

REPORT ON WATER TUBE BOILERS.

No. 1329

16 SEP 1950

Received at London Office

Writing Report Apr. 21st, 1949 When handed in at Local Office 19 Port of TORONTO, CANADA
 Survey held at St. Catharines, Ont. Date, First Survey June 4th/48 Last Survey Feb. 22nd, 1949
 on the A.R.A. "BAHIA THETIS", Hull No. 18 (Number of Visits 12)
Halifax, N.S. By whom built Halifax Shipyards Ltd. When built
 made at St. Catharines, Ont. By whom made Foster Wheeler Ltd. When made 1949
 Horse Power _____ Owners _____ When made _____
 Port belonging to _____

WATER TUBE BOILERS — ~~MANUFACTURED FOR~~ **DONKEY**. — Manufacturers of Steel Shell-Lukens Steel Co. Heads - The Steel Co. of Canada Ltd.
 Approval of plan September 18th, and October 25th, 1948. Montreal

Number and Description or Type One "D" type two drum
 Certificate 1329 Can each boiler be worked separately _____
 Working Pressure 50 lbs. Tested by Hydraulic Pressure to 200 lbs. Date of Test 22.2.49
 Design Pressure 100 lbs. Total Heating Surface of Boilers 760 sq. ft.

Area of fire grate (coal) in each Boiler _____
 No. and description of safety valves on _____
 One 2 1/4" Twin Cockburn Morrison Hi-Lift Area of each set of valves per boiler _____
 as fitted 7.8 sq. ins. Pressure to which they _____

Are they fitted with easing gear _____
 In case of donkey boilers state whether steam from main boilers can enter _____
 key boiler _____
 Smallest distance between boilers or uptakes and bunkers or woodwork _____

Height of boiler 11'-2 3/16"
 and Length 7'0 1/8" x 7'6 5/16" Steam Drums:—Number in each boiler One Inside diameter 24"
 Range of Tensile Strength 28 to 35 tons p.s.i.

Are drum shell plates welded _____
 If fusion welded, state name of welding firm Foster Wheeler Ltd.
 Have all the requirements of the rules _____

Description of riveting:—Cir. seams _____ long seams _____
 Pitch of rivets _____ Thickness of straps _____ Percentage strength of _____

Diameter of tube holes in drum 1.015" & 1.515" Pitch of tube holes 1-17/32" & 3/4"
 Range of tensile strength 26 to 35 tons p.s.i.
 Steam Drum Heads or Ends:—Range of tensile strength _____

Water Drums:—Number _____
 Are drum shell plates _____
 If fusion welded, state name of welding firm Foster Wheeler Ltd.
 Have all the requirements of the rules _____

Description of riveting:—Cir. seams _____ long seam _____
 Pitch of rivets _____ Thickness of straps _____

Diameter of tube holes in drum 1.015" & 1.515" Pitch of tube holes 1-17/32" x 3/4"
 Range of Tensile strength 26 to 35 tons p.s.i.
 Water Drum Heads or Ends:—Range of Tensile strength _____

Size of manhole or handhole 12" x 16"
 Number, diameter, and thickness of tubes _____
 Tested by Hydraulic Pressure to _____

Steam Dome or Collector:—Description of _____
 Range of tensile _____
 If fusion welded, state name of welding _____

Diameter of rivet holes _____
 Thickness of straps _____ Percentage strength of long joint _____
 Plate _____ Rivet _____

Range of tensile strength _____
 Thickness _____ Radius or how stayed _____

Number in each boiler _____
 Inside Diameter _____
 Material _____ Range of tensile strength _____

Are drum shell plates welded _____
 Have all the requirements of the rules _____
 Description of riveting:—Cir. seams _____ long seams _____

Pitch of rivets _____ Thickness of straps _____ Percentage strength of _____
 Plate _____ Rivet _____

Diameter of tube holes in drum _____ Pitch of tube holes _____ Percentage strength of _____
 Drum Heads or Ends:—Thickness _____ Range of tensile strength _____

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 _____
 Area of each set _____
 No. and description of Safety Valves _____
 Pressure to which they are adjusted _____ Is easing gear fitted _____

Has the spare gear required by the rules been supplied _____
 P.T.O.

FOSTER WHEELER LIMITED The foregoing is a correct description,
ST. CATHARINES, ONTARIO

W.R. McCall Manufacturer.

During progress of work in shops - June 4, Sept. 2, 29, Nov. 9, 27, Dec. 6,
 During erection on board vessel - 14, 1948, Jan. 13, 18, Feb. 7, 17, 22, 1949 Is the approved plan of boiler forwarded herewith Yes
 Total No. of visits in shops 12

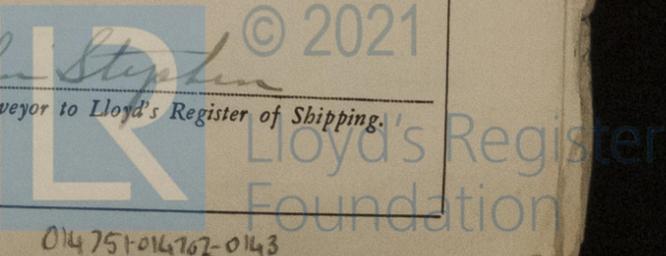
boiler a duplicate of a previous case Yes If so, state vessel's name and report No. 1326

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This donkey boiler was made under the Special
authority of the Society's Surveyor at the Works of Foster Wheeler Ltd., St. Catharines, Ont., in accordance
with the Rules and the approved Plans. All welding done by the Union Melt process with an
approved electrode. The steel plates and tubes were taken from stock, made by the Open P.T.O.

Survey Fee \$ 100.00 When applied for, Sept. 21 1949
 Travelling Expenses (if any) \$ 20.00 When received, 19

Committee's Minute FRI, 29 SEP 1950
 signed See minute on S.E. Rpt.

John Stephen
 Engineer Surveyor to Lloyd's Register of Shipping.



Identification stampings after hydrostatic test of Drums:-

Steam Drum
F.W.No. B4422 S-1708

LLOYDS
955
T.P. 200 lbs.
J.S.13.1.49

Water Drum
F.W.No. B4422 M-1708

LLOYDS
955
T.P. 200 lbs.
J.S.13.1.49

Stampings after tubing and final test:-

1329
LLOYD'S TEST
200 lbs.
W.P. 50 lbs.
J.S.22.2.49
FWB-3274

General Remarks (Cont'd.)

Hearth process to A.S.T.M. Spec. A-212 Grade "B", firebox quality fully killed. Check tests were made on samples taken from the plates and tubes with satisfactory results. The drums were subjected to a hydrostatic pressure of 200 lbs. before drilling, and the completed boiler was subjected to a hydrostatic pressure of 200 lbs., with satisfactory results. The workmanship and materials were good, and in my opinion this donkey boiler is eligible to be installed in a vessel classed in this Society.

The undermentioned copies of Certificates and Plans are forwarded with this Report:-

Certificates, etc.

1. Plate Report of physical tests, and Welding Report.
2. Two Macrographs.
3. Certificate of Test of 1" tubes.
4. Certificate of Test of 1½" tubes.

Plans

See Rpt. 1326.

London 1329