

# REPORT ON BOILERS.

No. 10461<sup>e</sup>

Received at London Office 30 DEC 1926

Date of writing Report 19 December 1926. When handed in at Local Office

192

Port of AMSTERDAM

No. in Survey held at

AMSTERDAM

Date, First Survey 12 March 1925. Last Survey 17 December 1926

455 on the Steel Single Screw Motorship "PHOBOS"

(Number of Visits 14) Tons { Gross 7412  
Net 4235

Built at Amsterdam By whom built Ned Scheepsbouw My Yard No. 181 When built 1926

Engines made at Amsterdam By whom made Werkspoor Engine No. When made 1926

Boilers made at Amsterdam By whom made Werkspoor Boiler No. When made 1926

Nominal Horse Power 1200 1704 Owners Ned Indische Tankstoomboot My Port belonging to s'Gravenhage

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colville (furnaces, Leeds Forge) (Letter for Record S)

Total Heating Surface of Boilers 2452 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil-fuel

No. and Description of Boilers 2 DB Horizontal marine boilers Working Pressure 180 lb.

Tested by hydraulic pressure to 320 lb. Date of test 4-1-26 No. of Certificate 314/218 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 4 No. and Description of safety valves to each boiler 2 - Spring loaded

Area of each set of valves per boiler { per Rule 9.4 sq. inch 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 L

Smallest distance between boilers or uptakes and bunkers or woodwork L Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating Top of cross bunker 32" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 10' 6" Length 10' 6" Shell plates: Material Steel Tensile strength 19 1/2 - 33 tons

Thickness 19/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end 11/16" inter. 3/4"

Seams 11/16" butt strap table riveted Diameter of rivet holes in { circ. seams 63/64" long. seams 63/64" Pitch of rivets { 6 1/8"

Percentage of strength of circ. end seams { plate 70% rivets 38% Percentage of strength of circ. intermediate seam { plate 85.5% rivets 84.5% combined 88%

Percentage of strength of longitudinal joint { plate 85.5% rivets 84.5% combined 88% Working pressure of shell by Rules 198 lb.

Thickness of butt straps { outer 53/64" inner 53/64" No. and Description of Furnaces in each Boiler 2 Marine furnaces

Material Steel Tensile strength 26 - 30 tons Smallest outside diameter 34 1/2"

Length of plain part { top 4 bottom 4 Thickness of plates { crown 15/32" bottom 15/32" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom L Working pressure of furnace by Rules 195 lb.

Plates in steam space: Material Steel Tensile strength 26 - 30 tons Thickness 63/64" Pitch of stays 15 3/4" x 15 3/4"

Are stays secured 11/16" nuts Working pressure by Rules 182 lb.

Front plates: Material { front Steel back Steel Tensile strength { 26 - 30 tons Thickness { 63/64" 15/32"

Pitch of stay tubes in nests 10" Pitch across wide water spaces 14 3/16" Working pressure { front 183 lb. back 186 lb.

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

Centre 6 5/8" x 1 1/2" Length as per Rule 25 5/8" Distance apart 4 7/8" No. and pitch of stays

Each 2 - 8 1/4" Working pressure by Rules 198 lb. Combustion chamber plates: Material Steel

Tensile strength 26 - 30 tons Thickness: Sides 15/32" Back 15/32" Top 23/32" Bottom 23/32"

Pitch of stays to ditto: Sides 8 1/4" x 4 7/16" Back 8 1/8" - 4 7/16" Top 8 1/4" x 4 7/8" Are stays fitted with nuts or riveted over riveted over

Working pressure by Rules 190 lb. Front plate at bottom: Material Steel Tensile strength 26 - 30 tons

Thickness 63/64" Lower back plate: Material Steel Tensile strength 26 - 30 tons Thickness 63/64"

Pitch of stays at wide water space 13" x 5 7/8" Are stays fitted with nuts or riveted over nutted

Working Pressure 330 lb. Main stays: Material Steel Tensile strength 28 - 32 tons

At body of stay, meter { Over threads 2 1/2" No. of threads per inch 8 Area supported by each stay 24 1/2 sq. inch

Working pressure by Rules 182 lb. Screw stays: Material Steel Tensile strength 26 - 30 tons

At turned off part, meter { Over threads 1 1/2" No. of threads per inch 11 Area supported by each stay 42.5 sq. inch



Working pressure by Rules *108 lb* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter *At turned off part, 1 1/2"*  
 No. of threads per inch *11* Area supported by each stay *60 sq. inch* Working pressure by Rules *108 lb*  
 Tubes: Material *Lapwelded steel* External diameter *Plain 1 1/4"* Thickness *5/16"* No. of threads per inch *11*  
 Pitch of tubes *5/16"* Working pressure by Rules *115 lb* Manhole compensation: Size of opening in  
 shell plate *14 1/2" x 18 1/2"* Section of compensating ring *16 sq. inch* No. of rivets and diameter of rivet holes *40 - 1 1/8"*  
 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 *No 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**

Manufacturer.

Dates of Survey *During progress of 12/2, 14, 14 1/2, 15/4, 22/4, 22/9, 2/9, 14/9, 14/11, 1915* Are the approved plans of boiler and superheater forwarded herewith *Yes*  
*work in shops - 4/1, 1916* (If not state date of approval.) *Sunday letter 12.1.25*  
*while building* *During erection on 10/9, 12/9, 15/9, 10/11, 8/12, 14/12* Total No. of visits *17*  
*board vessel - - -*

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

*The boiler has been made under Special Survey, in accordance with the Rules and Lloyds's Letter; material tested as required and workmanship good.*

Survey Fee ... *£ 196.80* *Please see Machinery Report* When applied for, *192*  
 Travelling Expenses (if any) £ : : When received, *10/1/27* *192*

*F. N. Bernoski*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUES. 4 JAN 1927*

Assigned

*See H.C. rpt attached*



© 2020

Lloyd's Register Foundation

Rpt. 13.

**RE**

Date of writ

No. in Reg. Book

Built at

Owners

Electric

System of

Pressure

Direct or

If alternat

Has the A

Generator

are they ov

Where mor

series with

Are all ter

or short cir

Position

is the vent

if situated

are their a

Earthing,

their respec

Main Swi

*The lig*

*F.B. sp*

*a fuse on e*

Switchboa

are they pr

woodwork o

are they cor

permanently

insulated fr

frame effect

*yes*

bars

Main Swi

*one*

*The eq*

*For A*

Instrumen

Earth Tes

*com*

Switches,

Section a