

REPORT ON BOILERS.

No. 7796.

Received at London Office 29 SEP 1928

Writing Report 14 September 1928 When handed in at Local Office

192

Port of

Copenhagen

in Survey held at

Copenhagen

Date, First Survey

4 April 1928

Last Survey

25 August 1928

7 on the

Steel Twin S. Motor Vessel HIDLEFJORD

(Number of Visits 22)

Gross

7638.59

Net

4488.97

Built at

Copenhagen

By whom built

H. Burmeister & Wain's Maskin-og Skibsbyggeri

Yard No. 548

When built 1928

Engines made at

Copenhagen

By whom made

H. Burmeister & Wain's Maskin-og Skibsbyggeri

Engine No. 1453

When made 1928

Boilers made at

Copenhagen

By whom made

H. Burmeister & Wain's Maskin-og Skibsbyggeri

Boiler No. 1816

When made 1928

Nominal Horse Power

For 160

Owners

Hidalekabet Motorbøt Hidleford (Kornelius Olsen)

Port belonging to

Havanger

LTTUBULAR BOILERS MAIN, AUXILIARY OR DONKEY

PLATES: Messrs. Mannesmannrørene Werke, AG. Schuler, H. Brandt of Hückingen. LONGITUDINAL STAYS

& SCREW STAYS: Messrs. Phoenix, AG. Loerden Verren of Loerden and Winkhausen, Bergbau und Eisenhütte G.m.b.H.

Manufacturers of Steel

Winkhausen, FURNACES: John Marshall & Co. Clyde Boiler Works, Motherwell. RIVETS: Messrs. H. & S. Letter for Record

STEEL CASTINGS: Messrs. Burmeister & Wain, Copenhagen

Heating Surface of Boilers

2 x 1200 = 2400 sq

Is forced draught fitted

yes

Coal or Oil fired

oil

Description of Boilers

2 off. single ended, return multitubular

Working Pressure

180 lbs per sq

Tested by hydraulic pressure to

320 lbs per sq

Date of test

6.7.1928

No. of Certificate

489-490

Can each boiler be worked separately

yes

No. and Description of safety valves to each boiler

2 off.

directly spring loaded

Pressure to which they are adjusted

180 lbs per sq

Are they fitted with easing gear

yes

If of donkey boilers, state whether steam from main boilers can enter the donkey boiler

No main boiler fitted

Least distance between boilers or uptakes and bunkers or woodwork

No bunkers or woodwork

Least distance between shell of boiler and tank top plating

The boiler is fitted on a

platform

Least internal dia. of boilers

11'-0"

Length

10'-10 3/4"

Shell plates: Material

Siemens M. Steel

Thickness

15/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

lap joint, double

inter. riveting

Pitch of rivets

3/32"

Pitch of rivets

7/16"

Percentage of strength of circ. end seams

plate

66.6%

rivets

51.5%

Percentage of strength of longitudinal joint

plate

86.2%

rivets

89.5%

Combined

90.31%

Working pressure of shell by Rules

186, 17 lbs per sq

Thickness of butt straps

outer

15/16"

inner

15/16"

No. and Description of Furnaces in each Boiler

2 off. corrugated, Morrison's section

Material

Siemens M. Steel

Tensile strength

29.0 - 29.7 Tons per sq

Smallest outside diameter

3'-2 1/8"

Thickness of plates

top

9/16"

bottom

9/16"

Description of longitudinal joint

Working pressure of furnace by Rules

214 lbs per sq

Plates in steam space: Material

Siemens M. Steel

Tensile strength

42.1 - 43.6 kg/mm²

Thickness

1"

Pitch of stays

16 1/2" x 14 1/2"

Are stays secured

Secured in both plates, nuts in and outside

Working pressure by Rules

191.2 lbs per sq

Material

Siemens M. Steel

Tensile strength

42.5 - 42.8 kg/mm²

Thickness

3/4"

Pitch of stay tubes in nests

11 1/4" x 7"

Pitch across wide water spaces

14"

Working pressure

front 204.0 lbs per sq

back 241.4 lbs per sq

Material

Cast steel

Tensile strength

30.4 Tons per sq

Depth and thickness of girder

8" - 1"

Length as per Rule

27"

Distance apart

8 1/2"

No. and pitch of stays

2 off. 9"

Working pressure by Rules

184 lbs per sq

Material

Siemens M. Steel

Tensile strength

42.3 - 45.9 kg/mm²

Thickness: Sides

5/8"

Back

5/8"

Top

5/8"

Bottom

3/4"

of stays to ditto: Sides

9" x 7 1/2"

Back

7 1/2" x 7 1/2"

Top

9" x 8 1/2"

Are stays fitted with nuts or riveted over

diagonal stays

nuts in and out

Working pressure by Rules

TOP 176.7 lbs per sq

Front plate at bottom: Material

Siemens M. Steel

Tensile strength

42.5 - 42.8 kg/mm²

Thickness

1"

Material

Siemens M. Steel

Tensile strength

42.1 - 43.6 kg/mm²

Thickness

1"

of stays at wide water space

a = 19 1/2"

Are stays fitted with nuts or riveted over

Secured in both plates, nuts in and out

Working Pressure

278 lbs per sq

Main stays: Material

Siemens M. Steel

Tensile strength

45.0 - 47.6 kg/mm²

Thickness: Sides

2 3/4"

Back

2 1/2"

Top

2 1/4"

No. of threads per inch

11"

Area supported by each stay

239.25 sq

Working pressure by Rules

230.6 lbs per sq

Screw stays: Material

Siemens M. Steel

Tensile strength

42.6 - 43.7 kg/mm²

Thickness: Sides

1 1/2"

Back

1 1/2"

Top

1 1/2"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At turned off part

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At turned off part

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At turned off part

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At turned off part

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At turned off part

2 3/4"

Over threads

3" - 2 3/4"

BACK 1 1/2"

SIDES 1 5/8"

No. of threads per inch

11"

Area supported by each stay

67.5 sq

At body of stay

2 3/4"

Over threads

SIDES: 2254 6/10"

Working pressure by Rules ~~222~~ 222.9 6/4 Are the stays drilled at the outer ends *No* Margin stays: Diameter { At turned off part, *1 3/4"* or Over threads *1 3/4"*

No. of threads per inch *11* Area supported by each stay *76,875 0"* Working pressure by Rules *236.0 lbs per sq in*

Tubes: Material *Steel* External diameter { Plain *2 1/2"* Stay *2 1/2"* Thickness { *5/16"* - *3/8"* No. of threads per inch *11*

Pitch of tubes *3 3/4" x 3 1/2"* Working pressure by Rules *230 lbs per sq in* Manhole compensation: Size of opening *50 1/4" - 1 1/16"*

shell plate *16" x 20"* Section of compensating ring *Flanged* No. of rivets and diameter of rivet holes *50 1/4" - 1 1/16"*

Outer row rivet pitch at ends *5 1/4"* Depth of flange if manhole flanged *3 1/2"* 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 *✓* Working pressure by Rules *✓* Thickness of crown *✓* No. and diameter of rivets *✓*

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 from the boiler *✓*

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 *✓*

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,

BURMEISTER & WAIN

MASKEIN DO SWIDORYGOBRI

Dates of Survey { During progress of work in shops - - - 1928: *4/4 - 14/4 - 19/4 - 24/4 - 1/5 - 18/5 - 24/5* Are the approved plans of boiler and superheater forwarded herewith *yes*
while building { During erection on board vessel - - - 1928: *29/5 - 7/6 - 11/6 - 18/6 - 23/6 - 6/7*
13/7 - 25/7 - 31/7 - 7/8 - 10/8 - 21/8 - 22/8 - 23/8 Total No. of visits *22*

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

The boiler have been built under survey in accordance with the Rules, the approved plan, and the requirements contained in the Secretary's letter E dated 31.10.1927. - The material has been tested as required by the Rules, as per certificates produced or by us, and the workmanship is of good description throughout.

The boiler have been fitted on board the above named vessel and completed to our entire satisfaction.

Oil fuel burning arrangement has been installed in accordance with the requirements of the Rules and the plan approved as per the Secretary's letter E dated 5.7.1927.

The Motor Vessel, "Christian" Messrs. Burmeister & Wain's Yard No 348.

Two duplex feed pumps 6 1/2" x 4" x 6" have been installed.

Survey Fee ... 16£ = 29/20.

Travelling Expenses (if any) £ :

When applied for, 18.9. 1928.

When received, 15.10. 1928.

A. J. F. Jones

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUE. 2 OCT 1928

Assigned

See P. 8 rpt attached



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