

# REPORT ON WATER TUBE BOILERS.

No. 2687

Received at London Office MAR 16 1938

Date of writing Report 14. 3. 1938 When handed in at Local Office 14. 3. 1938 Port of Barron

No. in Survey held at Barron Date, First Survey 29. September, 1936 Last Survey 7. 3. 1938

Reg. Bk. on the Jun Senew **STRATHALLAN.** Number of Visits 35 Gross 23721.95 Tons Net 14230.22

Master [Signature] Built at Barron By whom built Vickers Armstrongs Ltd. When built 1938

Engines made at Barron By whom made - do - When made 1938

Boilers made at - do - By whom made - do - When made 1938

NOMINAL Registered Horse Power 4910 Owners Peninsular & Oriental Steam Nav. Co Ltd. Port belonging to London

See also Glasgow Report No 58009 A.

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

(Letter for Record S) Date of Approval of plan \_\_\_\_\_ Number and Description or Type of Boilers 4 BARCOCK + WILCOX (LARGE) Working Pressure 450 lb Tested by Hydraulic Pressure to 725 lb Date of Test 20.1.38

No. of Certificate 466 Can each boiler be worked separately YES Total Heating Surface of Boilers 29860 sq ft

Is forced draught fitted YES Area of fire grate (coal) in each Boiler \_\_\_\_\_ Total grate area of boilers in vessel including Main and Auxiliary \_\_\_\_\_

No. and type of burners (oil) in each boiler 6 WALLSEND TYPE No and description of safety valves on each boiler 1 COCKBURNS H.L. DOUBLE SPRING Area of each valve 2 @ 7.06 sq in Pressure to which they are adjusted 450 lb

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

Smallest distance between boilers or uptakes and bunkers or woodwork 5'-6" Height of Boiler 20'-6" Width and Length 22'-3" x 18'-0"

Steam Drums:—Number in each boiler ONE Inside diameter 3'-6" Material of plates STEEL Thickness 1 5/8"

Range of Tensile Strength SHELL 28/32 Tons ENDS 26/30 Tons Are drum shell plates welded or flanged SOLID FORGED Description of riveting:—

Cir. seams DOUBLE long. seams \_\_\_\_\_ Diameter of rivet holes in long. seams \_\_\_\_\_ Pitch of Rivets \_\_\_\_\_

Lap of plate or width of butt straps \_\_\_\_\_ Thickness of straps \_\_\_\_\_ Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_

Diameter of tube holes in drum 4 3/4" Pitch of tube holes 7 1/4" Percentage strength of shell in way of tubes 44.1

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 \_\_\_\_\_

Steam Drum Heads or Ends:—Material STEEL Thickness 1 7/16" Radius or how stayed 3'-0"

Size of Manhole or Handhole 15" x 11" Water Drums:—Number in each boiler ONE Inside Diameter 6'-6" sq.

Material of plates STEEL Thickness 3/4 NOMINAL Range of tensile strength 28/32 Tons Are drum shell plates welded or flanged \_\_\_\_\_

Description of riveting:—Cir. seams \_\_\_\_\_ long. seams \_\_\_\_\_ Diameter of Rivet Holes in long. seams \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Lap of plates or width of butt straps \_\_\_\_\_ Thickness of straps \_\_\_\_\_

Percentage strength of long. joint:—Plate \_\_\_\_\_ Rivet \_\_\_\_\_ Diameter of tube holes in drum \_\_\_\_\_ Pitch of tube holes \_\_\_\_\_

Percentage strength of drum shell in way of tubes \_\_\_\_\_ Water Drum Heads or Ends:—Material \_\_\_\_\_ Thickness \_\_\_\_\_

Radius or how stayed \_\_\_\_\_ Size of manhole or handhole \_\_\_\_\_ Headers or Sections:—Number 360 (TAMA)

Material STEEL Thickness 7/16 NOMINAL Tested by Hydraulic Pressure to 725 lb Material of Stays \_\_\_\_\_

Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working Pressure by Rules \_\_\_\_\_ Tubes:—Diameter 1 1/2 GENERATOR }  
4" RETURN }

Thickness 1 1/16 --- 7+9 LSG ✓ Number 30 @ 1 1/2 ✓ 60 @ 4" (RETURN) ✓ 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 \_\_\_\_\_

**SUPERHEATER.** Type BFW INTERDECK Date of Approval of Plan \_\_\_\_\_ Tested by Hydraulic Pressure to 75 lb AFTER TUNING

Date of Test 19. 3. 38 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler YES

Diameter of Safety Valve 3" SINGLE SPRING Pressure to which each is adjusted 440 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 84 @ 1 1/2 OD x 8 LSG

Spare Gear. Tubes \_\_\_\_\_ Gaskets or joints:—Manhole 4 Handhole 135 Handhole plates 6 COMPLETE WITH BRIDGE + NUT.

50 GENERATOR TUBES EACH SIZE }  
6 SUPERHEATER " " LENGTH } INCLUDING SMALL BOILERS

The foregoing is a correct description, FOR VICKERS-ARMSTRONGS LIMITED, Manufacturer.

Wood

Dates of Survey } During progress of work in shops:—1936  
Sept. 29, Oct. 14, 15, 29, Nov. 10, 11, Dec. 10, 1937  
Jan. 14, Feb. 2, 9, Apr. 31, Aug. 9.  
while building } During erection on board vessel:—1938  
Oct. 19, Nov. 3, 24, Dec. 3, 1938  
Jan. 20, Feb. 10, 16, 25, Mar. 6, 4, 6, 8, 9.

Is the approved plan of boiler forwarded herewith YES

Total No. of visits 35

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

The boilers have been constructed under Special Survey & in accordance with the requirements & the materials & workmanship are sound & good. They have been efficiently installed on board & their safety valves adjusted under steam as above (See also Barron Mach Dept attached)

Survey Fee (See Mach Dept) : } When applied for, \_\_\_\_\_ 19 \_\_\_\_\_

Travelling Expenses (if any) £ : } When received, \_\_\_\_\_ 19 \_\_\_\_\_

[Signature]  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute \_\_\_\_\_

Assigned See F. C. report

