

See S.Fo. 1st Entry Report No. 3454

REC'D NEW YORK FEB 23 1921

REPORT ON WATER TUBE BOILERS.

No. 68

Received at London Office 17 MAR. 1921

Rpt. 5c.

Date of writing Report 6th Sept. 1920. When handed in at Local Office 191 Port of DULUTH. MINN. U.S.A.
No. in Survey held at MINNEAPOLIS. MINN. Date, First Survey 11th DEC. 1919. Last Survey 30th AUGUST. 1920.
Reg. Bk. on the THREE FOSTER MARINE BOILERS. Number of Visits Tons { Gross. Net.

Master Built at By whom built When built
Engines made at By whom made When made
Boilers made at MINNEAPOLIS By whom made W^m BROS. BOILER AND MFG CO When made 1920
Registered Horse Power Owners Port belonging to

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel LUKENS AND WORTH
Letter for Record) Date of Approval of plan 9th May 1919. Number and Description or Type
Boilers 3 FOSTER MARINE Working Pressure 200 Tested by Hydraulic Pressure to 400 Date of Test 30/8/20
No. of Certificate 63 Can each boiler be worked separately. Total Heating Surface of Boilers 7200 sq ft
Is forced draught fitted No. Area of fire grate (coal) in each Boiler 33.4 sq ft Total grate area of boilers in vessel including
Main and Auxiliary No. and type of burners (oil) in each boiler No. and description of safety valves on
Each boiler 2 SPRING LOADED. Area of each valve 7.06 sq ft 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 Height of Boiler 15-11 9/16 Width and Length 10-9 1/16 x 14-0
Steam Drums:—Number in each boiler ONE Inside diameter 42 Material of plates STEEL Thickness 3/4
Range of Tensile Strength 58,000 LBS. Are drum shell plates welded or flanged No Description of riveting:—
Cir. seams S.R.L. long. seams D.B.S. I.R. Diameter of rivet holes in long. seams 15/16 Pitch of Rivets 8 1/2, 4 1/16
Pitch of plate or width of butt straps 20 1/4, 14 1/4 Thickness of straps 9/16 Percentage strength of long. joint:—Plate 88.4 Rivet 58.3
Diameter of tube holes in drum 3 1/16 Pitch of tube holes 9 1/4 Percentage strength of shell in way of tubes 67.2
Does Drum have a flat side state method of staying Depth and thickness of girders at centre
Is fitted Distance apart Number and pitch of stays in each Working pressure
Rules Steam Drum Heads or Ends:—Material STEEL Thickness 3/4 Radius 42
Size of Manhole or Handhole 11" x 15" Water Drums:—Number in each boiler None Inside Diameter
Material of plates Thickness Range of tensile strength Are drum shell plates welded
Is 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 STEEL Thickness 3/4
How stayed STAYS AND TUBES Size of manhole handhole 4 1/16 x 3 1/16 Headers or Sections:—Number 2
Material STEEL Thickness 3/4 Tested by Hydraulic Pressure to 400 LBS Material of Stays STEEL
Area at smallest part 1.63 Area supported by each stay 68 Working Pressure by Rules 215 Tubes:—Diameter 3
Thickness N^o 10 GAUGE Number 348 8-8 7-12 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
Rules Crown or End Plates:—Material 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
Is a drain cock or valve fitted at lowest point of superheater Number, diameter, and thickness of tubes
Super Gear. Tubes Gaskets or joints:—Manhole Handhole Handhole plates

The foregoing is a correct description,

Wm Bros Boiler Mfg Co Manufacturer.

Dates { During progress of work in shops 11th Dec. 1919. March 27. Apr. 3. 24. June 2. July 24. Aug. 29.
Survey while { During erection on board vessel
Is the approved plan of boiler forwarded herewith
Total No. of visits

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

These boilers have been constructed under special survey and in accordance with the approved plans. The materials and workmanship are sound and good. These boilers have been forwarded to Oakland, California.

Survey Fee 1/3rd Duluth \$66.40 When applied for 6/9/1920.
Travelling Expenses (if any) \$64.95 When received 191

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Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute New York FEB 23 1921

Assigned See S.Fo. 3454

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