

REPORT ON BOILERS.

No. 18060

Received at London Office

Date of writing Report 15/7/1940 When handed in at Local Office 15/7/1940 Port of WEST HARTLEPOOL

No. in Survey held at WEST HARTLEPOOL

Date, First Survey 20th July, 1939 Last Survey July 6th 1940

on the S.S. "CAPE BRETON"

(Number of Visits 100) Tons { Gross Net

Built at West Hartlepool By whom built W. M. Gray & Co. Ltd. Yard No. 1101 When built 1940.

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 1101 When made 1940.

Boilers made at West Hartlepool By whom made Central Marine Engine Works Boiler No. 1101 When made 1940.

Nominal Horse Power 462 Owners Bowring Steamship Co. Ltd. Port belonging to London.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Colvilles & Co. Glasgow.

(Letter for Record S.

Total Heating Surface of Boilers 6375 sq

Is forced draught fitted Yes

Coal or Oil fired Coal.

No. and Description of Boilers 3 Cylindrical single ended.

Working Pressure 225 lbs.

Tested by hydraulic pressure to 388 lbs. Date of test 29.3.40 No. of Certificate 3910. Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 47.5 sq. No. and Description of safety valves to each boiler 2 Cockburn's High Lift.

Area of each set of valves per boiler { per Rule 5.53 sq. as fitted 7.95 sq. Pressure to which they are adjusted 225 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 21"

Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-6"

Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 14'-0" Length 11'-6"

Shell plates: Material Steel Tensile strength 29/33 tons

Thickness 1 3/8" Are the shell plates welded or flanged No

Description of riveting: circ. seams { end D.R. lap. inter. -

long. seams T.R. Double Butt Strap Diameter of rivet holes in { circ. seams 1 7/16" long. seams 1 7/16"

Pitch of rivets { 4" 9 3/8"

Percentage of strength of circ. end seams { plate 64.06% rivets 46.8%

Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 85.44% rivets 88.86% combined 88.65%

Thickness of butt straps { outer 1 1/16" inner 1 7/16" No. and Description of Furnaces in each Boiler 3 Deighton section.

Material Steel Tensile strength 26/30 tons Smallest outside diameter 3'-4 3/4"

Length of plain part { top - bottom - Thickness of plates { crown 4 1/2" bottom 6 1/2" 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 5/16" Pitch of stays 20 3/4" x 17 3/4"

How are stays secured Double nuts.

Tube plates: Material { front Steel Tensile strength 26/30 tons back Steel Tensile strength 26/30 tons Thickness 1 5/16" 3/8"

Mean pitch of stay tubes in nests 12 3/4" x 8 1/4" 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 9 1/4" x 2'-2 3/8" Peases Length as per Rule 2'-9 1/2" Distance apart 9 1/4" No. and pitch of stays

in each 3 @ 8 1/2" Combustion chamber plates: Material Steel

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

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

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

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 1 5/16"

Pitch of stays at wide water space 14 3/8" x 9 1/4" Are stays fitted with nuts or riveted over Nuts

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

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

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

No. of threads per inch 9

Tubes: Material Steel External diameter { Plain 3" Stay 3" Thickness { N°8 ISWG 3/16 1/4 5/16 No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 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 Smoke tube Manufacturers of { Tubes Stewart & Lloyd's Steel forgings Boliver's & Co. Steel castings Stophiusan

Number of elements 54 Material of tubes S.D. Steel Internal diameter and thickness of tubes 1 7/8" x 2 1/2" H.

Material of headers Steel Tensile strength 26/30 tons Thickness 1 1/16" Can the superheater be shut off and the boiler be worked separately yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler yes

Area of each safety valve 1.76" (High left) Are the safety valves fitted with easing gear yes

Pressure to which the safety valves are adjusted 235 lbs Hydraulic test pressure: tubes 675 lbs forgings and castings 675 lbs and after assembly in place 1000 lbs Are drain cocks or valves fitted to free the superheater from water where necessary yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with yes

The foregoing is a correct description,

(Sd. Arthur W. Oxford & John L. Benoit)

Manufacturer.

ASSISTANT GENERAL MANAGER

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

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

Total No. of visits

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

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 for a working pressure of 225 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 388 lbs per square inch, showed no signs of weakness and were sound and tight in every respect at that pressure.

Survey Fee ... £ : : When applied for, 19

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

Arthur W. Oxford & John L. Benoit
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute

TUE 23 JUL 1940

Assigned

See Hpl. JE 1886a



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