

REPORT ON BOILERS.

Received at London Office

Date of writing Report 4th Dec 1920 When handed in at Local Office 16 January 1921 Port of New York & Jacksonville
 No. in Survey held at Kearny, New Jersey Date, First Survey 15th Sept. 1919 Last Survey 13th Jan. 1921
 Reg. Book. 11010 on the Scotch Marine Boiler # 427 LLOYD'S 'BYRON D. BENSON' Tons Gross 8211.92 Net 5108
 Master W. J. ... Built at Stampa, Florida By whom built Oscar Daniels Co. When built 1922-1
 Engines made at New Jersey By whom made Vulcan Iron Works When made 1920
 Boilers made at Kearny, N.J. By whom made Federal Ship Building Co When made 1920
 Registered Horse Power ... Owners Standard Oil Co Port belonging to New York

MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel Carnegie & Illinois Steel Co

(Letter for record S) Total Heating Surface of Boilers 2806 sq ft Is forced draft fitted ye. No. and Description of Boilers 1-3 Furnace, S.E. Multi Scotch Working Pressure 220 lbs Tested by hydraulic pressure to 330 lbs Date of test 8-11-20
 No. of Certificate 427 Can each boiler be worked separately ye. Area of fire grate in each boiler 60 1/2 sq ft No. and Description of safety valves to each boiler 2-3 1/2" Twin Spring Area of each valve 9.62 sq in Pressure to which they are adjusted 220 lbs.
 Are they fitted with easing gear ye. In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No.
 Smallest distance between boilers or uptakes and bunkers or woodwork 24" Mean dia. of boiler 15'-0" Length 11'-6"
 Material of shell plates S Thickness 1 3/4" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No.
 Descrip. of riveting: cir. seams DRL long. seams TR/DB Diameter of rivet holes in long. seams 5/8" Pitch of rivets 9 3/8"
 Lap of plates or width of butt straps 23 3/8" Per centages of strength of longitudinal joint 102% Working pressure of shell by rules 239# Size of manhole in shell 12x16" Size of compensating ring 36 3/4 x 32 3/4 x 1 3/4" No. and Description of Furnaces in each boiler 3 Morrison Material S Outside diameter 48 3/8" Length of plain part ... Thickness of plates ...
 Description of longitudinal joint Weld No. of strengthening rings ... Working pressure of furnace by the rules 234# Combustion chamber plates: Material S Thickness: Sides 2 1/2" Back 3/4" Top 2 1/2" Bottom 1" Pitch of stays to ditto: Sides 7x7" Back 7 1/2 x 8"
 Top 7x8" If stays are fitted with nuts or riveted heads ... Working pressure by rules ... Material of stays S Area at smallest part 1.8 sq ft Area supported by each stay ... Working pressure by rules ... End plates in steam space: Material S Thickness 1 1/8"
 Pitch of stays 15x16" How are stays secured D.N. Working pressure by rules 236 Material of stays S Area at smallest part 5.93 sq ft
 Area supported by each stay 240 sq in Working pressure by rules 265# Material of Front plates at bottom S Thickness 1" Material of Lower back plate S Thickness 1" Greatest pitch of stays 12 3/4 x 7 1/2" Working pressure of plate by rules 234# Diameter of tubes 2 3/4"
 Pitch of tubes 4 x 3 3/4" Material of tube plates S Thickness: Front 1" Back 1 3/16" Mean pitch of stays 11 1/4 x 8" Pitch across wide water spaces 12 3/4 x 7 1/2" Working pressures by rules 220# Girders to Chamber tops: Material S Depth and thickness of girder at centre 10 x 5 1/8" Length as per rule 35" Distance apart 8" Number and pitch of Stays in each 4 at 7"
 Working pressure by rules 283# 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 ...

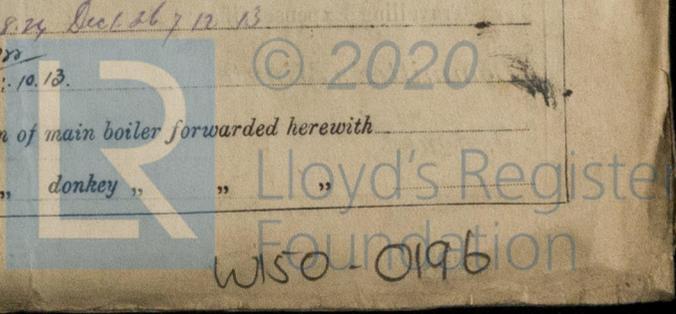
SUPERHEATER. Type ... Date of Approval of Plan ... Tested by Hydraulic Pressure to ...
 Date of Test ... Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler ...
 Diameter of Safety Valve ... Pressure to which each is adjusted ... Is Easing Gear fitted ...

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 ... 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,
FEDERAL SHIPBUILDING CO.
 J. H. Christensen, Manufacturer.

Dates of Survey while building: During progress of work in shops - - - 1921
 During erection on board vessel - - -
 Total No. of visits 41
 Is the approved plan of main boiler forwarded herewith ...
 " " " donkey " " ...

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent?



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

The Boiler has been built under Special Survey in accordance with the approved plan. The material and workmanship employed in its construction, so far as can be seen, are sound and good. The Boiler is eligible in my opinion to be classed B.S. 11.20

The above boiler has been satisfactorily installed on board & on completion safety valves were adjusted under steam to 220 lbs.

Certificates (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,
Special19
Donkey Boiler Fee £	When received,
Travelling Expenses (if any) £19

Note
See machinery report

J. Hockhart, + Hugh Boyle
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute New York JAN 31 1922

Assigned *See box 438*



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