

REPORT ON BOILERS.

No. 51000

Received at London Office

Date of writing Report 4-11-1930 When handed in at Local Office 15-11-1930 Part of Glasgow

No. in Reg. Book. Glasgow Date, First Survey 21-11-29 Last Survey 15-11-1930

on the M.V. NORFOLD (Number of Visits 65) Tons {Gross 6370 Net 3830

Master _____ Built at Glasgow By whom built Barclay Curle & Co Yard No. 642 When built 1930

Engines made at Glasgow By whom made Barclay Curle & Co Engine No. 642 When made 1930

Boilers made at Glasgow By whom made Barclay Curle & Co Boiler No. 642 When made 1930

Nominal Horse Power _____ Owners _____ Port belonging to _____

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel McCobbs Ltd & Dunlop Ltd, Wm Beardmore Ltd (Letter for Record (3))

Total Heating Surface of Boilers 1435 sq ft Is forced draught fitted no Coal or Oil fired oil

No. and Description of Boilers 1 SB Working Pressure 120 lbs

Tested by hydraulic pressure to 230 lbs Date of test 16-5-30 No. of Certificate 18429 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler 34.5 sq ft No. and Description of safety valves to each boiler 2 Spring Loaded (H.L.)

Area of each set of valves per boiler {per Rule 4.96 sq ft as fitted} Pressure to which they are adjusted 120 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 well clear Is oil fuel carried in the double bottom under boilers ✓

Smallest distance between shell of boiler and tank top plating Blw on upper flat. Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 12'-0" Length 11'-0" Shell plates: Material Steel Tensile strength 29/33 Tons

Thickness 21/32" Are the shell plates welded or flanged no Description of riveting: {circ. seams {end D.R. inter. ✓ long. seams ✓ end 3.025" inter. 5.5625"

long. seams T.R.-D.B.S. Diameter of rivet holes in {circ. seams 15/16" long. seams 3/4" Pitch of rivets {plate ✓ rivets ✓

Percentage of strength of circ. end seams {plate 69.04 rivets 55.08 Percentage of strength of circ. intermediate seam {plate 86.51 rivets 89.82 Working pressure of shell by Rules 120 lbs

Percentage of strength of longitudinal joint {plate 86.51 rivets 89.82 combined 90.98

Thickness of butt straps {outer 17/32" inner 21/32" No. and Description of Furnaces in each Boiler 2 Bighton Section

Material Steel Tensile strength 26/30 Tons Smallest outside diameter 3'-5 3/4"

Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 3/8" bottom 3/8" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 127 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Tons Thickness 7/8" Pitch of stays 14" x 16 1/4"

How are stays secured D.N. Working pressure by Rules 126 lbs

Tube plates: Material {front Steel back Steel Tensile strength {26/30 Tons Thickness {5/8" Working pressure {front 130 lbs back 121 lbs

Mean pitch of stay tubes in nests 10.6" Pitch across wide water spaces 14" Working pressure {23/32" Thickness {5/8" front 130 lbs back 121 lbs

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 Tons Depth and thickness of girder

at centre 8" x 9 1/16" double Length as per Rule 2'-8 25/32" Distance apart 9" No. and pitch of stays

in each 2 @ 10" Working pressure by Rules 127 lbs Combustion chamber plates: Material Steel

Tensile strength 26-30 Tons Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 19/32"

Pitch of stays to ditto: Sides 10" x 10" Back 10 1/2" x 9 1/2" Top 10" x 9" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 120 lbs Front plate at bottom: Material Steel Tensile strength 26-30 Tons

Thickness 23/32" Lower back plate: Material Steel Tensile strength 26-30 Tons Thickness 11/16"

Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 129 lbs Main stays: Material Steel Tensile strength 28-32 Tons

Diameter {At body of stay, 2 1/4" or 2 1/4" No. of threads per inch 6 Area supported by each stay 276 sq in

Working pressure by Rules 125 lbs Screw stays: Material Steel Tensile strength 26-30 Tons

Diameter {At turned off part, 1 1/2" or 1 1/2" No. of threads per inch 9 Area supported by each stay 100 sq in

Working pressure by Rules **125 lbs** Are the stays drilled at the outer ends **no** Margin stays: Diameter **1 7/8"**
 No. of threads per inch **9** Area supported by each stay **1140"** Working pressure by Rules **129 lbs**
 Tubes: Material **Iron** External diameter **3"** Thickness **5/16"** No. of threads per inch **9**
 Pitch of tubes **4 1/4" x 4 1/4"** Working pressure by Rules **140 lbs** Manhole compensation: Size of opening in
 shell plate **20 1/4" x 16 1/4"** Section of compensating ring **24" x 2 1/32"** No. of rivets and diameter of rivet holes **44 - 1"**
 Outer row rivet pitch at ends **4 3/4"** Depth of flange if manhole flanged **4"** Steam Dome: Material **✓**
 Tensile strength _____ Thickness of shell _____ Description of longitudinal joint _____
 Diameter of rivet holes _____ Pitch of rivets _____ Percentage of strength of joint { Plate _____ Rivets _____
 Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and diameter of
 stays _____ Inner radius of crown _____ Working pressure by Rules _____
 How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell _____

Type of Superheater

Number of elements _____ Material of tubes _____ Internal diameter and thickness of tubes _____
 Material of headers _____ Tensile strength _____ Thickness _____ Can the superheater be shut off and
 the boiler be worked separately _____ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve _____ Are the safety valves fitted with easing gear _____ Working pressure as per
 Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test pressure: _____
 tubes _____ castings _____ and after assembly in place _____ Are drain cocks or valves fitted
 to free the superheater from water where necessary _____

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with _____

FOR BARCLAY, CURLE & CO., LTD

The foregoing is a correct description,

John Alexander
 GENERAL MANAGER ENGINE WORKS

Manufacturer

Dates of Survey while building _____
 During progress of work in shops - - **See accompanying Report**
 During erection on board vessel - - **See accompanying machinery**

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) **yes 18/11/29**
 Total No. of visits **65**

Is this Boiler a duplicate of a previous case **yes** If so, state Vessel's name and Report No. **MV Alcides - Gb Rpt 50445**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
This boiler has been built under Special Survey, to approved plans in accordance with the Society's Rules. Materials and workmanship are good. It has been properly fitted on board the vessel, and the safety-valves adjusted under steam to 120 lbs.

Survey Fee _____ When applied for, _____
 Travelling Expenses (if any) £ _____ Report: _____ When received, _____

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

Committee's Minute **GLASGOW 18 NOV 1930**

Assigned **See accompanying machinery report**

