

OH

GLASGOW REPORT No. 66469 1-OCT 1942

# REPORT ON BOILERS.

No. 66113

Received at London Office

17/8"

inch 9 Report 21-9-42 When handed in at Local Office 24-9-42 Port of Glasgow

Size of Survey held at Clydebank Date, First Survey 31-1-41 Last Survey 10-9-1942  
 (Number of Visits 188) Tons { Gross 7043.49  
 Net 4908.57

on the "EMPIRE PENNANT" Built at Glasgow By whom built Tilghous & Co. Yard No. 972 When built 1942

No. and date made at GLASGOW By whom made DAVID ROWAN & Co. LTD. Engine No. 1117 When made 1942

made at Clydebank By whom made John Brown & Co. Ltd. Boiler No. A-60 When made 1942

rivet holes a Horse Power Owners Ministry of War Transport. Port belonging to Grunock

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Water be shut Manufacturers of Steel Cottrills & Co. (Letter for Record S.)

Heating Surface of Boilers 5920 ft<sup>2</sup> Is forced draught fitted Yes Coal or Oil fired Coal

Description of Boilers 2-tubular Working Pressure 220

by hydraulic pressure to 380 Date of test 13-8-42 No. of Certificate 21149 Can each boiler be worked separately Yes

of Firegrate in each Boiler 66.6 ft<sup>2</sup> No. and Description of safety valves to each boiler 2-3/4" S.L.

of each set of valves per boiler { per Rule 15.74 as fitted 16.58 Pressure to which they are adjusted 220 lb Are they fitted with easing gear Yes

se of donkey boilers, state whether steam from main boilers can enter the donkey boiler No

Best distance between boilers or uptakes and bunkers or woodwork 26" Is oil fuel carried in the double bottom under boilers No

Best distance between shell of boiler and tank top plating 12'0" 15/16" Is the bottom of the boiler insulated Yes

with Yes Best internal dia. of boilers 16'1" 35/64" Length 12'0" 15/16" Shell plates: Material S Tensile strength 29-33

Thickness 1" 35/64" Are the shell plates welded or flanged No Description of riveting: circ. seams { end hil inter. hil

seams T.R.D.B.S. Diameter of rivet holes in { circ. seams B. 1 9/16 F 1 3/8 Pitch of rivets { 10 13/16" long. seams 1 9/16"

Percentage of strength of circ. end seams { plate F60 B. 62.7 rivets 44.7 Percentage of strength of circ. intermediate seam { plate hil rivets 47

Percentage of strength of longitudinal joint { plate 85.5 rivets 85.26 combined 88.13 Working pressure of shell by Rules Yes

Thickness of butt straps { outer 1 1/64" inner 1 19/64" No. and Description of Furnaces in each Boiler 4 Deighton Smallest outside diameter 3'-5 1/4"

Material S Tensile strength 26-30 Description of longitudinal joint weld

Thickness of plates { crown 5/8" bottom 5/8" Working pressure of furnace by Rules Yes

Dimensions of stiffening rings on furnace or c.c. bottom None Thickness 1 13/32" Pitch of stays 20.5"

plates in steam space: Material S Tensile strength 26-30 Working pressure by Rules Yes

How are stays secured D.N. Thickness { 15/16" Working pressure { front Yes back Yes

Stays plates: Material { front S back S Tensile strength { " " Thickness { 25/32"

Can pitch of stay tubes in nests 10" Pitch across wide water spaces 14" Working pressure { front Yes back Yes

Orders to combustion chamber tops: Material S Tensile strength 28-32 Depth and thickness of girder

centre 10" x 1 3/4" Length as per Rule 30.6" Distance apart 9 3/8" No. and pitch of stays

each 3-8 3/4" Working pressure by Rules Yes Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 25/32" Back 2 1/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 8 3/4" x 9 3/8" Back 8 1/2" x 8" Top 9 3/8" x 8 3/4" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules Yes Front plate at bottom: Material S Tensile strength 26-30

Thickness 15/16" Lower back plate: Material S Tensile strength 26-30 Thickness 53/64"

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure Yes Main stays: Material S Tensile strength 28-32

Diameter { At body of stay 3 1/2" - 3 1/4" No. of threads per inch 6 Area supported by each stay Yes

Working pressure by Rules Yes Screw stays: Material S Tensile strength 26-30

Diameter { At turned off part 1 5/8", 1 3/4", 1 7/8", 2 1/4" No. of threads per inch 9 Area supported by each stay Yes

Working pressure by Rules  Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 3" or Over threads 1 3/4"

No. of threads per inch 9 Area supported by each stay  Working pressure by Rules

Tubes: Material S External diameter { Plain 3" Stay 3" Thickness { 8 W.G. 1/4", 5/16", 3/8", 7/16" No. of threads per inch 9

Pitch of tubes 4 1/8" x 4 3/16" Working pressure by Rules Manhole compensation: Size of shell plate Section of compensating ring No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends Depth of flange if manhole flanged 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 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 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 Rules Pressure to which the safety valves are adjusted Hydraulic test tubes forgings and castings and after assembly in place Are drain 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

John Brown & Company, Limited.  
The foregoing is a correct description,  
*[Signature]*

Additional visits since Glo 65422 on Engines:-

Dates of Survey { During progress of work in shops - - - 1942 Feb: 9, 11, 16, 19, 23, 26 Mar: 2, 5  
while building { During erection on board vessel - - - 8, 9, 10, 11, 12, 15, 17, 18, 22, 24, 25, 26, 29  
Total No. of visits 90 plus 98 on Engine 188

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
May: 1, 7, 8, 11, 13, 14, 15, 18, 22, 25, 28, 29 Jun  
July: 1, 2, 3, 6, 7, 8, 10, 13, 14, 15, 17, 27, 29, 30, 31 Aug: 3, 5, 7, 10, 11, 12, 13, 14, 17, 18, 20, 21, 24, 28, 31 Sep: 1, 2, 3, 1

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. 65763 Yes.

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) These Boilers have been built under special survey in accordance with the approved plan, and The Society's Rules and Requirements the material and workmanship are good

The requirements of The Ministry of Shipping specification have been carried out satisfactorily.

Job 22/9/42

The Boilers are to be fitted on board by D. Rowan

Survey Fee Spec ... £ 32-5 } When applied for, 30 SEP 1942 19  
Travelling Expenses (if any) £ 8-1 } When received, 19

Jas. Cairns  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 30 SEP 1942

Assigned referred for completion

