

REPORT ON WATER TUBE BOILERS.

No. 6931

Received at London Office 12 JUL 1935

Date of writing Report May 8 1935 When handed in at Local Office June 22nd 1935 Port of Philadelphia

No. in Survey held at New York & Philadelphia Date, First Survey Oct 27 '24 Last Survey May 1st 1935
Reg. Bk. on the Hull No 415 S.S. MAGNOLIA (Number of Visits 17) Tons Gross 9511 Net 5894

Master Bamden Md Built at New York SB Co By whom built New York SB Co When built 1935

Engines made at Trenton Md By whom made De Laval Steam Turbine Co When made 1924

Boilers made at Cleveland. O. Carters Md By whom made Foster Wheeler Corporation When made 1924

Registered Horse Power 4000 Owners Socony Vacuum Transportation Co Port belonging to New York

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY. Manufacturers of Steel Otis Steel Co. Lukens Steel Co
(Letter for Record 3 water tube (2 Superheaters) Date of Approval of plan 12 April 1924 Number and Description or Type 8 April 35
of Boilers 3 water tube (1 cargo) Working Pressure 450 lb Tested by Hydraulic Pressure to 675 lb Date of Test 17 April 35

No. of Certificate 675-676 Can each boiler be worked separately Yes Total Heating Surface of Boilers 11164 sq ft
Is forced draught fitted Yes Area of fire grate (coal) in each Boiler 3 in superheaters 70 sq ft Total grate area of boilers in vessel including Main and Auxiliary Yes No. and type of burners (oil) in each boiler 3 in superheaters 70 sq ft No. and description of safety valves on each boiler 2 Spring loaded Area of each valve 7.07 sq in Pressure to which they are adjusted 430 man 400 cargo

Are they fitted with easing gear Yes In case of donkey boilers state whether steam from main boilers can enter the donkey boiler with 16" x 4" 13" x 2" superheaters 14" x 4" cargo
Smallest distance between boilers or uptakes and bunkers or woodwork 48" Height of Boiler 17.5 1/2 superheaters 17.3 1/4 cargo Width and Length 13' 2" superheaters 14' 4" cargo

Steam Drums:—Number in each boiler One Inside diameter 48" Material of plates Steel Thickness 1 7/16"
Range of Tensile Strength 64000 minimum Are drum shell plates welded or flanged No Description of riveting:—
Cir. seams Double long. seams DR. DBS. Diameter of rivet holes in long. seams 1 5/32" Pitch of Rivets 4 13/16"

Lap of plate or width of butt straps 14.64" Thickness of straps 1 1/8" inside 1 1/16" outside Percentage strength of long. joint:—Plate 69 Rivet 71
Diameter of tube holes in drum 1 7/32" 2 3/32" Pitch of tube holes 3 1/2" 6 1/16" Percentage strength of shell in way of tubes 49.4

If Drum has a flat side state method of staying Yes Depth and thickness of girders at centre (if fitted) Yes Distance apart 48" Number and pitch of stays in each 48" Working pressure by rules 450 lb

Size of Manhole or Handhole 12" x 16" Water Drums:—Number in each boiler Two Inside Diameter 30"
Material of plates Steel Thickness 1 3/16" Range of tensile strength 64000 minimum Are drum shell plates welded or flanged No Description of riveting:—Cir. seams Double long. seams DR. DBS Diameter of Rivet Holes in long. seams 1 7/32" Pitch of rivets 4 5/16" Lap of plates or width of butt straps 13" Thickness of straps 1 1/8" inside 1 1/16" outside

Percentage strength of long. joint:—Plate 69 Rivet 78 Diameter of tube holes in drum 1 7/32" 2 3/32" Pitch of tube holes 3 1/2" 6 1/16"
Percentage strength of drum shell in way of tubes 49.4 Water Drum Heads or Ends:—Material Steel Thickness 1 1/32" - 1 7/32"

Radius or how stayed 30" Size of manhole or handhole 12" x 16" Headers or Sections:—Number —
Material — Thickness — Tested by Hydraulic Pressure to — Material of Stays —

Area at smallest part — Area supported by each stay — Working Pressure by Rules — Tubes:—Diameter 1 1/2" 2"
Thickness 1 1/4" 1 4/8" Number 2 tubes 962 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 Convection Date of Approval of Plan 12 April 1924 Tested by Hydraulic Pressure to 900 lb

Date of Test — Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler Yes
Diameter of Safety Valve 2" Pressure to which each is adjusted 405 Is easing gear fitted Yes

Is a drain cock or valve fitted at lowest point of superheater Yes Number, diameter, and thickness of tubes tubes 1 1/4" diam 1 3/4" thick
Spare Gear. Tubes 142 Gaskets or joints:—Manhole 3 Handhole 72 Handhole plates 174

The foregoing is a correct description,

Manufacturer.

Dates of Survey } During progress of work in shops -- } 1924. Oct 27. Nov 5-12. 13. 20. 26. Is the approved plan of boiler forwarded herewith Yes Forwarded with M/R Pt 35674
while building } During erection on board vessel -- } Jan. Feb. March. April. May. Total No. of visits 17
16.31 11.27. 19.22. 28.9.17.1

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above boilers have been installed on board the vessel, subjected to an hydraulic pressure of 675 lb. with satisfactory results. The safety valves have been adjusted under steam as noted above. In my opinion the boilers are eligible to receive the record of 450 lb. in the Register Books.

Survey Fee See M/R Report } When applied for, 19
Travelling Expenses (if any) £ No 35684 } When received, 19

M. J. Cumham
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute NEW YORK JUL 3 - 1935
Assigned 3 W.T.B. Steam Pressure 450 lb.

