

## 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 Barrin

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

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

Master Mr Built at Barrin By whom built Vickers Armstrongs Ltd. When built 1938

Engines made at Barrin 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 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 ft 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 (TOTAL)

Material STEEL Thickness 7/16" NOMINAL Tested by Hydraulic Pressure to 725 lb. Material of Stays 1 1/2" GENERATOR

Area at smallest part Area supported by each stay Working Pressure by Rules Tubes:—Diameter 4" RETURN

Thickness 1 3/16" 7'-9" LSC 13'-5" @ 1 1/2" Number 30 @ 1 1/2" 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 LSC

Spare Gear. Tubes 50 GENERATOR TUBES EACH SIZE 6 SUPERHEATER " " LENGTHS INCLUDING SMALL BOILERS

Gaskets or joints:—Manhole 4 Handhole 135 Handhole plates 6 COMPLETE WITH BRIDGE + NUT.

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

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, Is the approved plan of boiler forwarded herewith YES

while building During erection on board vessel Oct. 19, 20, 23, 24, Dec. 3, 1938: Jan. 20, Feb. 10, 16, 25, Total No. of visits 35

## GENERAL REMARKS (State quality of workmanship, opinions as to class, &amp;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 Barrin mach' Dept attached)

Survey Fee (See mach' Dept) : When applied for, 19

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

McMullan  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned See F. C. report

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