

Rpt. 5.

# REPORT ON BOILERS

No. 613  
WED. 6 APR. 1921

Received at London Office

Date of writing Report Dec. 28 1920 When handed in at Local Office Dec. 29 1920 Port of Portland, Oregon

No. in Survey held at Portland, Oregon Date, First Survey Oct. 30, 1920 Last Survey Dec. 9, 1920

Reg. Book. (Number of Visits 13) } Gross  
on the Union Construction Co.'s hull No. 12 } Net

Master Built at By whom built When built

Engines made at By whom made When made

Boilers made at Portland, Oregon By whom made Willamette Iron & Steel Works When made 1920

Registered Horse Power Owners General Petroleum Corporation Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Lukens Steel Co.

(Letter for record S) Total Heating Surface of Boilers 8736 011 <sup>Burning</sup> Is forced draft fitted No. and Description of

Boilers 3 Single End.Scotch Marine Working Pressure 220 Tested by hydraulic pressure to 330 Date of test Dec. 6, 8, 9 1920

No. of Certificate 204, 205, 206 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to each boiler Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear 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 Mean dia. of boilers 15'-4" Length 11'-8"

Material of shell plates Steel Thickness 1-11/16" Range of tensile strength 60000 to 71680 Are the shell plates welded or flanged Hds. Flanged

Descrip. of riveting: cir. seams D.R. long. seams Double Butt Straps Diameter of rivet holes in long. seams 1 11/16" Pitch of rivets 10 1/2"-5 1/2"

Lap of plates or width of butt straps 24" Per centages of strength of longitudinal joint rivets 93.87% Working pressure of shell by plate 83.928%

rules 239 Size of manhole in shell 12"x16" Size of compensating ring Heads Flanged No. and Description of Furnaces in each boiler 3 Morrison Material Steel Outside diameter 50 3/8" Length of plain part in. Thickness of plates crown 11/16" bottom

Description of longitudinal joint No. of strengthening rings Working pressure of furnace by the rules 225 Combustion chamber plates: Material Steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 1" Pitch of stays to ditto: Sides 6 1/2"x8" Back 7"x7-5/8"

Top 8 1/4"x8 1/4" If stays are fitted with nuts or riveted heads Boundary Nuts Working pressure by rules 220 Material of stays Steel Area at smallest part 1-5/8=1.755 Area supported by each stay 1 1/2=2.06 Working pressure by rules 220 End plates in steam space: Material Steel Thickness 1 1/2"

Pitch of stays 17"x16" How are stays secured Double Nuts Working pressure by rules 228 Material of stays Steel Area at smallest part 8.946

Area supported by each stay 306 Working pressure by rules 304 Material of Front plates at bottom Steel Thickness 7/8" Material of

Lower back plate Steel Thickness 11/16" Greatest pitch of stays 13" between Working pressure of plate by rules 317 Diameter of tubes 3"

Pitch of tubes 4" Horiz. Vertical Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 10-1/8" Pitch across wide

water spaces 13-3/8" Working pressures by rules 253 Girders to Chamber tops: Material Steel Depth and thickness of

girder at centre 3/4"x12" Length as per rule 34" Distance apart 8 1/2" Number and pitch of Stays in each 32 8 1/2"

Working pressure by rules 318 Steam dome: description of joint to shell % of strength of joint

Diameter Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes

Pitch of rivets Working pressure of shell by rules Crown plates Thickness How stayed

SUPERHEATER. Type Date of Approval of Plan Tested by Hydraulic Pressure to

Date of Test Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve Pressure to which each is adjusted Is Easing Gear fitted

VERTICAL DONKEY BOILER— No. Description Manufacturers of steel

Made at By whom made When made Where fixed Working pressure

tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of safety valves

No. of safety valves Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can

enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile

strength Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Lap of plating Per centage of strength of joint Rivets Plates Working pressure of shell by rules Thickness of shell crown plates

Radius of do. No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace

Thickness of furnace plates Description of joint Working pressure of furnace by rules Thickness of furnace crown

plates Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

Thickness of water tubes The foregoing is a correct description, Manufacturer.

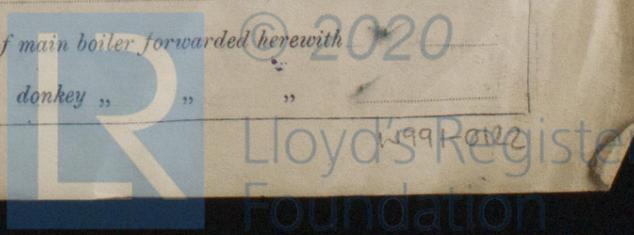
Dates of Survey while building { During progress of work in shops - - } Oct. 30, Nov. 3, 9, 13, 15, 16, 18, 23, Dec. 2, 3, 6, 8, 9.

{ During erection on board vessel - - - }

Total No. of visits 13.

Is the approved plan of main boiler forwarded herewith 2020

" " " donkey " " "



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

The three Main Boilers have been constructed under special survey in accordance with the Rules and to the approved plans. The material, tested by the Society's Surveyors, is sound and good and the workmanship good. The Boilers have been forwarded to San Francisco, Calif. to be fitted on board the Union Construction Co.'s hull No. 12.

Port of

No. in Reg. Book

Owners

Yard No.

DESCRIPT

Capacity of

Where is

Position of

Positions

After

If fuses a

circuit

If vessel is

Are the fu

Are all fu

are pe

Are all sw

Total numb

A

B

C

D

E

2

2

13

If arc light

Where are

DESCRIPT

Main cable

Branch cable

Branch cable

Leads to lam

Cargo light

DESCRIPT

Joints in cab

Are all the jo

position

Are there an

How are the

Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	:	:	When applied for,
1/3rd Special Portland. £ 86.00	:	:	Dec. 29 1920
Donkey Boiler Fee .. £	:	:	When received,
Travelling Expenses (if any) £	:	:	28.7. 1921

Billed direct to the  
 Willamette Iron &  
 Steel Co. by the  
 Portland Surveyors.  
 266.

J. A. Yates  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York MAR 15 1921

Assigned See S. L. Rpt 3464



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