

REPORT ON WATER TUBE BOILERS.

No. 59185

Received at London Office DEC 29 1937

Date of writing Report 12/10/1937 When handed in at Local Office 20.12.1937 Port of Glasgow

No. in Survey held at Renfrew Date, First Survey 27.11.36 Last Survey 17.12.1937

Reg. Bk. on the 3 Boilers No. 6/1321 for s.s. "IRON CHIEFTAIN" Number of Visits 48 Tons { Gross 4812 Net 2737

Master Built at Port-Glasgow By whom built Messrs. Lithgows Ltd. When built 1937

Engines made at Glasgow By whom made D. Rowan & Co. Ltd. When made 1937

Boilers made at Renfrew By whom made Babcock & Wilcox When made 1937

Registered Horse Power Owners Port belonging to

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

(Letter for Record) Date of Approval of plan 27-11-36 & 2-12-36 Number and Description or Type of Boilers 3 - B. & W. Type Working Pressure 250 lbs. Tested by Hydraulic Pressure to 425 lbs. Date of Test 16/8/37

No. of Certificate 19999 Can each boiler be worked separately Yes Total Heating Surface of Boilers 6612 sq. ft.

Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 65 sq. ft. Total grate area of boilers in vessel including Main and Auxiliary 195 sq. ft. No. and type of burners (oil) in each boiler ✓ No. and description of safety valves on each boiler Two - Imp. High Lift Area of each valve 3.14 sq. in. Pressure to which they are adjusted 257

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 Height of Boiler 9'-8" approx. Width and Length 12'-3 1/2" & 11'-6" approx.

Steam Drums:—Number in each boiler 1 Inside diameter 3'-6" Material of plates Steel Thickness 1 1/16" & 1 1/32"

Range of Tensile Strength 28-32 tons Are drum shell plates welded or flanged No Description of riveting:—

Cir. seams D. R. long. seams D. R. & D. B. S. Diameter of rivet holes in long. seams 29/32" Pitch of Rivets 3.48"

Lap of plates or width of butt straps 9 5/8" & 9 1/8" Thickness of straps 19/32" Percentage strength of long. joint:—Plate 74.06 Rivet 91.79

Diameter of tube holes in drum 4" Pitch of tube holes 7" HP-6" V.P. Percentage strength of shell in way of tubes 42.8

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 250 lbs.

Steam Drum Heads or Ends:—Material Steel Thickness 1 5/16" Radius or how stayed 3'-0"

Size of Manhole or Handhole 15" x 11" Water Drums:—Number in each boiler 1 Inside Diameter 7 1/2" sq. section

Material of plates Steel Thickness 3/4" Range of tensile strength 28-32 tons Are drum shell plates welded or flanged Ends 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 4 3/64" Pitch of tube holes 7"

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 17 per Boiler

Material Steel Thickness 1/32" min. Tested by Hydraulic Pressure to 425 lbs. Material of Stays ✓

Area at smallest part ✓ Area supported by each stay — Working Pressure by Rules 250 lbs. Tubes:—Diameter 4" & 1 1/16"

Thickness 1/4" - 8. & 9. L.S.G. Number 394 @ 1 1/16" 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

UPERHEATER. Type B. & W. Date of Approval of Plan 28-1-37 Tested by Hydraulic Pressure to 425 (drums)

Date of Test 9-9-37 & Various 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" single Pressure to which each is adjusted Is easing gear fitted

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes 130 - 1 1/2" O.D. - 9. L. S. G.

Spare Gear. Tubes 10 @ 4" Gaskets or joints:—Manhole 6 Handhole 512 Handhole plates 14

The foregoing is a correct description,

Babcock & Wilcox, Ltd.

Manufacturer.

Dates of Survey } During progress of } 1936 Nov: 27 Dec: 2, 30 (1937) Jan: 21 Feb: 5, 12 Is the approved plan of boiler forwarded herewith Yes

while } work in shops - - } 23, 25 Mar: 4, 12, 17, 19, 23 Apr: 7, 22, 23, 30 May: Total No. of visits 48

building } During erection on } 7, 14, 17, 18, 25, 26, 31 June: 2, 4, 9, 10, 11, 17, 21, 23 July: 1, 6 Aug: 2, 3, 5, 9, 10, 16, 31 Sep: 8, 9, 14 Oct: 14, 14, 23 Dec: 17

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

These boilers have been built under Special Survey to approved plans in accordance with the Society's Rules. Materials and workmanship are good. They are intended for Messrs. Lithgows Ltd. Yard No. 903, Messrs. Rowan's Eng. No. 1008.

Survey Fee ... £ 34/11/0. When applied for, 19

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

H Sutherland

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 28 DEC 1937Assigned SEE ACCOMPANYING MACHINERY REPORT.

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