

Rpt. 5c.

REPORT ON WATER TUBE BOILERS.

No. 48950

Received at London Office

13 MAR 1929

Date of writing Report 191 When handed in at Local Office 9.3.1929 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 5.10.27 Last Survey 4. March 1929

Reg. No. 92546 on the *Lutin P.L. Vicinity of India* Number of Visits 39 Gross 19648. Tons Net 10069.

Master Built at Glasgow By whom built *R. Stephens & Son Ltd.* When built 1929.

Engines made at *Rugby.* By whom made *British Thomson Houston Co.* When made 1929

Boilers made at *Glasgow.* By whom made *Jessie James & Co Ltd. (1549)* When made 1929.

Registered Horse Power Owners *Peninsular & Oriental Steam Nav. Co.* Port belonging to *Glasgow*

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

(Letter for Record *S*) Date of Approval of plan *1.7.27* Number and Description of Type of Boilers *2. James* Working Pressure *400 lb.* Tested by Hydraulic Pressure to *650 lb.* Date of Test *1.6.28*

No. of Certificate *17414-3* Can each boiler be worked separately *Yes* Total Heating Surface of Boilers *9700 sq. ft. (2 tubes)*

Is forced draught fitted *Yes* Area of fire grate (coal) in each Boiler *5.94* Total grate area of boilers in vessel including Main and Auxiliary *5.94* No. and type of burners (oil) in each boiler *5. Blyde* No. and description of safety valves on each boiler *2 Improved lift lift.* Area of each valve *5.94* Pressure to which they are adjusted *400 lb.*

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 *20"* Height of Boiler *15'-11"* Width and Length *22'-0" x 17'-2"*

Steam Drums:—Number in each boiler *One* Inside diameter *50"* Material of plates *S* Thickness *2 1/2"*

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

Cir. seams *D.R. overlap.* long. seams *Solid forged* Diameter of rivet holes in long. seams *1 1/4"* Pitch of Rivets *1 1/2"*

Lap of plate or width of butt straps *1 1/4"* Thickness of straps *1 1/4"* Percentage strength of long. joint:—Plate *✓* Rivet *✓*

Diameter of tube holes in drum *1 1/4" x 1 1/2"* Pitch of tube holes *2 1/2" x 3 1/2" x 1 1/2"* Percentage strength of shell in way of tubes *33.3*

If Drum has a flat side state method of staying *✓* Depth and thickness of girders at centre (if fitted) *✓* Distance apart *✓* Number and pitch of stays in each *✓* Working pressure by rules *400 lb.*

Steam Drum Heads or Ends:—Material *S* Thickness *1 1/2"* Radius on how stayed *50"*

Size of Manhole or Handhole *16 x 12* Water Drums:—Number in each boiler *Three* Inside Diameter *23"*

Material of plates *S* Thickness *1 1/2" x 1 1/4" x 1 1/2"* Range of tensile strength *28-32 tons* Are drum shell plates welded or flanged *No.* Description of riveting:—Cir. seams *D.R. overlap.* long. seams *Solid forged* Diameter of Rivet Holes in long. seams *1 1/4"* Pitch of rivets *1 1/2"* Lap of plates or width of butt straps *1 1/4"* Thickness of straps *1 1/4"*

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

Percentage strength of drum shell in way of tubes *33.3* Water Drum Heads or Ends:—Material *S* Thickness *1 1/2"*

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

Material *✓* 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 *✓*

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 *✓*

UPERHEATER. Type *James* Date of Approval of Plan *20.7.27* Tested by Hydraulic Pressure to *650 lb.*

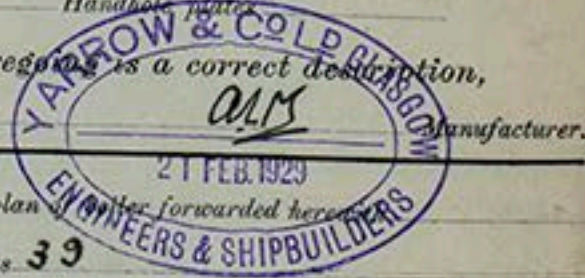
Date of Test *4.7.28* Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler *Yes*

Diameter of Safety Valve *See above.* 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 *284: 1 1/2" x 12 L.S.*

Spare Gear. Tubes *8 loops* Gaskets or joints:—Manhole *✓* Handhole *✓* Handhole plates *✓*

The foregoing is a correct description,



Dates of Survey: During progress of work in shops - 27 Oct 5-11-20-28 Nov 2-17-29 Dec 7-19-30 (1928) Is the approved plan of boiler forwarded hereon *✓*

During erection on board vessel - Jan 4-26 Feb 2-6-28 Mar 9-10-26 Apr 6-11-20-27 Total No. of visits 39

May 4-16-22-30 Jun 1-20-23 July 4-26 Aug 18-21-21

Sep 11-27 Oct 4-18 (1929) Mar 4

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 and approved plans. The materials and workmanship are good. On completion they have been tested by hydraulic pressure and found tight.

Survey Fee ... £ ... When applied for, 191

Travelling Expenses (if any) £ ... When received, 191

James Brown
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 MAR 1929

Assigned See accompanying machinery report.

TUE. 9 APR 1929



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