

# REPORT ON WATER TUBE BOILERS.

No. 40416

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Writing Report 2.10.20 When handed in at Local Office 4.10.20 Port of Glasgow  
 in Survey held at Glasgow Date, First Survey 14.7.1919 Last Survey 23.9.1920  
 Bk. on the S.S. "Salawati" Number of Visits 1 Gross Tons 100 Net Tons 100  
 Built at Glasgow By whom built Lithgows Ltd (20738) When built 1920  
 Repaired at Glasgow By whom made Do Rowan & Co Ltd (20734) When made 1920  
 Repaired at Glasgow By whom made Howdens (20734) When made 1920  
 Registered Horse Power 100 Owners Howdens Port belonging to Howdens

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Lithgows Ltd 60 Coateville PA USA

Number for Record S Date of Approval of plan 10.9.19 Number and Description or Type 4 Howdens Patent (3 elements)

Working Pressure 180 lb Tested by Hydraulic Pressure to 320 lb Date of Test 17.8.20

of Certificate 15435 Can each boiler be worked separately Yes Total Heating Surface of Boilers 10560 ft<sup>2</sup>

Forced draught fitted Yes Area of fire grate (coal) in each Boiler 45 ft<sup>2</sup> Total grate area of boilers in vessel including 180 ft<sup>2</sup>

No. and type of burners (oil) in each boiler None No. and description of safety valves on 2 Spring loaded

Area of each valve 8.29 ft<sup>2</sup> Pressure to which they are adjusted 185 lb

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 23" Height of Boiler 15.94' Width and Length 12-10 1/2' x 13-5'

Number in each boiler 3 Inside diameter 3'-0 7/8" x 21 7/8" Material of plates Steel Thickness 1 3/8"

Are drum shell plates welded or flanged Welded Description of riveting:— Double Lap

Diameter of rivet holes in long. seams 7/8" Pitch of Rivets 2.56"

Percentage strength of long. joint:—Plate 65.8 Rivet 79.86

Depth and thickness of girders at centre Thick tube plates with girders at end

Distance apart 6 7/8" Number and pitch of stays in each four 6 7/8" Working pressure 200 lb

Material Steel Thickness 3/4" Radius or how stayed 21" Radius

Water Drums:—Number in each boiler 3 Inside diameter 3'-0 7/8" x 21 7/8"

Range of tensile strength 26-30 tons Are drum shell plates welded Yes

Description of riveting:— Single Lap long. seams Double Lap Diameter of Rivet Holes in 7/8"

Pitch of rivets 2.65 Lap of plates or width of butt straps 4 7/8" Thickness of straps —

Diameter of tube holes in drum 2 3/32" Pitch of tube holes 3 3/8" x 5 1/2" Percentage strength of drum shell in way of tubes —

Water Drum Heads or Ends:—Material Steel Thickness 7/8" + 3/4"

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 2"

Number 717 Per Boiler Steam Dome or Collector:—Description of Joint to Shell Standard riveted Pad

Diameter 2'-6" Thickness of shell plates 7/16" Material Steel

Pitch of Rivets 2.48" Working Pressure of shell 226 lb

Crown or End Plates:—Material Steel Thickness 1 3/16" How stayed 2'-6" Radius

UPERHEATER. Type Howdens Date of Approval of Plan 22.12.19 Tested by Hydraulic Pressure to 540 lb

Date of Test 30.4.20 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2" Pressure to which each is adjusted 205 lb Is casing gear fitted No

Number, diameter, and thickness of tubes 16 tubes 1 1/2" O.D x 8" I.D.

Spare Gear. Tubes None Gaskets or joints:—Manhole 24 Handhole ✓ Handhole plates ✓

The foregoing is a correct description,  
David Rowan & Co Ltd Manufacturer.

Is the approved plan of boiler forwarded herewith Yes

Total No. of visits 1

Dates of Survey while building: During progress of work in shops See machinery report. During erection on board vessel —

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers & Superheater have been built under Special Survey Materials and workmanship are good. They have been well fitted to the Vessel.

Survey Fee £ 100 When applied for 191  
Travelling Expenses (if any) £ 0 When received 191

Earle Arthur Stewart Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW. 5. OCT. 1920

Assigned See accompanying Mach. Report.