

Rpt. 5c.

## REPORT ON WATER TUBE BOILERS.

No. 16862  
MON. SEP. 27 1920

Received at London Office

Date of writing Report

191

When handed in at Local Office

191

Port of

New York

No. in

Survey held at

Bayonne N.J.

Date, First Survey

Last Survey 11<sup>th</sup> Aug

1920

Reg. Bk.

on the

S.S. Sudurco

Number of Visits

Gross 2545

Net 2074

Master

Built at Newark N.J.

By whom built Submarine Boat Corporation

When built 1920

Engines made at Essington Pa.

By whom made Westinghouse Electric Mfg Co

When made 1920

Boilers made at Bayonne N.J.

By whom made Babcock &amp; Wilcox Co

When made 1919

Registered Horse Power 386

Owners Submarine Boat Corporation

Port belonging to Newark U.S.A.

## WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel

Lukens Steel Co

(Letter for Record 3)

Date of Approval of plan July 18-1917

Number and Description or Type

of Boilers Two Water Tube

Working Pressure 200 lb

Tested by Hydraulic Pressure to 400 lb

Date of Test 23/2/20

No. of Certificate 323

Can each boiler be worked separately

Total Heating Surface of Boilers 5800<sup>sq</sup>Is forced draught fitted Induced Area of fire grate (coal) in each Boiler 87.5<sup>sq</sup>

Total grate area of boilers in vessel including

Main and Auxiliary 175<sup>sq</sup>

No. and type of burners (oil) in each boiler Five Peabody

No. and description of safety valves on

each boiler Two 3" Ashlon

Area of each valve 7.06

Pressure to which they are adjusted 200 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

Height of Boiler 12' 10"

Width and Length 14' 7 1/2", 11' 7 1/2"

Steam Drums:—Number in each boiler One

Inside diameter 42"

Material of plates Steel

Thickness 1/2"

Range of Tensile Strength 55000-65000 lb

Are drum shell plates welded or flanged no

Description of riveting

Cir. seams S.R. lap long. seams D.R.D.B.G.

Diameter of rivet holes in long. seams 29/32"

Pitch of Rivets 2 1/2" + 4 1/4"

Lap of plates or width of butt straps 9 1/2" x 15"

Thickness of straps 3/4"

Percentage strength of long. joint:—Plate 80.1

Rivet 108.

Diameter of tube holes in drum 4 1/2"

Pitch of tube holes 7"

Percentage strength of shell in way of tubes 84.8

If Drum has a flat side state method of staying

Depth and thickness of girders at centre

(if fitted)

Distance apart

Number and pitch of stays in each

Working pressure

by rules 243 lb

Steam Drum Heads or Ends:—Material Steel

Thickness 1/2"

Radius or how stayed 42"

Size of Manhole or Handhole 15" x 11"

Water Drums:—Number in each boiler

Inside Diameter

Material of plates

Thickness

Range of tensile strength

Are drum shell plates welded

or flanged

Description of riveting:—Cir. seams

long. seams

Diameter of Rivet Holes in

long. seams

Pitch of rivets

Lap of plates or width of butt straps

Thickness of straps

Percentage strength of long. joint:—Plate

Rivet

Diameter of tube holes in drum

Pitch of tube holes

Percentage strength of drum shell in way of tubes

Water Drum Heads or Ends:—Material

Thickness

Radius or how stayed

Size of manhole or handhole

Headers or Sections:—Number 24

Material Steel

Thickness 3/4"

Tested by Hydraulic Pressure to 500 lb

Material of Stays

Area at smallest part

Area supported by each stay

Working Pressure by Rules 289 lb

Tubes:—Diameter 4"

Thickness 8 B.W.G.

Number 240

Steam Dome or Collector:—Description of Joint to Shell

Percentage strength of Joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diameter of Rivet Holes

Pitch of Rivets

Working Pressure of shell

by Rules

Crown or End Plates:—Material

Thickness

How stayed

## SUPERHEATER.

Type Tube

Date of Approval of Plan

Tested by Hydraulic Pressure to 400 lbs

Date of Test 22 Feb 1920

Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler yes

Diameter of Safety Valve 1"

Pressure to which each is adjusted 210 lbs

Is easing gear fitted no

Is a drain cock or valve fitted at lowest point of superheater

Number, diameter, and thickness of tubes

Spare Gear. Tubes

Gaskets or joints:—Manhole

Handhole

Handhole plates

The foregoing is a correct description,

The Babcock & Wilcox Co Manufacturer.  
per Hubbard Marine Dept.

Dates

During progress of

1919 Feb. 13, 14, 16, 17 &amp; 28 days until 12 May

Is the approved plan of boiler forwarded herewith

while

During erection on

Total No. of visits

building

board vessel

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.)

The workmanship & material are both of good quality. To complete the survey the boilers to be erected on board and tested by hydraulic pressure, all mountings to be examined and fitted. Safety valves to be adjusted under steam.

Survey Fee

£

When applied for

191

Travelling Expenses (if any) £

When received

191

N. Mac WAT

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

New York

SEP 14 1920

Assigned

See N.Y. Rpt 19022

W656-0070



© 2020

Lloyd's Register  
Foundation



REPORT ON WATER TUBE BOILERS

These boilers together with Superheaters have been installed on board the S.S. *Sundero* and tested Satisfactorily, to 400 lbs hydrostatic pressure. Safety valves have been adjusted under steam to blow at 200 lbs per sq inch & Accumulation tests on boilers carried out. Boiler mountings examined & found Satisfactory

L. Nosworthy

