

Rpt. 5a.

RECEIVED

14 OCT 1948

IN D.C.

REPORT ON BOILERS.

No. 18604.

Received at London Office

Date of writing Report 11th Oct 1948 When handed in at Local Office 13th Oct 48. Port of MIDDLESBROUGH.

14 OCT 1948

No. in Reg. Book. Survey held at STOCKTON-on-TEES. Date, First Survey 23rd July. Last Survey 8th Oct. 1948.

on the

BJORN STANGE

(Number of Visits 6.) Tons Gross Net

Built at Sunderland By whom built W. Lang & Sons L^d Yard No. 422 When built 1949Engines made at By whom made W. Lang & Sons L^d Engine No. 264 When made 1949

Boilers made at Stockton. By whom made Stockton C.E. & Riley Blrs. Ltd. Boiler No. 7091 When made 1948

Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 1700 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil & Ex. Gas

No. and Description of Boilers 1 S.E. Multitubular Working Pressure 150 lbs

Tested by hydraulic pressure to 275 lbs Date of test 8.10.48 No. of Certificate 7257 Can each boiler be worked separately

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2" D.S. HL.

Area of each set of valves per boiler { per Rule 10.3 sq. in. as fitted 11.88 sq. in. Pressure to which they are adjusted 150 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 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 11' 10" Length 11' 6" Shell plates: Material Steel Tensile strength 29.33

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

Long. seams TR. DBS Diameter of rivet holes in { circ. seams 1.1/16" long. seams 15/16" Pitch of rivets { 3.106" 6 1/2"

Percentage of strength of circ. end seams { plate 65.8% rivets 55.1 Percentage of strength of circ. intermediate seam { plate - rivets -

Percentage of strength of longitudinal joint { plate 85.6 rivets 97.0 combined -

Thickness of butt straps { outer 5/8" inner 3/4" No. and Description of Furnaces in each Boiler 2 - Deighton

Material Steel Tensile strength 26.30 Smallest outside diameter 3' 6 1/2"

Length of plain part { top - bottom - Thickness of plates { crown 15/32" 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 Thickness 13/16" Pitch of stays 16 1/2" x 15"

How are stays secured Double nuts and washers, stays screwed into both plates

Tube plates: Material { front Steel Tensile strength 26-30 Thickness { 13/16" 3/4"

Mean pitch of stay tubes in nests 9 1/2" Pitch across wide water spaces 13 1/2"

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

at centre 7" x 12" Length as per Rule 2' 4.3/32" Distance apart 8 1/2" No. and pitch of stays

in each Solid Welded Combustion chamber plates: Material Steel

Tensile strength 26 - 30 Thickness: Sides 21/32" Back 19/32" Top 21/32" Bottom 21/32"

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

Front plate at bottom: Material Steel Tensile strength 26.30

Thickness 13/16" Lower back plate: Material Steel Tensile strength 26-30 Thickness 3/4"

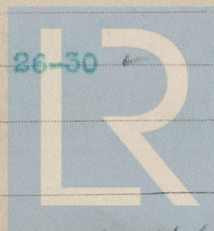
Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts

Main stays: Material Steel Tensile strength 28.32

Diameter { At body of stay, Over threads 2.3/8" No. of threads per inch 6

Screw stays: Material Steel Tensile strength 26-30

Diameter { At turned off part, or Over threads 1 1/2" 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, 1.5/8" or Over threads

No. of threads per inch 9 ✓

Tubes: Material Not Rolled External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 9 S.W.G. 5/16" No. of threads per inch 9 ✓

Pitch of tubes 5 3/4" x 3.5/8" ✓ Manhole compensation: Size of opening

shell plate 21" x 17" ✓ Section of compensating ring 5 7/8" x 1 1/8" ✓ No. of rivets and diameter of rivet holes 52 - 15/16" ✓

Outer row rivet pitch at ends 6 1/2" ✓ Depth of flange if manhole flanged - Steam Dome: Material

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

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 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

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,
for and on behalf of
Stockton Chemical Engineers & Riley Boilers Ltd. Manufacture

Dates of Survey { During progress of work in shops -- 1948, July 23, Aug. 31, Sept. 7, 1948
while building { During erection on board vessel -- Oct. 6, 8, 11, 13, 1948

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 19.5.48

Total No. of visits 6

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 used, and workmanship are good and on completion this boiler was hydraulically tested to 275 lbs per sq. inch and found satisfactory.

This boiler is being forwarded to Sunderland for Messrs. W. Doxford & Co. Contract No. 266.

This boiler has been securely fixed on board the vessel & safety valves adjusted under steam & working pressure

In recommendation please see Machinery Rpt.

W. E. Green

Survey Fee ... £ 28 : 8 : 0 When applied for, 13.10.48

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

Committee's Minute

FRI. 12 AUG 1948

Assigned

See F.E. Mch. rpt.

L. J. M. Stuart

Engineer Surveyor to Lloyd's Register of Shipping



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