

REPORT ON BOILERS.

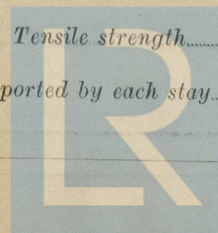
No. 12226

Received at London Office.

Date of writing Report 7th August 47 When handed in at Local Office 19 Port of Copenhagen
 No. in Survey held at Copenhagen Date, First Survey 26th October 1946 Last Survey 4th August 1947
 on the Barrister Wainwright "ARSENAL II" (for Mr. Portuguese Navy) (Number of Visits 19) Tons { Gross - Net -
 Built at Lisbon By whom built Arsenal do Alentejo Yard No. - When built -
 By whom made Apt. Barrister Wainwright Engine No. - When made -
 By whom made Markin. of Skibbyggeri Boiler No. 2078 When made 1947
 Owners - Port belonging to -

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Plates: Appleby-Fraughton Steel Co. Ltd. Slays: Colville Ltd.
 Manufacturers of Steel Tubes: Tube Ltd. Lucas Rivets: Lucas Bros. Exps (Letter for Record -)
 Total Heating Surface of Boilers 165 m² Is forced draught fitted no Coal or Oil fired exhausters
 No. and Description of Boilers 1 off horizontal multitubular Working Pressure 12.6 kg/cm²
 Tested by hydraulic pressure to 22.5 kg/cm² Date of test 4.8.47 No. of Certificate 707 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 off direct spring loaded 56 mm diam
 Area of each set of valves per boiler { per Rule 1700 cm² as fitted 3760 cm² Pressure to which they are adjusted - 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 - Is oil fuel carried in the double bottom under boilers -
 Smallest distance between shell of boiler and tank top plating - Is the bottom of the boiler insulated -
 Largest internal dia. of boilers 2640 mm Length 2500 mm Shell plates: Material S.M. Steel Tensile strength 45.75 kg/cm²
 Thickness 18 mm Are the shell plates welded or flanged no Description of riveting: circ. seams { end double 216-226 inter. -
 Pitch of rivets { 147 mm
 Diameter of rivet holes in { circ. seams 22 mm long. seams 21 mm
 Percentage of strength of circ. end seams { plate 63.4 rivets 55.5 Percentage of strength of circ. intermediate seam { plate - rivets -
 Percentage of strength of longitudinal joint { plate 85.7 rivets 96.5 Working pressure of shell by Rules 12.7 kg/cm²
 Thickness of butt straps { outer 18 mm inner 18 mm No. and Description of Furnaces in each Boiler -
 Tensile strength - Smallest outside diameter -
 Length of plain part { top - bottom - Thickness of plates { crown - bottom - Description of longitudinal joint -
 Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules -
 Plates in steam space: Material S.M. Steel Tensile strength 41-47 kg/cm² Thickness 22 mm Pitch of stays D = 505 mm
 Are stays secured Secured in both plates, nuts inside & outside Working pressure by Rules 12.8 kg/cm²
 Front plates: Material { front S.M. Steel back - Tensile strength { 41-47 kg/cm² Thickness { 22 mm
 Pitch of stay tubes in nests alt 216 mm Pitch across wide water spaces 335 & 765 mm Working pressure { front 14.2 kg/cm² back -
 Girders to combustion chamber tops: Material - Tensile strength - Depth and thickness of girder -
 Centre - Length as per Rule - Distance apart - No. and pitch of stays -
 Working pressure by Rules - Combustion chamber plates: Material -
 Thickness: Sides - Back - Top - Bottom -
 Height of stays to ditto: Sides - Back - Top - Are stays fitted with nuts or riveted over -
 Working pressure by Rules - Front plate at bottom: Material S.M. Steel Tensile strength 41-47 kg/cm²
 Thickness - Lower back plate: Material - Tensile strength - Thickness -
 Height of stays at wide water space D = 428 mm Are stays fitted with nuts or riveted over Stay tubes threaded & secured
 Working pressure 12.6 kg/cm² Main stays: Material S.M. Steel Tensile strength 44 kg/cm²
 Diameter { At body of stay 24 mm (57 mm) No. of threads per inch 11 Area supported by each stay 123000 mm²
 Working pressure by Rules 12.8 kg/cm² Screw stays: Material - Tensile strength -
 Diameter { At turned off part - No. of threads per inch - Area supported by each stay -



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Working pressure by Rules..... Are the stays drilled at the outer ends..... Margin stays: Diameter { At turned off part.....
or.....
Over threads.....

No. of threads per inch..... Area supported by each stay..... Working pressure by Rules.....

Tubes: Material S. M. Steel External diameter { Plain..... 2" (50.8 mm) Thickness { W. G. No. 10 (3.25 mm) No. of threads per inch 11
Stay..... 2" (50.8 mm) 8 ga. and 6 ga. HAND

Pitch of tubes 78 x 76.5 mm Working pressure by Rules 15 kg/cm² Manhole compensation: Size of opening in
shell plate 150 x 225 mm Section of compensating ring flat 325 x 400 mm No. of rivets and diameter of rivet holes electric welded

Outer row rivet pitch at ends..... Depth of flange if manhole flanged..... Steam Dome: Material.....

Tensile strength..... Thickness of shell..... Description of longitudinal joint.....

Diameter of rivet holes..... Pitch of rivets..... Percentage of strength of joint { Plate.....
Rivet.....

Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter of
stays..... Inner radius of crown..... Working pressure by Rules.....

How connected to shell..... Size of doubling plate under dome..... Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell.....

Type of Superheater..... Manufacturers of { Tubes.....
Steel forgings.....
Steel castings.....

Number of elements..... Material of tubes..... Internal diameter and thickness of tubes.....

Material of headers..... Tensile strength..... Thickness..... Can the superheater be shut off and
the boiler be worked separately..... Is a safety valve fitted to every part of the superheater which can be shut off from the boiler.....

Area of each safety valve..... Are the safety valves fitted with easing gear..... Working pressure as per
Rules..... Pressure to which the safety valves are adjusted..... Hydraulic test pressure:
tubes..... forgings and castings..... and after assembly in place..... Are drain cocks or
valves fitted to free the superheater from water where necessary.....

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with.

AKTIESELSKABET
BURMEISTER & WAIN'S MASKIN OG SKIBSBYGGER

Manufacturer

Dates of Survey while building	{ During progress of work in shops - - } During erection on board vessel - - - }	Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)	<i>yes</i>
		Total No. of visits.	<i>19.</i>

Is this Boiler a duplicate of a previous case.....*no*.....If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The above Monkey Voles has been built under special survey in accordance with the Rules, the approved plans and the Secretary's letter E dated 9/2-46.

The material used in construction has been tested as required by the Rules as per certificate herewith.

The workmanship is good.

Survey Fee *Jan. 2:40.00*

When applied for,.....1318.....1947

Travelling Expenses (if any) £

When received.....19.....

Committee's Minute

Assigned.

Engineer Surveyor to Lloyd's Register of Shipping.

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