

REPORT ON BOILERS.

No. 18096

DEC 18 1940

Received at London Office

Writing Report 12/12/1940 When handed in at Local Office 12/12/1940 Port of WEST HARTLEPOOL.

Survey held at WEST HARTLEPOOL.

Date, First Survey 3rd November, 1939 Last Survey 5th December 1940

(Number of Visits 125) Gross 6793.06 Tons Net 3969.29

on the S.S. ISMAILA

West Hartlepool By whom built Wm Gray & Co. Ltd.

Yard No. 1105 When built 1940.

made at West Hartlepool By whom made Central Marine Engine Works Engine No. 1105 When made 1940

made at West Hartlepool By whom made Central Marine Engine Works Boiler No. 1105 When made 1940.

Horse Power 669 Owners British India Steam Navigation Co. Port belonging to London.

TITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs Colvilles & Co. Glasgow.

(Letter for Record S.)

Heating Surface of Boilers 8,500 sq ft

Is forced draught fitted Yes.

Coal or Oil fired Coal.

Description of Boilers Four single ended multitubular

Working Pressure 250 lbs.

by hydraulic pressure to 425 lbs. Date of test 23-8-40 No. of Certificate 3918 Can each boiler be worked separately Yes.

Firegrate in each Boiler 55 sq ft No. and Description of safety valves to each boiler Two Backburn High Lift.

15) of each set of valves per boiler (per Rule 5.01 sq ft) (as fitted 6.28 sq ft) Pressure to which they are adjusted 250 lbs. Are they fitted with easing gear Yes.

of donkey boilers, state whether steam from main boilers can enter the donkey boiler -

Least distance between boilers or uptakes and bunkers or woodwork 2'-3"

Is oil fuel carried in the double bottom under boilers No.

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

Is the bottom of the boiler insulated Yes.

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

Shell plates: Material Steel

Tensile strength 31/35 tons

Are the shell plates welded or flanged No.

Description of riveting: circ. seams

end D.R. LAP.

Diameter of rivet holes in (circ. seams 1 1/2" (long. seams 1 9/16")

Pitch of rivets { 4 1/2" 10 1/4"

Percentage of strength of circ. end seams { plate 63.6 rivets 44.2

Percentage of strength of circ. intermediate seam { plate 84.75 rivets 90.5

Percentage of strength of longitudinal joint { plate 84.75 rivets 90.5 combined 87.6

Type of butt straps { outer 1 1/8" inner 1 1/4"

No. and Description of Furnaces in each Boiler 3 Dighton Section Galloway needles

Material Steel

Tensile strength 26/30 tons

Smallest outside diameter 40 7/16"

Type of plain part { top - bottom -

Thickness of plates { crown 23 bottom 32

Description of longitudinal joint Welded.

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

Plates in steam space: Material Steel

Tensile strength 26/30 tons

Thickness 1 3/8"

Pitch of stays 19 3/4" x 17 3/4"

Are stays secured Double nuts.

Plates: Material { front Steel back Steel

Tensile strength { 26/30 tons 26/30 tons

Thickness { 1" 3/2"

Pitch of stay tubes in nests 12 3/4" x 8 1/4" Pitch across wide water spaces 14"

Distance to combustion chamber tops: Material Steel

Tensile strength 28/32 tons

Depth and thickness of girder

Regretre 9 3/4" x 1 1/4" 2-3/8" length as per Rule 2'-9 1/2"

Distance apart 9 1/4"

No. and pitch of stays

Combustion chamber plates: Material Steel

Tensile strength 26/30 tons

Thickness: Sides 3/4"

Back 3/4"

Top 3/4"

Bottom 3/2"

Are stays fitted with nuts or riveted over No.

Plate at bottom: Material Steel

Tensile strength 26/30 tons

Thickness 1"

Lower back plate: Material Steel

Tensile strength 26/30 tons

Thickness 3/2"

Are stays at wide water space 14 3/8"

Are stays fitted with nuts or riveted over No.

Stays: Material Steel

Tensile strength 28/32 tons

At body of stay, or Over threads

3 1/2"

No. of threads per inch 6

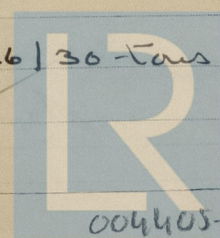
Stays: Material Steel

Tensile strength 26/30 tons

At turned off part, or Over threads

1 3/8"

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 1/8" ^{or} 2 1/8" ^{Over threads}

No. of threads per inch 9.

Tubes: Material SP Steel External diameter ^{Plain} 3" ^{Stay} 3" Thickness 8 SWG 2 1/16" No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of op

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 Kone

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 dia -

stays - Inner radius of crown -

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 Smoke tube Manufacturers of ^{Tubes} Stewart & Lloyd's Ltd. ^{Steel forgings} J. S. Sonst & Sons, Ltd. ^{Steel castings} Stophensons, Ltd.

Number of elements 46 Material of tubes SP Steel Internal diameter and thickness of tubes 1 7/8" x 2 1/2"

Material of headers Steel Tensile strength 26130 tons Thickness 1 7/8" Can the superheater be shut

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 sq ft Are the safety valves fitted with easing gear yes.

Pressure to which the safety valves are adjusted 260 lbs Hydraulic test pr

tubes 1,200 lbs forgings and castings 750 lbs and after assembly in place 1000 lbs Are drain

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,
FOR THE CENTRAL MARINE ENGINE WORKS,

(W. Gray & Co., Ltd.)

Manuf

Dates of Survey ^{During progress of} work in shops - -
^{while} During erection on
^{building} 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 yes. If so, state Vessel's name and Report No. SS "TAURA" No. 180

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 250 lbs per square inch.

The materials and workmanship have been found upon completion the boilers were tested in the presence of the undersigned by a hydraulic pressure of 425 lbs per square inch, showed no signs of weakness and were found 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.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 20 DEC 1940

Assigned

See Spl. 28. 18096



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