

REPORT ON WATER TUBE BOILERS.

No. 2433

Received at London Office

Date of writing Report 4th January 1932 When handed in at Local Office 16th January 1932 Port of Barrow

No. in Survey held at Barrow Date, First Survey Sept 3 1930 Last Survey 12th January 1932

Reg. Bk. 5211 on the Steel Gun screw Turb-Electric "Strathaird" Number of Visits 37 Tons { Gross 225444 Net 13621

Master Barrow Built at Barrow By whom built Vickers-Armstrongs Ltd When built 1932

Engines made at Rugby By whom made The British Thomson Houston Co Ltd When made 1932

Boilers made at Barrow By whom made Vickers-Armstrongs Ltd When made 1932

NOMINAL Horse Power 6315 Owners Peninsular & Oriental S.S. Co Ltd Port belonging to London

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel English Steel Corporation, Yuba ^{British Magnesia}

Letter for Record S Date of Approval of plan 5/3/30 Number and Description or Type Four Yarrow

Boilers Four Yarrow Working Pressure 425 lb Tested by Hydraulic Pressure to 688 lb Date of Test 23/9/31

No. of Certificates 451 & 452 Can each boiler be worked separately Yes Total Heating Surface of Boilers 50000 sq. ft.

Forced draught fitted Yes Area of fire grate (coal) in each Boiler Yes Total grate area of boilers in vessel including Yes

Main and Auxiliary Yes No. and type of burners (oil) in each boiler 4 Clyde No. and description of safety valves on Yes

Each boiler Single 3 1/4" high lift Area of each valve 8.29 sq. in. 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 on iron plates and bunkers on woodwork 2'-0" Height of Boiler 20'-1" Width and Length 20'-1" x 14'-9"

Steam Drums:—Number in each boiler One Inside diameter 54" Material of plates Steel Thickness 2 1/2"

Range of Tensile Strength 34 to 38 ton Are drum shell plates welded or flanged No Description of riveting:—

Long. seams Yuba long. seams Solid Diameter of rivet holes in long. seams Yes Pitch of Rivets Yes

Thickness of straps Yes Percentage strength of long. joint:—Plate Yes Rivet Yes

Diameter of tube holes in drum 1 3/8" & 2" Pitch of tube holes 2 1/4", 3", 4 1/4" Percentage strength of shell in way of tubes 33 1/3

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

Distance apart Yes Number and pitch of stays in each Yes Working pressure Yes

Rules Yes Steam Drum Heads or Ends:—Material Steel Thickness 2" Radius as shown stayed 54"

Size of Manhole or Handhole 16" x 12" each end Water Drums:—Number in each boiler Three Inside Diameter 2 @ 23"

Material of plates Steel Thickness in 23": 1 1/4" & 1 3/8" Range of tensile strength 28 to 32 ton Are drum shell plates welded Yes

Flanged No Description of riveting:—Cir. seams Double long. seams Solid Diameter of Rivet Holes in Yes

Long. seams Yes Pitch of rivets Yes Lap of plates or width of butt straps Yes Thickness of straps Yes

Percentage strength of long. joint:—Plate Yes Rivet Yes Diameter of tube holes in drum 1 3/8" & 2" Pitch of tube holes 2 1/4", 3", 4 1/4"

Percentage strength of drum shell in way of tubes 33 1/3 Water Drum Heads or Ends:—Material Steel Thickness in 23": 1 3/8"

Radius as shown stayed 21 1/2" & 36" 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 1 3/8" & 2"

Thickness 12, 15, 19 Number 2849 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 Yes

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

PREHEATER. Type Yarrow Date of Approval of Plan 5/3/30 Tested by Hydraulic Pressure to 688 lb

Date of Test 10/6/31 23/6/31 & 16/7/31 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Cannot be shut-off

Diameter of Safety Valve Double 3 1/2" high lift Pressure to which each is adjusted 425 lb Is easing gear fitted Yes

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 1030, - 1 1/8" - 9 1/2"

Manhole or Handhole plates 10

The foregoing is a correct description,
G. Johnson for Vickers-Armstrongs Ltd. Manufacturer.

Dates During progress of work in shops: 1930 - Sept 3, 17, 26, Nov 5, 1931 - Mar 5, 12, Apr 24, 29 Is the approved plan of boiler forwarded herewith Yes

While erecting on board vessel: May 1, 15, 19, June 2, 19, 25, July 3, 16, Aug 17, 21, Sept 3, 14, 23, Oct 6, 13, Nov 5, 16, 24, 27, Dec 21 Total No. of visits 37

1932 - Jan 6, 10, 13, 14

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built in accordance with the approved plans and the Rules. The material and workmanship are good. They have been efficiently fixed and mounted, and their safety valves adjusted under steam.

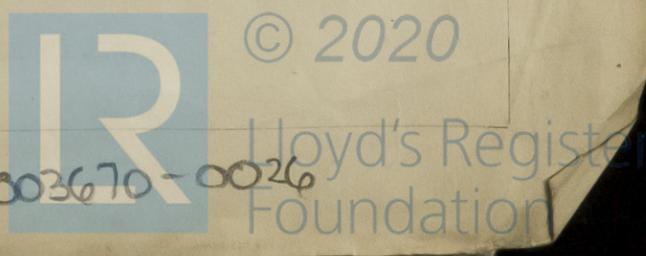
Survey Fee ... £ 10 When applied for, 10

Travelling Expenses (if any) £ 10 When received, 10

W. D. Jones
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 26 JAN 1932

Assigned See F. C. Rep



003659-003670-0026