

REPORT ON WATER TUBE BOILERS.

No. 41060

WED DEC 14 1921

Received at London Office WED. 4 MAY. 1921

Date of writing Report 6/4 1921 When handed in at Local Office 27. 4. 1921 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 7th Oct. Last Survey 25th Oct. 1920

Reg. Bk. 0316 on the 2m Babcock Wilcox Boilers M.V. 'Scottish Maiden' Number of Visits 2 Tons { Gross 6993.25 Net 4036.14

Master ✓ Built at Barrow By whom built Vickers Ltd. When built 1921

Engines made at Barrow-in-Furness By whom made Vickers Ltd. When made 1921

Boilers made at Renfrew By whom made Babcock Wilcox Ltd. When made 1921

Registered Horse Power ✓ Owners Yankers Ltd. Port belonging to London

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel Colville & Co Ltd

Letter for Record ✓ Date of Approval of plan 26/5/20 Number and Description or Type 2m Babcock Wilcox

Boilers 2m Babcock Wilcox Working Pressure 200 Tested by Hydraulic Pressure to 400 lbs. Date of Test 7/7/21

No. of Certificate 325, 326 Can each boiler be worked separately. Yes. Total Heating Surface of Boilers 5326 sq ft

Is forced draught fitted Yes. Area of fire grate (coal) in each Boiler ✓ Total grate area of boilers in vessel including combustion chamber space ✓

Main and Auxiliary 630 cub. ft. No. and type of burners (oil) in each boiler 4 off. White's system No. and description of safety valves on each boiler Double-spring loaded Area of each valve 15.9 sq in Pressure to which they are adjusted 125 lbs.

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 1'-6" Height of Boiler 16'-0" Width and Length 12'-9 3/4" - 13'-6"

Steam Drums:—Number in each boiler one Inside diameter 4'-0" Material of plates S Thickness 1 7/32 in

Range of Tensile Strength 28/32 Are drum shell plates welded or flanged no. Description of riveting:—

Cir. seams double long. seams 2.7W. 5.B. Diameter of rivet holes in long. seams 27/32 Pitch of Rivets 3 3/64

Lap of plate or width of butt straps 7 1/2 Thickness of straps 7/16 Percentage strength of long. joint:—Plate 75.8 Rivet 77.6

Diameter of tube holes in drum 3 3/32 Pitch of tube holes 7 x 5 3/4 Percentage strength of shell in way of tubes 43.3

Does Drum have 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 234 Steam Drum Heads or Ends:—Material S Thickness 13/16 Radius or how stayed 3'-6"

Size of Manhole or Handhole none Mud Water Drums:—Number in each boiler one Outside Diameter 7 1/2 sq in

Material of plates S Thickness 3/4 Range of tensile strength 26/30 Are drum shell plates welded or flanged welded

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 3-97 Pitch of tube holes 7 3/4

Percentage strength of drum shell in way of tubes 43.3 Water Drum Heads or Ends:—Material S Thickness 7/16

Radius or how stayed ✓ Size of manhole or handhole ✓ Headers or Sections:—Number 19

Material S Thickness 7/16 Tested by Hydraulic Pressure to 600 lbs. Material of Stays ✓

Area at smallest part ✓ Area supported by each stay ✓ Working Pressure by Rules ✓ Tubes:—Diameter 3 15/16 x 1 13/16

Thickness .212; .192; .144; .128 Number 113/16 - 570 Steam Dome or Collector:—Description of Joint to Shell None

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 ✓ Date of Approval of Plan ✓ Tested by Hydraulic Pressure to ✓

Date of Test ✓ Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler ✓

Diameter of Safety Valve ✓ Pressure to which each is adjusted ✓ Is easing gear fitted ✓

Is a drain cock or valve fitted at lowest point of superheater ✓ Number, diameter, and thickness of tubes ✓

Spare Gear. Tubes ✓ Gaskets or joints:—Manhole ✓ Handhole ✓ Handhole plates ✓

The foregoing is a correct description, ✓

Babcock & Wilcox Ltd Manufacturer.

Dates of Survey { During progress of work in shops - - } 1920 Oct 7. 25. Is the approved plan of boiler forwarded herewith Yes

{ During erection on board vessel - - - } ✓ Total No. of visits 2

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The workmanship and material good in accordance with approved plans. Headers & mud drums tested as above and with dished end plates forwarded to Barrow for completion and test after assembling.

The above boilers have been efficiently fitted on board. For further particulars see Barrow Rpt No. 1928. John Houston.

Survey Fee £ 8 : 17 : 6 When applied for 191

Travelling Expenses (if any) £ : When received 22.12.1921

Charles Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 3-MAY 1921

Assigned TRANSMIT TO LONDON.

W81-0054