

REPORT ON BOILERS.

No. 15109

Received at London Office... 19 JAN 1951

by Rules...
 Actual... 35
 Date of writing Report... 15 Nov 50
 When handed in at Local Office... 17/11/51
 Port of... Belfast
 Included in rpt + b.
 No. in Survey held at... Belfast
 Date, First Survey...
 Last Survey... 19
 on the... M.V. LAGANFIELD
 (Number of Visits...)
 Gross...
 Net...
 Built at... Belfast
 By whom built... Harland & Wolff L^d
 Yard No. 1418
 When built... 1950
 Engines made at... Belfast
 By whom made... Harland & Wolff L^d
 Engine No. 1418
 When made... 1950
 Boilers made at... Belfast
 By whom made... Harland & Wolff L^d
 Boiler No. 1418
 When made... 1950
 Owners... Hunting, Sons Ltd.
 Port belonging to... Newcastle on Tyne

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel... Colvilles
 (Letter for Record... 5)
 Total Heating Surface of Boilers... 2047 x 2 ft
 Is forced draught fitted... Yes
 Coal or Oil fired... Oil & S.K. gas
 No. and Description of Boilers... 2 Cylindrical smoke tube type
 Working Pressure... 150 lbs
 Tested by hydraulic pressure to... 275 lbs
 Date of test... 9.10.50
 No. of Certificate... 1468
 Can each boiler be worked separately... Yes
 Area of Firegrate in each Boiler...
 No. and Description of safety valves to each boiler... 2 1/2" Improved High Liftable 3/4" outlet 3/8" outlet
 Area of each set of valves per boiler...
 per Rule... 7.75 sq ft
 as fitted... 7.95 sq ft
 Pressure to which they are adjusted... 150 lbs
 Are they fitted with easing gear... Yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler... No
 Smallest distance between boilers or uptakes and bunkers or woodwork...
 Is oil fuel carried in the double bottom under boilers... No
 Smallest distance between shell of boiler and tank top plating...
 Is the bottom of the boiler insulated...
 Largest internal dia. of boilers... 12'-10 3/16"
 Length... 11'-6"
 Shell plates: Material... Steel
 Tensile strength... 29-33 tons
 Thickness... 29/32"
 Are the shell plates welded or flanged... No
 Description of riveting: circ. seams...
 end... DR.
 inter...
 long. seams... T.R.D.B.S.
 Diameter of rivet holes in...
 circ. seams... 1 3/32"
 long. seams... 1 1/32"
 Pitch of rivets...
 3.08
 6.9/16
 Percentage of strength of circ. end seams...
 plate... 64.5
 rivets... 53.0
 Percentage of strength of circ. intermediate seam...
 plate... 84.3
 rivets... 104
 Working pressure of shell by Rules... 155 lbs
 Percentage of strength of longitudinal joint...
 rivets... 89.3
 combined...
 Thickness of butt straps...
 outer... 23/32"
 inner... 27/32"
 No. and Description of Furnaces in each Boiler... 2 Right; Corrupted
 Material... Steel
 Tensile strength... 26-30 tons
 Smallest outside diameter... 3'-8"
 Length of plain part...
 top...
 bottom...
 Thickness of plates...
 crown... 1/2"
 bottom...
 Description of longitudinal joint... forge weld
 Working pressure of furnace by Rules... 163 lbs
 End plates in steam space: Material... Steel
 Tensile strength... 26-30 tons
 Thickness... 15/16"
 Pitch of stays... 16x16
 16x15
 How are stays secured... DN.W.
 Working pressure by Rules... As approved
 Tube plates: Material... Steel
 Tensile strength... 26-30 tons
 Thickness... 3/4"
 Mean pitch of stay tubes in nests... 8 5/16"
 Pitch across wide water spaces... 13 1/2"
 Working pressure...
 front...
 back... As approved
 Girders to combustion chamber tops: Material... Steel
 Tensile strength... 28-32 tons
 Depth and thickness of girder at centre... 9 1/2" x 1 1/32"
 Length as per Rule... 32 1/2"
 Distance apart... 9 3/8"
 No. and pitch of stays in each...
 Welded
 Working pressure by Rules... As approved
 Combustion chamber plates: Material... Steel
 Tensile strength... 26-30 tons
 Thickness: Sides... 3/4"
 Back... 3/4"
 Top... 3/4"
 Bottom... 3/4"
 Pitch of stays to ditto: Sides... 8 1/2" x 8 1/2" x 9"
 Back... 8 1/4" x 9 1/2"
 Top...
 Are stays fitted with nuts or riveted over...
 Shell - others welded
 Working pressure by Rules... As approved
 Front plate at bottom: Material... Steel
 Tensile strength... 26-30 tons
 Thickness... 7/8"
 Lower back plate: Material... Steel
 Tensile strength... 26-30 tons
 Thickness... 15/16"
 Pitch of stays at wide water space... 16 1/4" x 9 1/2"
 Are stays fitted with nuts or riveted over... Welded
 Working pressure... As approved
 Main stays: Material... Steel
 Tensile strength... 28-32 tons
 Diameter...
 At body of stay... 2 3/4"
 or
 Over threads...
 No. of threads per inch... 6
 Area supported by each stay... Various
 Working pressure by Rules... As approved
 Screw stays: Material... Steel
 Tensile strength... 26-30 tons
 Diameter...
 At turned off part... 1 1/2"
 or
 Over threads...
 No. of threads per inch... 19
 Area supported by each stay...
 Shrouded at Shell only
 Welded in Combustion Chamber

Working pressure by Rules *As approved* Are the stays drilled at the outer ends Margin stays: Diameter *At turned off part 1 3/4 x 2*
 No. of threads per inch *Welded* Area supported by each stay *14" x 9 1/2"* Working pressure by Rules *As approved*
 Tubes: Material *H. O. S.* External diameter *2 1/2"* Thickness *10 LSG STAY 1/4" 3/16" 1/32"* No. of threads per inch *9*
 Pitch of tubes *3 3/4" x 3 5/8"* Working pressure by Rules *As approved* Manhole compensation: Size of opening
 shell plate *13 3/4" x 17 3/4"* Section of compensating ring *2' 8" x 2' 4" x 7/8"* No. of rivets and diameter of rivet holes *Welded to shell*
 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..... Rivets.....*
 Internal diameter..... Working pressure by Rules..... Thickness of crown..... No. and diameter
 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 or
 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
 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.....
 For HARLAND AND WOLFE LIMITED
 The foregoing is a correct description,
Fred R. Shaw Manufacturer

Dates of Survey *while building* *During progress of work in shops - - -* Are the approved plans of boiler and superheater forwarded herewith *Yes*
During erection on board vessel - - - (If not state date of approval.) *See approval letter dated London 2nd June 1946*
 Total No. of visits.....

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *British Explorer, Rpt No. 150*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
*The boilers have been built under special survey in accordance with the Rules and approved plan.
 The materials and workmanship are good.
 The boilers have been satisfactorily installed in the vessel tested under working conditions and found in good order. Safety valves adjusted under steam as stated above.*

Survey Fee £ 59 : 2 : } When applied for, *17/1/1951*
 Travelling Expenses (if any) £ : : } When received, *19.....*

S. Barchin
 Engineer Surveyor to Lloyd's Register of Shipping

FRI. 9 FEB 1951

Committee's Minute.....
 Assigned *See F.E. Welch, rpt.*