

068

Charge.

Rpt. 5a.

RECEIVED

20 OCT 1949

IN D.O.

REPORT ON BOILERS.

SUNDERLAND RPT. No 35269

No. 18875

Received at London Office

17 OCT 1949

Date of writing Report. 10th Oct. 1949 When handed in at Local Office 14th Oct. 1949. Port of MIDDLESBROUGH

No. in Reg. Book. Survey held at STOCKTON-on-TEES Date, First Survey 26th August, Last Survey 29th Sept. 1949.

on the

"DARTMODR"

(Number of Visits 4)

Gross 5314
Net 2928

Master. Built at Sunderland. By whom built Wm. Hoxford & Sons Yard No. 771 When built 1949

Engines made at Sunderland By whom made Wm. Hoxford & Sons Ltd. Engine No. 441 When made 1949

Boilers made at Stockton-on-Tees. By whom made Stockton C.E. & Riley Blrs Ltd. Boiler No. 7073 When made

Nominal Horse Power. Owners. Man Lini Ltd. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Frodingham Steel Co. Ltd. (Letter for Record S)

Total Heating Surface of Boilers 2130 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 1 S.E. Marine Working Pressure 120 lbs per sq. inch.

Tested by hydraulic pressure to 230 lbs Date of test 29.9.49 No. of Certificate 7285 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 1-3" double high lift

Area of each set of valves per boiler per Rule 13.06 as fitted 14.12 Pressure to which they are adjusted 120 lbs. Are they fitted with easing gear

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 Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 12' 10.9/16" Length 11' 6" Shell plates Material Steel Tensile strength 26.30

Thickness 23/32" Are the shell plates welded or flanged No Description of riveting: circ. seams

Percentage of strength of circ. end seams rivets 67.19% plate 86.31 Percentage of strength of circ. intermediate seam rivets 60.4 plate 86.31

Percentage of strength of longitudinal joint rivets 90.23 plate 90.27 Working pressure of shell by Rules 123.8 lbs

Thickness of butt straps outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler 3 Deighton corrugated

Material Steel Tensile strength 26.30 Smallest outside diameter 3' 0 1/2"

Length of plain part top Thickness of plates crown 5/8" bottom Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 145.8 lbs

End plates in steam space: Material Steel Tensile strength 26.30 Thickness 29/32" Pitch of stays 18" x 16"

How are stays secured Fitted double nuts and washers & stays Working pressure by Rules 130 lbs per sq. ins.

Tube plates: Material Steel Tensile strength 26.30 Thickness 11/16" Working pressure front 133 lbs/sq. in. back 191 lbs/sq. in.

Pitch of stay tubes in nests 9.3/8" Pitch across wide water spaces 13 1/2" Working pressure front 133 lbs/sq. in. back 191 lbs/sq. in.

Orders to combustion chamber tops: Material Steel Tensile strength 26.30 Depth and thickness of girder

centre 6 7/8" x 29/32" Length as per Rule 2' 8 3/8" Distance apart 5" No. and pitch of stays

each Welded Working pressure by Rules 122.3 lbs Combustion chamber plates: Material Steel

Tensile strength 26.30 Thickness: Sides 5/8" Back 9/16" Top 5/8" Bottom 5/8"

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

Working pressure by Rules 149.5 lbs Front plate at bottom: Material steel Tensile strength 26.30

Thickness 11/16" Lower back plate: Material Steel Tensile strength 26.30 Thickness 11/16"

Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over

Working pressure 144.6 lbs Main stays: Material Steel Tensile strength 26.30

At body of stay meter Over threads 2.3/8" No. of threads per inch 6 Area supported by each stay 282 sq. in.

Working pressure by Rules 136.6 lbs Screw stays: Material Steel Tensile strength 26.30

At turned off part meter Over threads 1.3/8" No. of threads per inch 9 Area supported by each stay 82.5 sq. ins.

Working pressure by Rules 125 lbs. Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1.5/8" or Over threads. 1.5/8" ✓
No. of threads per inch 9 ✓ Area supported by each stay 101.25. Working pressure by Rules 150 lbs. ✓
Tubes: Material H.R.W. Steel External diameter { Plain 2 3/4" Stay 2 3/4" Thickness { 8 W.G. 5/16" No. of threads per inch 9 ✓
Pitch of tubes 32" x 32" ✓ Working pressure by Rules 220 x 275. Manhole compensation: Size of opening 44 - 15/16" ✓
Shell plate 20" x 16" ✓ Section of compensating ring 7" x 1" ✓ No. of rivets and diameter of rivet holes 44 - 15/16" ✓
Outer row rivet pitch at ends 6" ✓ Depth of flange if manhole flanged - Steam Dome: Material -
Tensile strength Thickness of shell Description of longitudinal joint Plate Rivets
Diameter of rivet holes Pitch of rivets Percentage of strength of joint
Internal diameter Working pressure by Rules Thickness of crown No. and diameter
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 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
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 casing gear Working pressure as
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure
tubes forgings and castings and after assembly in place Are drain cocks
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
The foregoing is a correct description,
A. J. G. J. G. J. G.

Dates
of Survey
while
building

During progress of
work in shops - -
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

If so, state Vessel's name and Report No.

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

This boiler has been constructed under special survey and in accordance with the Rule Requirements and approved plan.

The materials and workmanship are good and on completion the boiler was hydraulically tested to 230 lbs per sq. inch and found satisfactory.

This boiler is being forwarded to Messrs. Duxfords for their Contract No. 771.

This boiler has been securely fixed on board the Vessel & Safety valves adjusted under steam & working pressure (For recommendation please see Master's Rpt.)

A. J. G. J. G. J. G.

Survey Fee ... £ 35 : 8 : When applied for, 14. 10. 19. 49.
Travelling Expenses (if any) £ : : When received, 19.

C. J. G. J. G. J. G.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

In minute see J. G. J. G.



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