

REPORT ON BOILERS.

1-MAY 1942

Received at London Office

Date of writing Report 30/4/42 When handed in at Local Office 30/4/42 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL Date, First Survey 1st October, 1941, Last Survey 18th April, 1942.

on the S.S. EMPIRE ELGAR (Number of Visits 62) Tons {Gross 2846.73 Net 1695.26

Built at WEST HARTLEPOOL By whom built W.H. GRAY & CO. LTD. Yard No. 1130 When built 1942.

Engines made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS. Engine No. 1130 When made 1942.

Boilers made at WEST HARTLEPOOL By whom made CENTRAL MARINE ENGINE WORKS. Boiler No. 1130 When made 1942.

Nominal Horse Power 269 Owners MINISTRY OF WAR TRANSPORT. Port belonging to WEST HARTLEPOOL.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Colvilles, Ltd. (Letter for Record S)

Total Heating Surface of Boilers 3854 sq ft Is forced draught fitted Yes. Coal or Oil fired Coal.

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

Tested by hydraulic pressure to 350 lbs. Date of test 6-2-42 No. of Certificate 3958. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 43.25 sq ft No. and Description of safety valves to each boiler 2 Bockburn's High Lift

Area of each set of valves per boiler {per Rule 5.6 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 No.

Smallest distance between boilers or uptakes and bunkers or woodwork 24" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating 24" Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 13'-6" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 tons

Thickness 1 13/16" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end D.R. LAP inter.

long. seams TR Double butt strap Diameter of rivet holes in {circ. seams 1 5/16" long. seams 1 1/4" Pitch of rivets {4" 8 1/16"

Percentage of strength of circ. end seams {plate 67.2 rivets 44.6 Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 85.9 rivets 86 combined 89.

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

Material Steel Tensile strength 26/30 tons Smallest outside diameter 3'-2 1/2"

Length of plain part {top bottom Thickness of plates {crown 9/16" bottom Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 1/16" Pitch of stays 18 1/4" x 17 1/4"

How are stays secured Double nuts.

Tube plates: Material {front Steel Tensile strength {26/30 tons Thickness {29/32 back Steel 26/30 tons 1 1/16"

Mean pitch of stay tubes in nests 12 3/8" x 8 3/8" Pitch across wide water spaces 14"

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

at centre 7 1/4" x 1 3/4" 2-3/8" plates Length as per Rule 2-9 15/16" Distance apart 8" No. and pitch of stays

in each 2 @ 10 3/4" Combustion chamber plates: Material Steel

Tensile strength 26/30 tons Thickness: Sides 3/32" Back 3/32" Top 3/32" Bottom 3/32"

Pitch of stays to ditto: Sides 11 x 7 3/4" Back 10 1/2 x 8 3/8" Top 10 3/4 x 8" Are stays fitted with nuts or riveted over No.

Front plate at bottom: Material Steel Tensile strength 26/30 tons

Thickness 29/32" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 29/32"

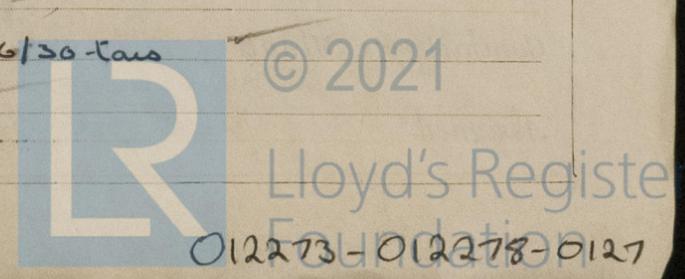
Pitch of stays at wide water space 14 3/8" x 10 1/2" Are stays fitted with nuts or riveted over No.

Main stays: Material Steel Tensile strength 28/32 tons

Diameter {At body of stay, or Over threads 3" No. of threads per inch 6.

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.



Are the stays drilled at the outer ends no. ✓ Margin stays: Diameter { At turned off part, 2" ✓ or Over threads

No. of threads per inch 9 ✓

Tubes: Material W.S.H.R. External diameter { Plain 3" ✓ ✓ Stay 3" ✓ ✓ Thickness { 8 SWG ✓ $\frac{3}{16}$ $\frac{1}{4}$ $\frac{5}{16}$ No. of threads per inch 9 ✓

Pitch of tubes $4\frac{3}{16} \times 4\frac{1}{8}$ ✓ Manhole compensation: Size of opening in shell plate none ✓ 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 none ✓

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 Thickness of crown No. and diameter of stays Inner radius of crown

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 none ✓ 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

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and 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 yes. ✓

The foregoing is a correct description,

W. G. & Co. Ltd. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building { During erection on board vessel - - - } Total No. of visits

Is this Boiler a duplicate of a previous case yes. ✓ If so, state Vessel's name and Report No. SS EMPIRE TENNYSON RPTN° 18254.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special survey and in accordance with the approved plans and specification for a working pressure of 200 lbs per square inch.

The materials and workmanship have been found good.

Upon completion the boilers were tested in the presence of the undersigned by a hydraulic pressure of 350 lbs per square inch, showed no signs of weakness and were found tight and sound in every respect at that pressure.

Survey Fee £ : : } When applied for, 19

Travelling Expenses (if any) £ : : } When received, 19

Arthur W. Oxford.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 8 MAY 1942

Assigned See fe machy report.

