

# REPORT ON WATER TUBE BOILERS.

No. 60190

Received at London Office SEP 21 1938

Date of writing Report 19 \_\_\_\_\_ When handed in at Local Office 20:9:1938 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 4:3:37 Last Survey 11:9:1938

Reg. Blk. 11676 on the Swire S. Leanton Number of Visits ✓ Tons 15784  
 Gross 15784  
 Net 9255

Master JW Built at Glasgow By whom built Alexandra Stephen Sons Ltd. When built 1938.

Engines made at Glasgow By whom made do. When made 1938.

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

Registered Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

**WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.**—Manufacturers of Steel Press - 4 Walsby: Inch - Brown: Jubo Ltd.

(Letter for Record S) Date of Approval of plan 26/1/34: 10/3/34 + 20/3/34 Number and Description of Type 4 Jarms water tube

of Boilers 4 Jarms water tube Working Pressure 465 lbs Tested by Hydraulic Pressure to 450 lb Date of Test 1/4/38: 2:5:38

No. of Certificate 50119: 20167 Can each boiler be worked separately y/o. Total Heating Surface of Boilers 31800 sq + 14348 sph in  
50157: 20193 TOTAL 46148 sq

Is forced draught fitted y/o. 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 4 blvd of. Apten No. and description of safety valves on \_\_\_\_\_  
 each boiler 1. IHL on steam drum + 2. IHL on superheater Area of each valve 4.91 sq Pressure to which they are adjusted Superheater 435 lbs

Are they fitted with easing gear y/o. 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 hull beam Height of Boiler 20' 6" Width and Length 23' 0" : 18' 9"

Steam Drums:—Number in each boiler 1. Inside diameter 4' 2" Material of plates Steel Thickness 2 7/8"

Range of Tensile Strength 34-38 Tons Are drum shell plates welded or flanged Do. Description of riveting:—  
 Cir. seams DR. overlap 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 1 1/4" & 1 3/4" Pitch of tube holes 1 7/8": 2 1/8": 3 3/4" Percentage strength of shell in way of tubes 33.3.

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 468 lbs

Steam Drum Heads or Ends:—Material Steel Thickness 2 1/2" Radius or how stayed 4-2"

Size of Manhole or Handhole 16' x 12" Water Drums:—Number in each boiler 3. Inside Diameter 20 23" : 10 30"

Material of plates Steel Thickness 1 1/8": 1 3/8" + 1 3/4" Range of tensile strength 28-32 Tons Are drum shell plates welded \_\_\_\_\_  
 or flanged Do. Description of riveting:—Cir. seams DR. overlap 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 1 1/4" & 1 3/4" Pitch of tube holes 1 7/8": 2 1/8": 3 3/4"

Percentage strength of drum shell in way of tubes 33.3. Water Drum Heads or Ends:—Material Steel Thickness 1 1/2" & 1 9/16"

Radius or how stayed 2 1/2" : 30" 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 \_\_\_\_\_  
 Thickness \_\_\_\_\_ Number \_\_\_\_\_

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 Jarms Date of Approval of Plan 24.1.34. Tested by Hydraulic Pressure to 450 lb.

Date of Test 11.5.38: 16.5.38: 23.5.38: 31.5.38. Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler y/o.

Diameter of Safety Valve 20 2 1/2 I.H.L. Pressure to which each is adjusted 435 lbs. Is easing gear fitted y/o.

Is a drain cock or valve fitted at lowest point of superheater y/o. Number, diameter, and thickness of tubes 170 of 1 3/8 OD. x .109 Thick

Spare Gear. Tubes 50. Gaskets or joints:—Manhole \_\_\_\_\_ Handhole \_\_\_\_\_ Handhole plates \_\_\_\_\_

FOR  
**ALEXANDER STEPHEN & SONS LIMITED**  
 The foregoing is a correct description,  
Alex Macfellan Manufacturer.  
 Director

Dates of Survey } During progress of work in shops - - }  
 while building } During erection on board vessel - - - }

SEE ACCOMPANYING MACHINERY REPORT.

Is the approved plan of boiler forwarded herewith \_\_\_\_\_  
 Total No. of visits \_\_\_\_\_

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey & in accordance with the approved plans. They have been efficiently secured in position on board examined under steam and the safety valves adjusted under steam. Saturated Steam drum at 465 lbs sq & the Superheater drum rated at 435 lbs sq.

Survey Fee ... .. £ : : } When applied for, 19

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

J. D. Munro  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 20 SEP 1938**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

