

REPORT ON BOILERS.

Received at London Office 6-DEC-1944

Date of writing Report 2/12/1944 When handed in at Local Office 5/12/1944 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at WEST HARTLEPOOL Date, First Survey 27-3-44 Last Survey 25-11-1944

on the STEEL SCREW STEAMER "EMPIRE BERMUDA" (Number of Visits 55) Tons {Gross 3538.56 Net 2257.09

Master Built at WEST HARTLEPOOL By whom built WM. GRAY & CO. LTD. Yard No. 1173 When built 1944

Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS Engine No. 1173 When made 1944

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS Boiler No. 1173 When made 1944

Nominal Horse Power 299 Owners MINISTRY OF WAR TRANSPORT Port belonging to WEST HARTLEPOOL

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Colvilles, 2nd Glasgow. (Letter for Record S.V.)

Total Heating Surface of Boilers 4546 sq ft Is forced draught fitted Yes Coal or Oil fired Both

No. and Description of Boilers 2 Single ended, Multitubular Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lbs Date of test 20th Sept 1944 No. of Certificate 4036 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 46.2 sq ft No. and Description of safety valves to each boiler 2 Backburnis High Lift

Area of each set of valves per boiler {per Rule 6.03 sq ft as fitted 7.95 sq ft Pressure to which they are adjusted 200 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 18" Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 3'-4 1/2" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 14'-0" Length 11'-9" Shell plates: Material Steel Tensile strength 29-33 tons

Thickness 1 5/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end DR LAP. inter. 4" Pitch of rivets 9"

long. seams TR Double butt straps Diameter of rivet holes in {circ. seams 1 5/16" long. seams 1 5/16" Pitch of rivets 9"

Percentage of strength of circ. end seams {plate 67.2 rivets 43.5 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.42 rivets 90.6 combined 88.95 Working pressure of shell by Rules

Thickness of butt straps {outer 1 5/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 3 Corrugated, Dimple section

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3'-5 3/16"

Length of plain part {top bottom Thickness of plates {crown 1 9/32" bottom 1 3/32" Description of longitudinal joint welded

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

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 1 9/32" Pitch of stays 19 3/8" x 19 3/4"

How are stays secured Double nuts Working pressure by Rules

Tube plates: Material {front Steel back Steel Tensile strength {26-30 tons Thickness {2 9/32" 1 3/16"

Mean pitch of stay tubes in nests 12 3/8" x 8 1/2" Pitch across wide water spaces 14" Working pressure {front back

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

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

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

Tensile strength 26-30 tons Thickness: Sides 2 3/32" Back 1 1/16" Top 2 3/32" Bottom 2 3/32"

Pitch of stays to ditto: Sides 10 3/8" x 8 1/2" Back 9 3/8" x 8 3/4" Top 10" x 9" Are stays fitted with nuts or riveted over Nuts

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

Thickness 2 9/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 7/8"

Pitch of stays at wide water space 14 3/8" x 9 3/8" Are stays fitted with nuts or riveted over Nuts

Working Pressure Main stays: Material Steel Tensile strength 28-32 tons

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

Working pressure by Rules Screw stays: Material Steel Tensile strength 26-30 tons

Diameter {At turned off part or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay



