

# REPORT ON WATER TUBE BOILERS.

No. 51003

12 NOV 1930

Received at London Office

Port of *Glasgow*

of writing Report *31-10-1930* When handed in at Local Office *10-11-1930* Date, First Survey *20-3-30* Last Survey *22-10-1930*

Survey held at *Glasgow & Barrow* Number of Visits *11* Gross *22574*

Boilers *Nº 1598 (S.S. STRATHNAVER)* Tons *Net 13620*

Built at *Barrow* By whom built *Vickers-Armstrongs Ltd* When built *1931*

By whom made *The British Thomson Houston Co Ltd* When made *1931*

By whom made *Yarrow & Co Ltd* When made *1930*

Owners *Peninsular & Oriental S.N. Co* Port belonging to *London*

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel *Steel Co of Scotland & Eng. Steel Corp.*

Letter for Record *(S)* Date of Approval of plan *5/3/30* Working Pressure *425* Tested by Hydraulic Pressure to *688 lb* Date of Test *22/4/31*

Boilers *4 Yarrow* Total Heating Surface of Boilers *688 lb* Date of Test *22/4/31*

No. of Certificate *438, 441, 446, 448* Can each boiler be worked separately *Yes* Total grate area of boilers in vessel including *50,000 sq ft*

forced draught fitted *Yes* Area of fire grate (coal) in each Boiler *4 Yarrow* No. and description of safety valves on *446 lb*

main and Auxiliary *3 1/4" Single H.L.* No. and type of burners (oil) in each boiler *4 Yarrow* Pressure to which they are adjusted *446 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 *2' 0"* Height of Boiler *20' 1"* Width and Length *20' 1" x 14' 9"*

team Drums:—Number in each boiler *34-38 TONS* Are drum shell plates welded or flanged *NO* Description of riveting:—

Range of Tensile Strength *T.R.* long. seams *SOLID* Diameter of rivet holes in long. seams *54"* Pitch of rivets *33 1/3%*

lap of plate or width of butt straps *1 3/8 and 2"* Thickness of straps *2 1/16 - 3 - 4 1/4"* Percentage strength of shell in way of tubes *33 1/3%*

Diameter of tube holes in drum *1 3/8 and 2"* Pitch of tube holes *2 1/16 - 3 - 4 1/4"* Depth and thickness of girders at centre *54"*

Drum has a flat side state method of staying *Distance apart* Number and pitch of stays in each *2"* Working pressure *54"*

if fitted) *STEEL* Thickness *3"* Radius or how stayed *2 @ 23"* Inside Diameter *1 @ 36"*

rules *STEEL* Thickness *3"* Inside Diameter *1 @ 36"* Are drum shell plates welded *SOLID*

size of Manhole or Handhole *16" x 12" EACH END* Water Drums:—Number in each boiler *28-32 TONS* Diameter of Rivet Holes in *SOLID*

material of plates *STEEL* Thickness *3"* long. seams *SOLID* Diameter of Rivet Holes in *SOLID*

flanged *NO* Description of riveting:—Cir. seams *DR.* long. seams *SOLID* Thickness of straps *2 1/16 - 3 - 4 1/4"*

long. seams *Yes* Pitch of rivets *33 1/3%* Lap of plates or width of butt straps *1 3/8 - 2"* Pitch of tube holes *2 1/16 - 3 - 4 1/4"*

Percentage strength of long. joint:—Plate *33 1/3%* Water Drum Heads or Ends:—Material *STEEL* Thickness *3"*

Percentage strength of drum shell in way of tubes *33 1/3%* Size of manholes or handhole *16" x 12"* Headers or Sections:—Number *NOT FITTED*

Radius or how stayed *2 1/2 - 36"* Tested by Hydraulic Pressure to *425 lb* Material of Stays *NOT FITTED*

Material *STEEL* Thickness *3"* Working Pressure by Rules *54"* Tubes:—Diameter *1 3/8 x 2"*

Area at smallest part *121 - 127 - 198* Number *2849* Steam Dome or Collector:—Description of Joint to Shell *Material*

Thickness *121 - 127 - 198* Diameter *2849* Thickness of shell plates *Material* Working Pressure of shell *54"*

Percentage strength of Joint *33 1/3%* Diameter of Rivet Holes *54"* Pitch of Rivets *33 1/3%*

Description of longitudinal joint *by Rules* Thickness *54"* How stayed *54"*

by Rules *Yes* Crown or End Plates:—Material *as above* Tested by Hydraulic Pressure to *688 lb*

UPERHEATER. Type *YARROW* Date of Approval of Plan *as above* Is a safety valve fitted to each section of the superheater which can be shut off from the Boilers *shut off*

Date of Test *22/4/31* Is easing gear fitted *Yes* Is a drain cock or valve fitted at lowest point of superheater *Yes*

Diameter of Safety Valve *3 1/2" double spring H.L.* Pressure to which each is adjusted *425 lb* Number, diameter, and thickness of tubes *10*

Is a drain cock or valve fitted at lowest point of superheater *Yes* Handhole *Yes* Handhole plates *10*

Spare Gear. Tubes *200* Gaskets or joints:—Manhole *40* Handhole *Yes* Handhole plates *10*

Here Boilers have been efficiently fitted on board the vessel and satisfactorily The foregoing is a correct description of the Boilers

withstood the hydraulic test of 688 lb per sq in. They have been mounted and examined under steam and their safety valves adjusted as above. *Wm Brown*

Dates of Survey *1930 Mar 20-27 Apr 28 May 19 July 7* Is the approved plan of boiler *Yes*

During progress of work in shops *1930 Mar 20-27 Apr 28 May 19 July 7* Total No. of visits *37*

During erection on board vessel *22/4/31* *25 Sep 1930* *15 Oct 1930* *22 Jan 1931* *7 Feb 1931*

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &c.)

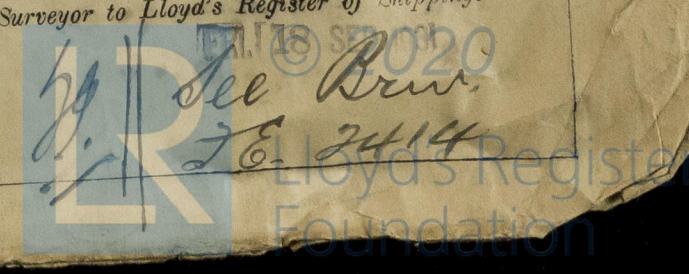
These pressure parts have been made under special survey, to approved plans in accordance with the Society's Rules. Material and workmanship is good. They are being forwarded to Barrow for erection in s.s. "Strathnaver". M. Vickers-Armstrongs Ltd. 603/4. Hydraulic test to be carried out on board.

Survey Fee *107-10*

When applied for *22/9/31* When received *22/9/31*

Committee's Minute *GLASGOW 11 NOV 1930* Assigned *TRANSMIT TO LONDON*

Engineer Surveyor to Lloyd's Register of Shipping.



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