

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

No. of Certificate 19999 Working Pressure 250 lbs. Tested by Hydraulic Pressure to 425 lbs. Date of Test 16/8/37

Is forced draught fitted Yes Can each boiler be worked separately Yes Total Heating Surface of Boilers 6612 sq. ft.

Main and Auxiliary 195 sq. ft. Area of fire grate (coal) in each Boiler 65 sq. ft. Total grate area of boilers in vessel including each boiler Two-Impr. High Lift No. and type of burners (oil) in each boiler _____ No. and description of safety valves on each boiler Two-Impr. High Lift Area of each valve 3.14 sq. ft. 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 Yes

Smallest distance between boilers or uptakes and bunkers or woodwork _____ Height of Boiler 9'-8" approx. Width and Length 12'-3 1/2" x 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. DBS. 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 15/16" 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 11/32" 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 13/16"

Thickness 1/4" - 8.99 L.S.G. Number 394 @ 1 13/16" 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 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

14 @ 1 13/16"

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

Dates of Surveys: During progress of work in shops: 1936 Nov: 27 Dec: 2-30 (1937) Jan: 21 Feb: 5-12 Is the approved plan of boiler forwarded herewith Yes

while building: During erection on board vessel: 23-25 Mar: 4-12-17-19-23 Apr: 7-22-23-30 May: Total No. of visits 48

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: 4-14-23 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

18/12/37

MONTHLY ACCOUNT

H Sutherland
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 28 DEC 1937**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

