

Rpt. 5c.

# REPORT ON WATER TUBE BOILERS.

No. 7188

26. 10. 27

Received at London Office

Date of writing Report *27/10/27* When handed in at Local Office *22. 10. 1927* Port of *Glasgow*

No. in Survey held at *Glasgow* Date, First Survey *13. 12. 26* Last Survey *20. 10. 1927*

Reg. Bk. on the *Messrs Amthang Whitehairs of 1019.* Number of Visits *31* Tons *Gross*

Master *T.S.S. "Beaverdale"* Built at *Newcastle* By whom built *T.S.S. "Beaverdale"* When built

Engines made at *Newcastle* By whom made *Parsons Marine Steam Turbine Co* When made

Boilers made at *Glasgow* By whom made *Messrs James (No 1538)* When made *1924.*

Registered Horse Power *1000* Owners *Canadian Pacific Ry Co* Port belonging to

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.** Manufacturers of Steel *Steel Company of Western*

Letter for Record *S* Date of Approval of plan *5.8.26* Number and Description or Type *4 James Water tube*

Boilers *4 James Water tube* Working Pressure *250 lbs* Tested by Hydraulic Pressure to *425 lbs* Date of Test *12.4.27*

No. of Certificate *17364, 17373, 17380, 17400* Can each boiler be worked separately *Yes* Total Heating Surface of Boilers *12620 sq ft*

Is forced draught fitted *Yes* Area of fire grate (coal) in each Boiler *80 sq ft* Total grate area of boilers in vessel including

Main and Auxiliary *435.5 sq ft* No. and type of burners (oil) in each boiler *2 direct spring high lift.* No. and description of safety valves on

each boiler *2 direct spring high lift.* Area of each valve *408 sq in* Pressure to which they are adjusted *250 lbs*

Are they fitted with easing gear *Yes* In case of donkey boilers state whether steam from main boilers can enter the donkey boiler *Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *18"* Height of Boiler *22'-10"* Width and Length *20'-0" x 16'-6"*

Steam Drums:—Number in each boiler *One* Inside diameter *50"* Material of plates *S* Thickness *3/8"*

Range of Tensile Strength *28-35 tons* Are drum shell plates welded or flanged *No* Description of riveting:—

long. seams *double* Diameter of rivet holes in long. seams *3/8"* Pitch of Rivets *3 1/2"*

lap of plate or width of butt straps *9"* Thickness of straps *9/16"* Percentage strength of long. joint:—Plate *75* Rivet *80%*

Diameter of tube holes in drum *1 3/4" x 1 1/4"* Pitch of tube holes *2 1/2", 3 1/2", 1 1/2"* Percentage strength of shell in way of tubes *48-1*

Drum has a flat side state method of staying *Yes* Depth and thickness of girders at centre

Distance apart *280 lbs* Number and pitch of stays in each *1 1/4"* Working pressure

Material *S* Thickness *1 1/4"* Radius or how stayed *50"*

Water Drums:—Number in each boiler *Three* Inside Diameter *23"*

Material of plates *S* Thickness *5/8"* Range of tensile strength *28-35 tons* Are drum shell plates welded

flanged *No* Description of riveting:—Cir. seams *double* long. seams *double* Diameter of Rivet Holes in

long. seams *13/16"* Pitch of rivets *3 1/2"* Lap of plates or width of butt straps *8 1/2"* Thickness of straps *9/16"*

Percentage strength of long. joint:—Plate *76.8* Rivet *73.5* Diameter of tube holes in drum *1 3/4" x 1 1/4"* Pitch of tube holes *2 1/2", 3 1/2", 1 1/2"*

Percentage strength of drum shell in way of tubes *40.* Water Drum Heads or Ends:—Material *S* Thickness *3/4"*

Radius or how stayed *2 1/2"* Size of manhole or handhole *16" x 12"* Headers or Sections:—Number

Material *S* Thickness *3/8"* Tested by Hydraulic Pressure to *425 lbs* Material of Stays

Area at smallest part *280 lbs* Area supported by each stay *280 lbs* Working Pressure by Rules *280 lbs* Tubes:—Diameter

Thickness *3/8"* Number *31* Steam Dome or Collector:—Description of Joint to Shell

Percentage strength of Joint *40.* Diameter *16"* Thickness of shell plates *3/8"* Material *S*

Description of longitudinal joint *Double* Diameter of Rivet Holes *3/8"* Pitch of Rivets *3 1/2"* Working Pressure of shell

Rules *280 lbs* Crown or End Plates:—Material *S* Thickness *3/8"* How stayed *Double*

**SUPERHEATER** Type *James Bell* Date of Approval of Plan *12.10.26* Tested by Hydraulic Pressure to *425 lbs*

Date of Test *12.4.27 + 21/19.4.27* Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler *Yes*

Diameter of Safety Valve *1 1/2"* Pressure to which each is adjusted *150 lbs* Is easing gear fitted *Yes*

Is a drain cock or valve fitted at lowest point of superheater *Yes* Number, diameter, and thickness of tubes *153 @ 1 1/2", 12 @ 1 1/2"*

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

Dates of survey: During progress of *1926 Dec 13-23 (1927) Jan 12-19 Feb 3-10 18-20 Mar 27* Is the approved plan of boiler forwarded herewith *Yes*

work in shops *19.31 Apr 5-12-19-22-29 May 11-17-26 Jun 1-7-17 July 5*

During erection on *Aug 15-16-30 Sep 12 Oct 5-11-20* Total No. of visits *31*

board vessel *---*

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *These Boilers have been built under special survey and in accordance with the Rules. The Materials & Workmanship are good. On completion they have been tested by hydraulic pressure with satisfactory results. Steel invoice includes material worked into Messrs James No. 1537. now completed.*

Survey Fee *£ 54. 11. -* When applied for *25/10/27*

Travelling Expenses (if any) *£ - - -* When received *28.3.1927*

*W.M.* *Geo. J. Munro*

Committee's Minute **GLASGOW 25. OCT 1927**

Engineer Secretary to Lloyd's Register of Shipping. **TUES. 14 FEB 1928**

See Note *See Note* Lloyd's Register Foundation

W336-0021