

# REPORT ON WATER TUBE BOILERS.

No. 64433

Received at London Office -3 OCT 1941

of writing Report 11<sup>th</sup> Sept 1941 When handed in at Local Office 26<sup>th</sup> Sept 1941 Port of Glasgow

No. in Survey held at Renfrew & Glasgow Date, First Survey 16:5:41 Last Survey 20<sup>th</sup> Sept 1941

eg. Bk. 305 on the Three new boilers for S.S. EMPIRE TARPON (Number of Visits 25) Tons { Gross 6085 Net 3448

Master Erwin Conn. Built at Erwin Conn. By whom built Erwin Iron Works When built 1920-12<sup>th</sup> mch

Engines made at Jersey City By whom made Vulcan Iron Works When made 1920

Boilers made at Renfrew By whom made Babcock & Wilcox Ltd (Bk. 6/1458) When made 1941-9<sup>th</sup> mch

Registered Horse Power \_\_\_\_\_ Owners Ministry of War Transport Port belonging to London

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

Letter for Record W.T. Date of Approval of plan 21-5-41, 4-6-41 Number and Description or Type \_\_\_\_\_

Boilers 3- Babcock & Wilcox Ltd (No. 1414) Working Pressure 225 lbs Tested by Hydraulic Pressure to 387 lbs Date of Test 12-15-19/41

of Certificate 20821-20822-20823 Can each boiler be worked separately Yes Total Heating Surface of Boilers 9960 sq ft

forced draught fitted Induced Draught Area of fire grate (coal) in each Boiler oil fired Total grate area of boilers in vessel including \_\_\_\_\_

main and Auxiliary \_\_\_\_\_ No. and type of burners (oil) in each boiler 4 No. and description of safety valves on \_\_\_\_\_

each boiler One-3 1/2" Double Spring loaded Area of each valve 9.62 sq in Pressure to which they are adjusted 225 lbs

are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler Yes

smallest distance between boilers or uptakes and bunkers or woodwork well clear Height of Boiler 15' 4 3/4" Width and Length 13'-0" x 15'-0" (approx)

Steam Drums:—Number in each boiler One Inside diameter 3'-6" Material of plates Steel Thickness 1 1/16"

Range of Tensile Strength 28/32 tons Are drum shell plates welded or flanged long seam assembly else welding at ends (approx) Description of riveting:—

long. seams D.R. Lap long. seams D.R. D.B.S. Diameter of rivet holes in long. seams 1 23/64" Pitch of Rivets 5.128"

pitch of plates or width of butt straps 14 1/16" Thickness of straps 13/16" Percentage strength of long. joint:—Plate 73.49 Rivet 78.48

diameter of tube holes in drum 4.056" Pitch of tube holes 4" Percentage strength of shell in way of tubes 42%

Drum has a flat side state method of staying \_\_\_\_\_ Depth and thickness of girders at centre \_\_\_\_\_

(fitted) \_\_\_\_\_ Distance apart \_\_\_\_\_ Number and pitch of stays in each \_\_\_\_\_ Working pressure \_\_\_\_\_

rules \_\_\_\_\_ Steam Drum Heads or Ends:—Material Steel Thickness 7/8" Radius or how stayed 3'-0"

Size of Manhole or Handhole 15" x 11" Manhole Drums:—Number in each boiler one Inside Diameter 6 x 6"

Material of plates S.D. Steel Thickness 3/4" Range of tensile strength 28/32 tons Are drum shell plates welded \_\_\_\_\_

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 4.056" Pitch of tube holes 4"

percentage strength of drum shell in way of tubes 42% Water Drum Heads or Ends:—Material \_\_\_\_\_ Thickness \_\_\_\_\_

Radius or how stayed \_\_\_\_\_ Size of manhole or handhole \_\_\_\_\_ Headers or Sections:—Number 16 each boiler

Material S.D. Steel Thickness 1/16" at tube ends 1/32" at handholes Tested by Hydraulic Pressure to 387 lbs Material of Stays \_\_\_\_\_

Area at smallest part \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working Pressure by Rules at 225 lbs Tubes:—Diameter 1 13/16" 0 + 4" 0

Thickness 9/16, 8/16, 1/4" Number 554 @ 1 13/16" 0 48 @ 4" 0 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 \_\_\_\_\_

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 \_\_\_\_\_

are Gear. Tubes 8-4" 0 14-1 1/16" 0 2-4" 0 (return) Gaskets or joints:—Manhole 6 Handhole 500-4 1/16" 12-3 3/4" dia Handhole plates 14-4 1/16" 1-3 3/4" dia

The foregoing is a correct description, Babcock & Wilcox, Ltd. Manufacturer.

Dates of Survey: During progress of work in shops 1941 May: 16 22 June: 3.10.13.17.19.20 July Is the approved plan of boiler forwarded herewith \_\_\_\_\_

While erecting board vessel 7.8.10.17.18.21.22.31 Aug: 6.7.12.15.19.29 Total No. of visits 25

30 Sep: 3.20

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the Society's Rules & approved plans. The materials & workmanship are good. The boilers have been satisfactorily erected on board, tested under hydraulic pressure (as stated above) and safety valves adjusted under steam.

Survey Fee ... £ 45 : 14 : - } When applied for, MONTHLY ACCOUNT  
 Travelling Expenses (if any) £ : : } When received, 19

Glasgow & G. C. Murdoch,  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1 OCT 1941  
 Signed Su No. 64432

