

REPORT ON WATER TUBE BOILERS.

No. 62070

Rpt. 5c.

Received at London Office

MAR 6 1940

Date of writing Report 19th Feb 1940 When handed in at Local Office 2.3.1940 Port of Glasgow

No. in Survey held at Renfrew Date, First Survey 1939 June 2nd Last Survey 19th Feb 1940

Reg. Bk. on the Boiler Parts 1362 for Swan Hunter & Wigham Richardson Yard No 1640 Tons 9031 (Gross) 4463 (Net)

Master _____ Built at _____ By whom built _____ When built _____

Engines made at _____ By whom made _____ When made _____

Boilers made at Renfrew By whom made Babcock & Wilcox Ltd When made 1940

Registered Horse Power _____ Owners _____ Port belonging to _____

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

Letter for Record _____ Date of Approval of plan 19-6-39, 6-4-39 Various data _____ Number and Description or Type of Boilers Three—Babcock & Wilcox Type Working Pressure 450 lb Tested by Hydraulic Pressure to 725 lb { DRUMS 12x21-12-39 Date of Test 6-11-39 27-21-1039

No. of Certificate _____ Can each boiler be worked separately _____ Total Heating Surface of Boilers 17895 sq ft

Is forced draught fitted _____ Area of fire grate (coal) in each Boiler 154 sq ft Total grate area of boilers in vessel including Main and Auxiliary 462 sq ft No. and type of burners (oil) in each boiler _____ No. and description of safety valves on each boiler One—2 1/2" Double Improved Hep Lift Area of each valve 4.90 Pressure to which they are adjusted Load as per plan 450

Are they fitted with easing gear _____ 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 _____ Height of Boiler 23'6" approx Width and Length 21'7" x 18'6"

Steam Drums:—Number in each boiler one Inside diameter 3'6" Material of plates Yull steel Thickness 1 5/8"

Range of Tensile Strength 28/32 ton sq Are drum shell plates welded or flanged Fusion Welded Description of riveting:—

Cir. seams _____ 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" max Pitch of tube holes 4 1/4" Percentage strength of shell in way of tubes 43.58 min

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 Yull steel Thickness 1 5/16" Radius or how stayed 3'0"

Size of Manhole or Handhole 11" x 15" Water Drums:—Number in each boiler _____ Inside Diameter _____

Material of plates _____ Thickness _____ Range of tensile strength _____ 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 27

Material S.D. Steel Thickness 3/4 x 5/8 Tested by Hydraulic Pressure to 725 lb Material of Stays _____

Area at smallest part _____ Area supported by each stay _____ Working Pressure by Rules 450 lb Tubes:—Diameter 4" x 1 1/16"

Thickness 2, 4 x 9 L.S.G Number 1005 @ 1 1/16" MUD DRUM No PER BOILER _____ Description of Joint to Shell _____

Percentage strength of Joint _____ Diameter 6" x 6" (inside) Thickness of shell plates 3/4" Material Steel

Description of longitudinal joint Solid drawn Diameter of Rivet Holes _____ Pitch of Rivets _____ Working Pressure of shell by Rules 450 lb Crown or End Plates:—Material _____ Thickness _____ How stayed _____

UPERHEATER. Type Babcock & Wilcox Date of Approval of Plan 8/7/39 Tested by Hydraulic Pressure to 725 lb

Date of Test Box only - 4-8-1-40 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes

Diameter of Safety Valve 2 1/2" Imp Hep Lift Pressure to which each is adjusted Load as per plan 450 Is easing gear fitted _____

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 90—1 1/2" x 8 L.S.G.

Spare Gear. Tubes 25-4" SECTION TUBES Gaskets or joints:—Manhole 8-Gaskets Handhole 1962 @ 4 1/16" sq Handhole plates 12 @ 4 1/16" sq

24-4" RETURN 24-1 1/2" S/HTR 6-3 3/4" 90-3 3/8" 10-3 5/8" sq

The foregoing is a correct description, 7/5/40

Dates of Survey } During progress of 1939 June 2, 6, 8, 9, 19, 20, 28, July 7, 11, Aug 8, 9, 14 In the approved plan of boiler forwarded herewith Yes
 while } work in shops - - - } 22, 29 Sept. 4, 11, 12, 18, 20, 27, 29, Oct. 3, Duplicate of Bk 1333 sq. net. 60609
 building } During erection on } 11, 16, 18, 23, 24, 27, 30, 31, Nov. 3, 7, 8, 14, Total No. of visits - 52
 board vessel - - - } 1940 Jan. 21, 27, 29, 30, Dec. 4, 6, 18, 19, 21, 22, 27, 28
1940 Jan. 4, 8, 10, Feb. 12, 19

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boiler parts have been manufactured under special survey in accordance with the Society's Rules and approved plans. They have been despatched to Newcastle district for completion and installation in Swan Hunter & Wigham Richardson's Yard No 1640

Survey Fee N.B. Fee 42-3-0 When applied for, At New on completion
 Travelling Expenses (if any) 24 : 0 When received, 19

G. Anderton
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 5 MAR 1940

Assigned TRANSMIT TO LONDON

See New. J.C. 99305

Lloyd's Register Foundation