

REPORT ON WATER TUBE BOILERS.

No. 14211
26 DEC 1926

Received at London Office

Date of writing Report 23rd Dec. 1926, When handed in at Local Office

19

Port of HAMBURG.

No. in Survey held at KIEL Date, First Survey 8th June Last Survey 21st Dec. 1926.
 Reg. Bk. 70317 on the Steel Tug S.S. "G. HARRISON SMITH" Number of Visits 11 Tons } Gross 15371
 Net 9326
 Master Built at SPARROW'S POINT By whom built BETHLEHEM S.S. CORP. LD. When built 1921.
 Engines made at SHIP WILL BE CONVERTED TO MOTORSHIP By whom made BREMEN WOLFF When made 1926
 Boilers made at KIEL By whom made FRIED KRUPP-GERMANIAWERFT When made 1926.
 Registered Horse Power Owners INTERNATIONAL PETROLEUM CO. LD. Port belonging to HALIFAX N.S.

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Hewschel & Sohn - Hamburg.

(Letter for Record S.) Date of Approval of plan 26. 1. 26. Number and Description or Type of Boilers 2 Water Tube Donkey Boilers. Working Pressure 176 lb./250 lb. Tested by Hydraulic Pressure to 425 lb. Date of Test 3/9/26.
 No. of Certificate 440-441. Can each boiler be worked separately. Total Heating Surface of Boilers 3240 sq. ft. - 300 sq. ft.
 Is forced draught fitted. Area of fire grate (coal) in each Boiler oil fired 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. Area of each valve. 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 51 3/4 in. Width and Length 33 5/8 in.
 Steam Drums:—Number in each boiler 1 Inside diameter 14 00 in. Material of plates Steel Thickness 24 in.
 Range of Tensile Strength 44-50 tgr Are drum shell plates welded or flanged flanged Description of riveting:—
 Cir. seams lp. double long. seams double diameter of rivet holes in long. seams 28 in. Pitch of Rivets 9 1/2 in.
 Lap of plate or width of butt straps 266 in. Thickness of straps 19 in. Percentage strength of long. joint:—Plate 69.5% Rivet 84.6%
 Diameter of tube holes in drum 9 5/8 in. Pitch of tube holes 22 5/8 in. Percentage strength of shell in way of tubes 57.8%
 If Drum has a flat side state method of staying. Depth and thickness of girders at centre (if fitted). Distance apart. Number and pitch of stays in each. Working pressure by rules 17.98 tgr/cm²
 Steam Drum Heads or Ends:—Material Steel Thickness 30 in. Radius or how stayed 1260 in.
 Size of Manhole or Handhole 320 x 425 in. Water Drums:—Number in each boiler. Inside Diameter.
 Material of plates. Thickness. Range of tensile strength. Are drum shell plates welded or 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. Thickness. Radius or how stayed. Size of manhole or handhole. Headers or Sections:—Number 2
 Material Steel Thickness 22 in. - 19 in. Tested by Hydraulic Pressure to 425 lb. Material of Stays Steel
 Area at smallest part 84 in. Area supported by each stay 24000 sq. in. Working Pressure by Rules 17.88 tgr Tubes:—Diameter 8 5/8 in.
 Thickness 6.5 in. - 5 in. Number 31 + 140 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 Schmidt Patent Date of Approval of Plan 25/5/26. Tested by Hydraulic Pressure to 750 lb.

Date of Test 11/10/26. 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 yes Number, diameter, and thickness of tubes double - 32 in. - 3 in.
 Spare Gear. Tubes. Gaskets or joints:—Manhole. Handhole.

**FRIED KRUPP
GERMANIAWERFT**
The foregoing is a correct description,
[Signature] Manufacturer.

Dates of Survey while building } During progress of 8/6-11/6-13/6-28/7-3/8-3/9-17/9-1/10-11/10-26/10-31/12/26 Is the approved plan of boiler forwarded herewith yes.
 } During erection on board vessel - - - Total No. of visits 11.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) Material and Workmanship of these Water Tube Donkey Boilers are of good quality. The materials used in the construction are made at local works mixed by the Committee and tested by the Society's Surveyors. These boilers have been built under Special Survey in accordance with the approved plan of the Secretary's Letter and are, in my opinion, fit to receive N.D.B (W.T.) subject to completion on board. (with date). The boilers have been shipped to register to be fitted on board.

Survey Fee ... £ 21 : 12 : - When applied for, 23. 12. 26
 Travelling Expenses (if any) £ 4 : 4 : - When received, 28. 1. 27

[Signature]
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Assigned Not for Passing Committee

TUES. 6 MAR 1926

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See Return No. 1000