

REPORT ON BOILERS.

No. 73018

Received at London Office

28 JUL 1948

Date of writing Report 9/7/1948 When handed in at Local Office 12/7/1948. Port of Glasgow.

No. in Survey held at Glasgow Date, First Survey (1947) Apr. 23rd Last Survey 30/6/1948

8603 on the M/V DARA

(Number of Visits 4)

Tons { Gross 5020
Net 2766.

Master Built at Glasgow By whom built Barclay Currie & Co. Ltd. No. 711. When built 1948

Engines made at Glasgow By whom made Barclay Currie & Co. Ltd. Engine No. 711. When made 1948.

Boilers made at Glasgow By whom made Barclay Currie & Co. Ltd. Boiler No. 711. When made 1948.

Nominal Horse Power 220. Owners British India Steamer Co. Ltd. Port belonging to London.

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

Manufacturers of Steel Columbian Ltd. (Letter for Record L.)

Total Heating Surface of Boilers 3293 sq. ft. Is forced draught fitted Yes. Coal or Oil fired Oil.

No. and Description of Boilers 1-P.E. 256 Tub. Working Pressure

Tested by hydraulic pressure to 230 Date of test 19/9/47 No. of Certificate 22513. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1-3 1/4 Donk I.H.L.

Area of each set of valves per boiler { per Rule 15.245 EI
as fitted 17.58 EI 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 None clear. Is oil fuel carried in the double bottom under boilers Yes.

Smallest distance between shell of boiler and tank top plating fitted on flat. Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 16'-0" Length 11'-9" Shell plates: Material Steel. Tensile strength 29/355

Thickness 7/8 Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R.
inter. Yes.Long. seams T.R.-D.B.S. Diameter of rivet holes in { circ. seams 1 1/2
long. seams 1 5/8 Pitch of rivets { 3-29
6 7/8Percentage of strength of circ. end seams { plate 69.6
rivets 43.2 Percentage of strength of circ. intermediate seam { plate
rivets 86.3Percentage of strength of longitudinal joint { plate 86.3
rivets 85.2 Working pressure of shell by Rules 121 lbs.
combined 89.8Thickness of butt straps { outer 1 1/4
inner 1 3/4 No. and Description of Furnaces in each Boiler Low Dignity Section.

Material Steel. Tensile strength 26/305. Smallest outside diameter 39 1/4

Length of plain part { top
bottom Thickness of plates { crown 3/8
bottom 3/8 Description of longitudinal joint Welded.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 134 lbs.

End plates in steam space: Material Steel. Tensile strength 26/305. Thickness 1 3/32 Pitch of stays 2 1/2 x 2 1/2

How are stays secured Donk. units. Working pressure by Rules 122 lbs.

Tube plates: Material { front Steel
back Steel Tensile strength { 26/305 Thickness { 1 1/8
2 3/32Mean pitch of stay tubes in nests (9.83) 2 Pitch across wide water spaces 14 Working pressure { front 126 lbs.
back 174 lbs.

Orders to combustion chamber tops: Material Steel. Tensile strength 28/325. Depth and thickness of girder

centre (8 1/2 x 7 1/2) x 2 Length as per Rule 34 1/8 Distance apart 8 1/2 - 9 1/2 No. and pitch of stays

each 20 11 Working pressure by Rules 150 lbs. Combustion chamber plates: Material Steel.

Tensile strength 26/305. Thickness: Sides 2 1/32 Back 1 9/32 Top 2 1/2 Bottom 2 1/32

Pitch of stays to ditto: Sides 11 1/4 x 11 Back 11 x 11 1/2 Top 11 x 9 1/2 Are stays fitted with nuts or riveted over Units.

Working pressure by Rules 121 lbs. Front plate at bottom: Material Steel. Tensile strength 26/305.

Thickness 1 1/8 Lower back plate: Material Steel. Tensile strength 26/305. Thickness 4 3/64

Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Units.

Working Pressure 186 lbs. Main stays: Material Steel. Tensile strength 28/325.

Diameter { At body of stay, 2 7/8
or
Over threads No. of threads per inch 6 Area supported by each stay 2 1/2 x 2 1/2

Working pressure by Rules 187 lbs. Screw stays: Material Steel. Tensile strength 26/305

Diameter { At turned off part, 1 1/2 x 1 1/8
or
Over threads No. of threads per inch 9 Area supported by each stay 10 x 10 - 1 1/2 D.
11 x 11 1/4 - 1 5/8 D.

Working pressure by Rules 125 lbs. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/2 or Over threads 1 1/2 -

No. of threads per inch 9 Area supported by each stay 11 x 11 1/4 Working pressure by Rules 124 lbs.

Tubes: Material L External diameter { Plain 2 1/2 Stay Thickness { 11.25 No. of threads per inch 9

Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules 160 lbs. Manhole compensation: Size of opening in

shell plate 20 x 16 Section of compensating ring 19 x 7 1/8 No. of rivets and diameter of rivet holes 40 @ 1 1/8

Outer row rivet pitch at ends 7 1/2 Depth of flange if manhole flanged 3 1/4 Steam Dome: Material Am. fitted

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

Manufacturers of { Tubes Steel forgings Steel castings

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 forgings and castings and after assembly in place Are drain cocks

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 Yes

A. MacNeill

The foregoing is a correct description,

Dates of Survey { During progress of work in shops - - - } while building { During erection on board vessel - - - }

See Machinery Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits 1

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. M/V DUMRA 915. 21

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

This Boiler has been built under Special Survey in accordance with the Rules & the approved plans & the material & workmanship are good.

The Boiler has been satisfactorily installed in the vessel & is in good working condition & the safety valves have been adjusted under steam to a working pressure of 120 lbs./sq. in. Compression Rings F.V. 1 1/2 A.V. 2 3/4

Survey Fee ... £ Travelling Expenses (if any) £

When applied for, 10 When received, 10

A. H. Lumsden
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

GLASGOW 27 JUL 1948

Assigned See accompanying Machy. Rpt.



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