

REPORT ON BOILERS.

No. 111906

Received at London Office

13 OCT 1928

of writing Report 1 October 1928

When handed in at Local Office

192

Port of AMSTERDAM

Survey held at AMSTERDAM

Date, First Survey 11.12.1927

Last Survey 2/9

1928

(Number of Visits 14)

Gross

Tons

Net

on the Steel Twin Screw Motor Vessel "TURICUM"

Built at Krimpen a.d. Yssel By whom built G.v.d. Giessen & Zonen Yard No. 586 When built 1928

Boilers made at Amsterdam

By whom made Werkspoor

Engine No. - When made 1928

Boilers made at Amsterdam

By whom made Werkspoor

Boiler No. 2303/1 When made 1928

Nominal Horse Power

Owners Camillo Eitzen & Co.

Port belonging to Oslo

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Henschel, Sohn, Bochum.

(Letter for Record S)

Total Heating Surface of Boilers 24524 sq. ft.

Is forced draught fitted Yes

Coal or Oil fired

No. and Description of Boilers 2 Horizontal Marine boilers.

Working Pressure 180 lb.

Tested by hydraulic pressure to 320 lb. Date of test 19/4/28 No. of Certificate 346 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 4

No. and Description of safety valves to each boiler Two spring loaded.

Area of each set of valves per boiler

per Rule

9.4 sq. in.

as fitted

9.4 sq. in.

Pressure to which they are adjusted 180 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

Boiler to tank top

Is the bottom of the boiler insulated

Largest internal dia. of boilers 10' 6"

Length 10' 6"

Shell plates: Material Steel

Tensile strength 44,000 lb.

Thickness 2 1/2"

Are the shell plates welded or flanged No

Description of riveting: circ. seams

end All nuts

Long. seams

All butt straps

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

5 1/4"

Percentage of strength of circ. end seams

plate

70%

rivets

30%

Percentage of strength of circ. intermediate seam

plate

70%

rivets

Percentage of strength of longitudinal joint

plate

85.5%

rivets

84.5%

combined

88%

Working pressure of shell by Rules 180 lb.

Thickness of butt straps

outer

5 1/4"

inner

5 1/4"

No. and Description of Furnaces in each Boiler 2 marine furnaces

Material Steel

Tensile strength

24/50 tons

Smallest outside diameter

34 1/2"

Length of plain part

top

4

bottom

Thickness of plates

crown

15/16"

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules 195 lb.

End plates in steam space: Material Steel

Tensile strength

24/50 tons

Thickness

1 1/2"

Pitch of stays

15 1/4" x 15 1/4"

How are stays secured

Double nuts.

Working pressure by Rules 182 lb.

Tube plates: Material

front Steel

back

Tensile strength

24-50 tons

Thickness

1 1/2"

Mean pitch of stay tubes in nests 10"

Pitch across wide water spaces 14 3/16"

Working pressure

front 185 lb.

back 184 lb.

Girders to combustion chamber tops: Material Steel

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

16 3/8" x 1 1/2"

Length as per Rule

25 5/8"

Distance apart

4' 4"

No. and pitch of stays

in each

2 - 2 1/4"

Working pressure by Rules 190 lb.

Combustion chamber plates: Material Steel

Tensile strength

24-50 tons

Thickness: Sides

2 1/2"

Back

2 1/2"

Top

2 1/2"

Bottom

2 1/2"

Pitch of stays to ditto: Sides

8 1/4" x 4 7/16"

Back

8 3/8" x 4 7/16"

Top

8 1/4" x 4 7/16"

Are stays fitted with nuts or riveted over

nuts

over

Working pressure by Rules 190 lb.

Front plate at bottom: Material Steel

Tensile strength 24/50 tons

Thickness

1 1/2"

Lower back plate: Material Steel

Tensile strength 24/50 tons

Thickness

1 1/2"

Pitch of stays at wide water space 13' x 5 7/8"

Are stays fitted with nuts or riveted over

nuts

over

Working Pressure 330 lb.

Main stays: Material Steel

Tensile strength 28/50 tons

Diameter

At body of stay,

2 1/2"

Over threads

No. of threads per inch

8

Area supported by each stay

244 sq. in.

Working pressure by Rules 185 lb.

Screw stays: Material Steel

Tensile strength

24/50 tons

Diameter

At turned part,

1 1/2"

Over threads

No. of threads per inch

11

Area supported by each stay

11.5 sq. in.

Working pressure by Rules 198 lb Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, or Over threads 1 1/2"

No. of threads per inch 11 Area supported by each stay 604.7 inch Working pressure by Rules 206 lb

Tubes: Material Lap mild iron External diameter { Plain 2 3/4" Stay 2 1/2" Thickness { 5/16" + 3/8" No. of threads per inch 11

Pitch of tubes 3 13/16" Working pressure by Rules 215 lb Manhole compensation: Size of opening 25 1/2"

shell plate 14 1/2" x 10 1/2" Section of compensating ring 16 1/2 inch No. of rivets and diameter of rivet holes 40-1 1/2"

Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged 3" Steam Dome: Material No dome

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 < 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 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
WERKSPOR

Dates of Survey { During progress of work in shops - 14/12, 1/1, 9/1, 21/1, 24/1, 27/1, 28/1, 29/1 Are the approved plans of boiler and superheater forwarded herewith Yes
 while building { During erection on board vessel - 24/12, 19/1, 22/1, 23/1, 28/1, 29/1 (If not state date of approval.) 23/5-1918

Total No. of visits 14

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

The boilers have been made in accordance with the approved plans. Scouring, fitting and riveting, workmanship good. The vessel is in my opinion eligible to be classed with vessels of + N. D. B. 10. 28.

Survey Fee / ... £ 192 When applied for, 192
 Travelling Expenses (if any) £ 192 When received, 192

F. V. Bennett
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUES. 30 OCT 1928**
 Assigned see Minute on
Ans. Rpt 11198 attached

Report of
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 in Book. Survey
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