Yes.
Total No. of visits

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

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

J. J. Bairns
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 - MAR 1928
Assigned See accompanying report on mach.