

REPORT ON WATER TUBE BOILERS.

Received at London Office 16th Nov. 1945

Date of writing Report 16 Nov., 1945 When handed in at Local Office 16th Nov. 1945 Port of Vancouver, B. C.

No. in Survey held at Esquimalt, B. C. Date, First Survey 27 Nov., 1944 Last Survey 7th Nov., 1945

Reg. Bk. on the Steel Twin Screw Steam Transport Ferry H.M. "L.S.T. 3534" (Number of Visits 60) Tons Gross 4290.74
Net 2430.45

Built at Esquimalt, B. C. By whom built Yarrow's Ltd. When built 1945

Engines made at Lachine, P. W. By whom made Dominion Bridge Co. Ltd. When made 1945

Boilers made at Vancouver, B. C. By whom made Vancouver Iron Works Ltd. When made 1944 - 1945

Nominal Horse Power 749 Owners My Lord's Commissioners of the Admiralty Port belonging to - -

WATER TUBE BOILERS—MAIN, ~~auxiliary or donkey~~—Manufacturers of Steel Worth Steel Co., Steel Co. of Canada, Dominion Foundries and Page-Hersey Tubes Ltd.

Date of Approval of plan 10th February, 1942 Number and Description of Type 4-12-44

of Boilers 2 - Yarrow Three Drum Working Pressure 225 lbs Tested by Hydraulic Pressure to 388 lbs Date of Test 16-3-45

No. of Certificate 790 - 833 Can each boiler be worked separately Yes Total Heating Surface of Boilers 12654 sq. ft.

Is forced draught fitted Yes, Closed Stokehold Area of fire grate (coal) in each Boiler Oil fired

No. and type of burners (oil) in each boiler 4 off F.J. Raskin Inc. Sprayer Type No. and description of safety valves on

each boiler (One) 4" Twin Double Spring High Lift Area of each set of valves per boiler per rule 24.3 per sq. inch (E = 9)

are adjusted 230 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 35" Height of boiler 14'-11" overall.

Width and Length 15'-0" x 15'-0" Steam Drums:—Number in each boiler One Inside diameter 50"

Thickness of plates 5/8" Shell & 1-1/2" Tube Pl. Range of Tensile Strength 28 to 32 tons Are drum shell plates welded

or flanged Welded If fusion welded, state name of welding firm Vancouver Iron Works, Ltd. Have all the requirements of the rules

for Class I vessels been complied with Yes Description of riveting:—Cir. seams - - long. seams - -

Diameter of rivet holes in long. seams - - Pitch of rivets - - Thickness of straps - - Percentage strength of

long. joint:—Plate - - Rivet - - Diameter of tube holes in drum 1.01", 1.135 & 1.51" Pitch of tube holes 1 1/2", 1-11/16" & 2 1/4"

Percentage strength of shell in way of tubes 32.6% Steam Drum Heads or Ends:—Range of tensile strength 26 to 30 tons.

Thickness of plates 1" Plain Radius or how stayed 50" Size of manhole or handhole 12" x 16" Water Drums:—Number

in each boiler Two Inside Diameter 23" Thickness of plates 9/16" Shell Range of tensile strength 28 to 32 tons Are drum shell plates

welded or flanged Welded If fusion welded, state name of welding firm Vancouver Iron Works Ltd. Have all the requirements of the rules

for Class I vessels been complied with Yes Description of riveting:—Cir. seams - - long. seam - -

Diameter of rivet holes in long. seams - - Pitch of rivets - - Thickness of straps - -

Percentage strength of long. joint:—Plate - - Rivet - - Diameter of tube holes in drum 1.01", 1.135" and 1.51" Pitch of tube holes 1 1/2", 1-11/16" and 2-1/4"

Percentage strength of drum shell in way of tubes 32.6% Water Drum Heads or Ends:—Range of Tensile strength 26 to 30 tons

Thickness of plates 13/16" Plain & 7/8" Manhole Radius or how stayed 23" Size of manhole or handhole 12" x 16"

Headers or Sections:—Number - - Material - - Thickness - - Tested by Hydraulic Pressure to - -

Tubes:—Diameter 1", 1-1/8" & 1 1/2" Thickness .104", .116" & .116" (minimum) Number 2446 - total Steam Dome or Collector:—Description of

Joint to Shell - - Inside diameter - - Thickness of shell plates - - Range of tensile strength - -

firm - - Have all the requirements of the rules for Class I vessels been complied with - - Diameter of rivet holes - -

Pitch of rivets - - Thickness of straps - - Percentage strength of long. Joint - - Plate - - Rivet - -

Crown or End Plates:—Range of tensile strength - - Thickness - - Radius or how stayed - -

SUPERHEATER. Drums or Headers:—Number in each boiler None Inside Diameter - -

Thickness - - Material - - Range of tensile strength - - Are drum shell plates welded

or flanged - - If fusion welded, state name of welding firm - - Have all the requirements of the rules

for Class I vessels been complied with - - Description of riveting:—Cir. seams - - long. seams - -

Diameter of rivet holes in long. seams - - Pitch of rivets - - 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 - - Drum Heads or Ends:—Thickness - - Range of tensile strength - -

Radius or how stayed - - Size of manhole or handhole - - Number, diameter, and thickness of tubes - -

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 - - No. and description of Safety Valves - - Area of each set

of valves - - Pressure to which they are adjusted - - Is easing gear fitted - -

Spare Gear. Has the spare gear required by the rules been supplied Yes

The foregoing is a correct description,
VANCOUVER IRON WORKS LTD.
D. J. Iron Manufacturer.

Dates of Survey } During progress of work in shops - - 1944 Nov. 27, 28, 29 Dec. 1, 2, 4, 5, 6
while building } During erection on board vessel - - 1945 Mar. 9, 10, 13, 15, 17, 20
} 1945 June 25, 26, 28, 29 July 14, 21, 24
Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. H.M.C.S. "WASKESIU" (Ver. Rpt. No. 5931)

Is the approved plan of boiler forwarded herewith Yes
Approved Plan forwarded with Ver. Rpt. No. 5931 H.M.C.S. "WASKESIU"
Total No. of visits 60

Is this boiler a duplicate of a previous case Yes If so, state vessel's name and report No. H.M.C.S. "WASKESIU" (Ver. Rpt. No. 5931)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built and fitted on board under Special Survey in accordance with the approved plans, New York letters and the Rules. The workmanship is good and the materials tested as per Rule. Satisfactorily tested under hydraulic pressure as above, and to 337 lbs. on board, examined under working conditions, safety valves adjusted to 230 lbs. and a satisfactory accumulation test carried out.

Survey Fee ... \$270.00 : } When applied for, 15 Nov., 1945
Travelling Expenses (if any) \$ 10.00 : } When received, 19

Committee's Minute FRI. 25 JAN 1945
Assigned Su F.E. machy rph.
Engineer Surveyor to Lloyd's Register of Shipping

