

# REPORT ON BOILERS.

Received at London Office 21 OCT 1941

Date of writing Report 19 When handed in at Local Office 17/10/1941 Port of

NEWCASTLE-ON-TYNE

No. in Reg. Book. Survey held at Newcastle on Tyne Date, First Survey 10 April 1941 East Survey 23 Sept 1941

on the M.V. "BRITISH HARMONY"

(Number of Visits) Tons { Gross 8453 Net 4897

Master Built at Newcastle By whom built Swan, Hunter & Wigham Richardson Ltd. Yard No. 1696 When built 1941-

Engines made at Newcastle By whom made ditto Engine No. 1696 When made 1941-

Boilers made at ditto By whom made ditto Boiler No. 1696 When made 1941-

Nominal Horse Power 235 Owners British Tanker Co. Port belonging to LONDON.

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

Manufacturers of Steel The Steel Coy. of Scotland.

(Letter for Record S.)

Total Heating Surface of Boilers 3530 sq ft Is forced draught fitted Yes Coal or Oil fired oil fired and Waste Gas

No. and Description of Boilers Two Single ended Multitubular Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lbs Date of test 10/6/41 No. of Certificate 897. Can each boiler be worked separately Yes

Area of Firegrate in each Boiler oil fired No. and Description of safety valves to each boiler Two 2 1/2" dia Cockburn's Imp'd High Lift

Area of each set of valves per boiler { per Rule 7.56 sq ins as fitted 7.95 " " Pressure to which they are adjusted 150 lbs Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No main Boilers

Smallest distance between boilers or uptakes and bunkers or woodwork Is oil fuel carried in the tank double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 2'3" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 12'4 3/8" Length 11'0" Shell plates: Material Steel Tensile strength 30 to 34 tons

Thickness 13/16" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. overlap

long. seams T.R. Dble butt Straps Diameter of rivet holes in { circ. seams 15/16" long. seams 7/8" Pitch of rivets 3.08

Percentage of strength of circ. end seams { plate 69.59 rivets 42.24 Percentage of strength of circ. intermediate seam { plate None rivets

Percentage of strength of longitudinal joint { plate 85.85 rivets 85.96 combined 88.91 Working pressure of shell by Rules 151 lbs

Thickness of butt straps { outer 5/8" inner 3/4" No. and Description of Furnaces in each Boiler Two Deighton Corrugated

Material Steel Tensile strength 26 to 30 tons Smallest outside diameter 3'7 1/16"

Length of plain part { top Thickness of plates { crown 15/32" bottom Description of longitudinal joint Fire welded

Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 156 lbs

End plates in steam space: Material Steel Tensile strength 26 to 30 tons Thickness 15/16" Pitch of stays 17 3/4" x 14 5/8"

How are stays secured Nuts inside & outside Working pressure by Rules 152 lbs

Tube plates: Material { front Steel back Tensile strength 26 to 30 tons Thickness { 15/16" 3/4"

Mean pitch of stay tubes in nests 7 1/2" x 11 1/4" Pitch across wide water spaces 13 1/2" Working pressure { front 183 lbs back 228 lbs

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

at centre 7 3/4" x 5 7/8" x two Length as per Rule 30 1/2" Distance apart 9" No. and pitch of stays

Working pressure by Rules 153 lbs. Combustion chamber plates: Material Steel

Tensile strength 26 to 30 tons Thickness: Sides 5/8" Back 3/4" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 9 3/8" x 9" Back 7 1/2" x 9" Top 9 3/8" x 9" Are stays fitted with nuts or riveted over

Working pressure by Rules 160 lbs Front plate at bottom: Material Steel Tensile strength 26 to 30 tons Thickness 15/16"

Lower back plate: Material Steel Tensile strength 26 to 30 tons Thickness 15/16"

Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over with nuts

Working Pressure 155 lbs min Main stays: Material Steel Tensile strength 28 to 32 tons

Diameter { At body of stay, or Over threads 2 3/8" No. of threads per inch 6 Area supported by each stay 246.4 sq ins

Working pressure by Rules 159 lbs Screw stays: Material Steel Tensile strength 26 to 30 tons

Diameter { At turned off part, or Over threads 1 1/2" No. of threads per inch 9 Area supported by each stay 84 sq ins

Conts P.T.O.

