

REPORT ON BOILERS.

No. 16928

[2 JUL 1930

Received at London Office

Date of writing Report 21st June 1930 When handed in at Local Office

Port of

West Hartlepool

No. in
Reg. Book
Supp.

Survey held at

West Hartlepool

Date, First Survey

11 Febry

Last Survey

26 June 1930

(Number of Visits

Gross

Tons

Net

42540 on the

S S "THETIS"

Master Built at Sunderland By whom built Wm Gray & Co. Ltd. Yard No. 1037 When built 1930

Engines made at West Hartlepool By whom made Central Marine Engine No. 1037 When made 1930

Boilers made at ditto By whom made Engine Works Boiler No. 1037 When made 1930

Nominal Horse Power Owners C. Hadjilias. Port belonging to Syra

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel D Colville & Sons Ltd.

(Letter for Record

S

Total Heating Surface of Boilers 7590 sq ft. Is forced draught fitted no

Coal or Oil fired

oil fuel fitted 11.47

No. and Description of Boilers Three single ended.

Working Pressure 200 lbs

Tested by hydraulic pressure to 350 lb. Date of test 6.5.30 No. of Certificate 3782 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 57.6 sq ft. No. and Description of safety valves to each boiler 2 Cockburns improved High lift

Area of each set of valves per boiler {per Rule 7.350" as fitted 9.820" Pressure to which they are adjusted 205 lb. 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 20" Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 15'-9 1/4" Length 11'-0" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end 9.12 Lap inter. 9.12

long. seams J.R. 2.B.S. Diameter of rivet holes in {circ. seams 1 1/2" long. seams 1 1/16" Pitch of rivets {4 5/8" 9 5/8"

Percentage of strength of circ. end seams {plate 67.6 rivets 44.2 Percentage of strength of circ. intermediate seam {plate 85.5 rivets 89

Percentage of strength of longitudinal joint {plate 85.5 rivets 89 Working pressure of shell by Rules 200 lbs

Thickness of butt straps {outer 1 3/32" inner 1 1/32" No. and Description of Furnaces in each Boiler 3 Deightons 3 of

Material Steel Tensile strength 26/30 Smallest outside diameter 46 3/16"

Length of plain part {top 1 1/2" bottom 1 1/2" Thickness of plates {crown 2 1/2" bottom 3/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 208 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 21" x 17"

How are stays secured Double nuts Working pressure by Rules 200 lbs

Tube plates: Material {front steel back steel Tensile strength {26/30 Thickness {1 5/16" 7/8"

Mean pitch of stay tubes in nests 13 1/2" x 8 3/4" Pitch across wide water spaces 14 1/2" x 8 3/4" Working pressure {front 212 lb back 224 lb

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

at centre 8 3/4" x 1 3/4" Length as per Rule 34 7/16" Distance apart 9" No. and pitch of stays

in each Three 9" Working pressure by Rules 201 lbs Combustion chamber plates: Material Steel

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

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

Working pressure by Rules 204 lbs Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 7/8"

Pitch of stays at wide water space 14 1/4" x 9 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 214 lb. Main stays: Material Steel Tensile strength 28/32

Diameter {At body of stay, 3 5/8" No. of threads per inch 6 Area supported by each stay 21" x 17 3/4"

Working pressure by Rules 200 lb. Screw stays: Material Steel Tensile strength 26/30

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

Working pressure by Rules 224 lb 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 Area supported by each stay 11 1/2" x 9 1/2" Working pressure by Rules 227 lb
Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 8 V.V.G. No. of threads per inch 9
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 230 & 237 lb Manhole compensation: Size of opening in
shell plate 12 x 16 Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 3 3/8" 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 ✓ Working pressure by Rules ✓ Thickness of crown ✓ No. and diameter of
stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓
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 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 ✓ Working pressure as per
Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test pressure:
tubes ✓ 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,
FOR THE CENTRAL MARINE ENGINE WORKS,
(M. Eng. & Co. Ltd.) Manufacturers.
MANAGING DIRECTOR C.M.E.W.

Dates of Survey { During progress of work in shops -- See Weekly rpt. Are the approved plans of boiler and superheater forwarded herewith
while building { During erection on board vessel --- ✓ (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. Atthis

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

See accompanying machinery report.

Survey Fee ... £ : : When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

R.D. Shilston.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 15 JUL 1900

Assigned See attached Hpl. &c.