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REPORT ON BOILERS.

No. 18630.

23 NOV 1948

Received at London Office

Date of writing Report 18th Nov. 1948. When handed in at Local Office 22nd Nov. 1948. Port of MIDDLESBROUGH.

No. in Survey held at Stockton-on-Tees.

Date, First Survey 16th Sept.

Last Survey 17th Nov. 1948.

on the STEINGRIM STANGE

(Number of Visits 7.)

Gross 10099

Net 5895

Built at Sunderland By whom built

Sir J. Lang & Sons Ld

Yard No. 483

When built 1949

Engines made at Sunderland

By whom made

Wm Bayford & Sons Ld

Engine No. 266

When made 1949

Boilers made at Stockton

By whom made

Stockton C.E. & R.B. Ltd.

Boiler No. 7094

When made 1948

Nominal Horse Power

MN 4.2.

Owners

Skibs a/s Amsterdam

Port belonging to

Oso

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Apploby-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 17.11.48 No. of Certificate 7261

Can each boiler be worked separately

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 - 2 3/4" D.S. H. L Marine Type

Area of each set of valves per boiler

per Rule 10.31

as fitted 11.88

Pressure to which they are adjusted 150 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

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 3/4"

Length 11' 6"

Shell plates: Material Steel

Tensile strength 29.33

Thickness 13/16"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

DR. L

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.

M.D.B. letter 18/12/48. 16 1/2 x 14"

Tube plates: Material

front Steel

back 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 1 1/4"

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, or 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 1/8"

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, or Over threads 1.5/8" 1 3/4"

No. of threads per inch 9

Tubes: Material Hot 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 3 3/4" x 3.5/8" Manhole compensation: Size of opening in 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 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 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 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

The foregoing is a correct description,
Stockton Chemical Engineers & Riley Boilers Ltd.
Manufacturer.

Dates of Survey { During progress of work in shops - - 1948 Sept. 16, Oct. 4, 8, 14, Nov. 2, 10 17. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 19.5.47.

while building { During erection on board vessel - - - Total No. of visits 7.

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's Contract No. 267.

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

For recommendation please see Machinery Rpt.

John Lundegren

Survey Fee ... £ 28 : 8 : 0 When applied for, 22.11. 19 47.

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

L. Norman Stuart
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI, 11 NOV 1949

Assigned See F.R. machinery rpt.



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