

# REPORT ON BOILERS.

No. 9346

Received at London Office

25 MAY 1925

Date of writing Report 22 - 5 - 1925 When handed in at Local Office 23 - 5 - 1925 Port of Belfast

No. in Survey held at Belfast Date, First Survey 6<sup>th</sup> Jan, 1925 Last Survey 18<sup>th</sup> May 1925  
 Reg. Book. on the Donkey Boiler for the New Steel M.S. "NAIRN BANK" (Number of Visits 21) Gross Tons (6799) Net  
 Master Glasgow Built at Glasgow By whom built Harland & Wolff Ltd. When built 1925  
 Engines made at Glasgow By whom made Harland & Wolff Ltd When made 1925  
 Donkey Boilers made at Belfast By whom made Harland & Wolff Ltd When made 1925  
 Registered Horse Power Owners Messrs Andrew Weir & Co. (Bank Line Ltd) Port belonging to

## MULTITUBULAR BOILERS ~~MAIN, AUXILIARY OR~~ DONKEY.—Manufacturers of Steel D. Shuille & Sons Ltd

(Letter for record S) Total Heating Surface of Boilers 1510 sq ft Is forced draft fitted No. and Description of Boilers One single Ended. Working Pressure 110 lbs Tested by hydraulic pressure to 215 lbs Date of test 18-5-25  
 No. of Certificate 864 Can each boiler be worked separately Yes Area of fire grate in each boiler 44 sq ft No. and Description of safety valves to each boiler TWO SPRING LOADED Area of each valve 9.6 sq in Pressure to which they are adjusted 110 LBS/S  
 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~~ 2'-1" <sup>inside</sup> Mean dia. of boilers 13'-0" Length 11'-0"  
 Material of shell plates Steel Thickness 3/4" Range of tensile strength 28 to 32 tons Are the shell plates welded or flanged No.  
 Descrip. of riveting: cir. seams D.R. long. seams T.R.D. B.S. Diameter of rivet holes in long. seams 15/16" Pitch of rivets 6 1/8"  
~~Top of plates~~ width of butt straps 1'-2 1/4" Per centages of strength of longitudinal joint rivets 116 Working pressure of shell by rules 120 lbs Size of manhole in shell 16 x 12 Size of compensating ring 2 @ 3'0" x 2'8" x 3/4" No. and Description of Furnaces in each boiler 3 corrugated Material Steel Outside diameter 3'4 1/8" Length of plain part 3'0" Thickness of plates <sup>crown</sup> 3/16" <sup>bottom</sup> 3/16"  
 Description of longitudinal joint weld. No. of strengthening rings 1 Working pressure of furnace by the rules 156 lbs Combustion chamber plates: Material Steel Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4" Pitch of stays to ditto: Sides 8 1/4 x 8 1/2" Back 9 x 8 1/2"  
 Top 9 1/2 x 8 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 134 lbs Material of stays Steel Diameter at smallest part 1.22" Area supported by each stay 48.3 sq in Working pressure by rules 129 lbs End plates in steam space: Material Steel Thickness 1/8"  
 Pitch of stays 18 x 18 How are stays secured Nuts & Washers Working pressure by rules 122 lbs Material of stays Steel Diameter at smallest part 4.116"  
 Area supported by each stay 32.4 sq in Working pressure by rules 134 lbs Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back-plate Steel Thickness 3/4" Greatest pitch of stays 12 3/4 x 8 1/2" Working pressure of plate by rules 190 lbs Diameter of tubes 3 1/4"  
 Pitch of tubes 4 1/2 x 4 1/2" Material of tube plates Steel Thickness: Front 3/4" Back 3/4" Mean pitch of stays 8.92" Pitch across wide water spaces 1' 2 1/4" Working pressures by rules 134 lbs Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 2 @ 4 1/2 x 3 1/2" Length as per rule 2'-6" Distance apart 9 1/2" Number and pitch of Stays in each 3 @ 8 1/4"  
 Working pressure by rules 141 lbs Superheater or Steam chest: how connected to boiler None Can the superheater be shut off and the boiler worked separately  
 Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet holes Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thickness  
 If stiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed  
 Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear

The foregoing is a correct description,  
 For HARLAND AND WOLFF, LIMITED.  
J. E. Hebbek Manufacturer.

Dates of Survey: During progress of work in shops - Jan 6-14, 23-30 Feb 6-16-23 Mar 6-12-13-20 Is the approved plan of boiler forwarded herewith No  
 while building: During erection on board vessel - 26 Apr 1-8-17-21 May 8-14-15-16-18-21 will be forwarded with 680-1681  
 Total No. of visits 21

GENERAL REMARKS (State quality of workmanship, opinions as to class, etc.) This Boiler has been built under Special Survey. Materials & workmanship good. It has been shipped to Glasgow for installation in the vessel.

This Boiler has now been fitted on board the above vessel in an efficient manner, examined under steam pressure and everything found satisfactory. Safety valves adjusted to 110 LBS/S. Washers F 3/8" A 5/16"

Survey Fee ... £ 10 : 0 : 0 When applied for, 23-5-1925  
 Travelling Expenses (if any) £ : : When received, 14/5/25  
William Butts & H. M. Critch  
 Engineer Surveyors to Lloyd's Register of British and Foreign Shipping.

Committee's Minute GLASGOW 14 JUL 1925  
 Assigned See Glasgow Report No. 44850



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