

REPORT ON BOILERS.

No. 14265

Received at London Office 11 OCT 1946

Reporting Report 19 When handed in at Local Office 9/10/1946 Port of BELFAST
Visits included in 7.2. Machinery report
Survey held at BELFAST Date, First Survey Last Survey 19
on the S.S. "BALAENA" (Number of Visits) Tons { Gross 15760 Net 8224
Built at BELFAST By whom built HARLAND & WOLFF Yard No. 1327 When built 1946
made at BELFAST By whom made HARLAND & WOLFF, LD Engine No. 1327 When made 1946
made at BELFAST By whom made HARLAND & WOLFF, LD. Boiler No. 1327 When made 1946
Horse Power 1643 Owners UNITED WHALERS, LD. Port belonging to LONDON

TITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY. AFT

Manufacturers of Steel COLVILLES LD. (Letter for Record S ✓)
Heating Surface of Boilers 3 x 3340 SQ. FT. Is forced draught fitted YES ✓ Coal or Oil fired OIL ✓
Description of Boilers 3 CYLINDRICAL SMOKE TUBE Working Pressure 220 LB/0"
by hydraulic pressure to 380 LB/0" Date of test 12/4/46 No. of Certificate 1298 1348-9 Can each boiler be worked separately YES ✓
Firegrate in each Boiler - No. and Description of safety valves to each boiler 2 - 2 1/2" DIA. IMP. HIGH LIFT.
of each set of valves per boiler { per Rule 8.9" ✓ as fitted 9.8" ✓ Pressure to which they are adjusted 226 LB/0" Are they fitted with easing gear YES ✓
of donkey boilers, state whether steam from main boilers can enter the donkey boiler -
Distance between boilers or uptakes and bunkers or woodwork AMPLE ✓ Is oil fuel carried in the double bottom under boilers TWEEN DK. ✓
Distance between shell of boiler and tank top plating AMPLE ✓ Is the bottom of the boiler insulated YES ✓
internal dia. of boilers 16'-2 31/32" Length 12'-6" Shell plates: Material S ✓ Tensile strength 30/34 T/0" ✓
Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R. LAP ✓ inter. -
T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 19/32" ✓ long. seams 1 19/32" ✓ Pitch of rivets { 3.957" ✓ 10 5/8" ✓
Percentage of strength of circ. end seams { plate 59.9 rivets 50.5 Percentage of strength of circ. intermediate seam { plate - rivets -
Percentage of strength of longitudinal joint { plate 85.0 rivets 89.0 Working pressure of shell by Rules 232 LB/0" ✓ combined 87.8
Pitch of butt straps { outer 1 5/32" ✓ inner 1 9/32" ✓ No. and Description of Furnaces in each Boiler 3 DEIGHTON CORRUGATED ✓
Material S. ✓ Tensile strength 26/30 T/0" ✓ Smallest outside diameter 3'-11 23/32" ✓
Thickness of plates { crown 4 7/64" ✓ bottom - Description of longitudinal joint FIRE WELD ✓
Working pressure of furnace by Rules AS APP. ✓
Material S. ✓ Tensile strength 26/30 T/0" ✓ Thickness 1 13/32" ✓ Pitch of stays VARIOUS ✓
Working pressure by Rules AS APP. ✓
Material { front S back S Tensile strength { 26/30 T/0" ✓ Thickness { 15/16" ✓ 7/8" ✓
Pitch of stay tubes in nests 8.625" W 9.625" C Pitch across wide water spaces 14 1/2" ✓ Working pressure { front AS APP. ✓ back AS APP. ✓
Material S. ✓ Tensile strength 28/32 T/0" ✓ Depth and thickness of girder
Length as per Rule 4'-0 1/2" ✓ Distance apart 8" ✓ No. and pitch of stays
WELDED TO C.C. TOPS. Working pressure by Rules AS APP. ✓ Combustion chamber plates: Material S
Strength 26/30 T/0" ✓ Thickness: Sides 13/16" ✓ Back 23/32" ✓ Top 13/16" ✓ Bottom 29/32" ✓
of stays to ditto: Sides 9 13/16" x 10" ✓ Back 9 1/8" x 8" C ✓ Top - Are stays fitted with nuts or riveted over C.C. PLATES ✓
Working pressure by Rules AS APP. ✓ Front plate at bottom: Material S ✓ Tensile strength 26/30 T/0" ✓
Lower back plate: Material S ✓ Tensile strength 26/30 T/0" ✓ Thickness 15/16" ✓
of stays at wide water space 1'-3 3/8" ✓ Are stays fitted with nuts or riveted over WELDED AT BACK ENDS ✓
Working Pressure AS APP. Main stays: Material S ✓ Tensile strength 28/32 T/0" ✓
At body of stay, 3 3/4" x 3 1/2" ✓ No. of threads per inch 6 ✓ Area supported by each stay VARIOUS ✓
Over threads
Working pressure by Rules AS APP. ✓ Screw stays: Material S. ✓ Tensile strength 26/30 T/0" ✓
At turned off part, 1 5/8", 1 7/8", 2" ✓ No. of threads per inch 9 TO SHELL Area supported by each stay VARIOUS ✓
Over threads

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Working pressure by Rules *As APP.* Are the stays drilled at the outer ends *No* ✓ Margin stays: Diameter $1\frac{7}{8}$ "
 No. of threads per inch - Area supported by each stay $12\frac{3}{16} \times 8$ " Working pressure by Rules *As APP.*
 Tubes: Material *S* ✓ External diameter { Plain $2\frac{1}{2}$ " ✓ Stay $2\frac{1}{2}$ " ✓ Thickness { *8 L.S.G.* $5/16$ " $3/8$ " $7/16$ " No. of threads per inch *9* ✓
 Pitch of tubes $4 \times 3\frac{5}{8}$ " ✓ Working pressure by Rules *As APP* Manhole compensation: Size of
 shell plate *NONE IN SHELL* Section of compensating ring - No. of rivets and diameter of rivet holes -
 Outer row rivet pitch at ends - Depth of flange if manhole flanged $4\frac{1}{8} \times 3\frac{3}{8}$ " ✓ 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 - Rivets -
 Internal diameter - Working pressure by Rules - Thickness of crown - No. and
 stays - Inner radius of crown - Working pressure by Rules -
 How connected to shell - Size of doubling plate under dome - Diameter of rivet hole
 of rivets in outer row in dome connection to shell -

Type of Superheater *N.E. MAR. C.C. TYPE* ✓ Manufacturers of { Tubes *TALBOT STEAP & TUBES, L*
 { Steel forgings -
 { Steel castings -
 Number of elements *84 TOTAL* Material of tubes *S.D.S.* ✓ Internal diameter and thickness of tubes $1.273 \times$
 Material of headers *S.D.S* Tensile strength $26/28 T/0$ " ✓ Thickness 1 " ✓ Can the superheater be
 the boiler be worked separately *No* ✓ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Y*
 Area of each safety valve 3.14 " ✓ Are the safety valves fitted with easing gear *No* ✓ Working pressure
 Rules *As APP.* ✓ Pressure to which the safety valves are adjusted. $226 \text{ LBS}/0$ " ✓ Hydraulic test
 tubes $1500 \text{ LBS}/0$ " ✓ forgings and castings *HEADERS $660 \text{ LB}/0$ "* and after assembly in place $660 \text{ LB}/0$ " ✓ Are dr
 valves fitted to free the superheater from water where necessary *YES* ✓
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *YES*
 FOR HARLAND AND WOLFF, LIMITED.
 The foregoing is a correct description
 Secretary

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

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.)

*These boilers have been built under Special Survey
 accordance with the Society's Rules and Approved plan.
 The materials and workmanship are good.
 The boilers have been efficiently installed on board
 vessel, the Safety valves adjusted under steam for a
 working pressure of $220 \text{ lb}/0$ " and a water
 accumulation test held.*

Survey Fee *See Engine Rpt.* } When applied for, 19
 Travelling Expenses (if any) £ : : } When received, 19

John W. Mace *Eng. S. Mace*
 Engineer Surveyor to Lloyd's Register

Committee's Minute

FRI. 22 NOV 1946

Assigned *See F.E. mch. rpt.*



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