

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 *6th Jan, 1925* Last Survey *18th 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*
 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. O'Sullivan & Sons Ltd*(Letter for record *S*) Total Heating Surface of Boilers *1510 sq ft* Is forced draft fitted *No.* and Description ofBoilers *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 *✓* Area of fire grate in each boiler *44 sq ft* No. and Description ofsafety 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 boilerSmallest distance between boilers or uptakes and bunkers or ~~woodwork~~ *2'-1"* *inside* 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 or~~ width of butt straps *1'-2 1/4"* Per centages of strength of longitudinal joint *116* Working pressure of shell byrules *120 lbs* Size of manhole in shell *16" x 12"* Size of compensating ring *2 @ 3'0" x 2'8"* No. and Description of Furnaces in eachboiler *3 Corrugated* Material *Steel* Outside diameter *3'4 1/8"* Length of plain part *top* Thickness of plates *crown* *bottom* *7/16"*Description of longitudinal joint *weld.* No. of strengthening rings *✓* Working pressure of furnace by the rules *156 lbs* Combustion chamberplates: 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 1/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *134 lbs* Material of stays *Steel* Diameter atsmallest 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 *Washed* Working pressure by rules *122 lbs* Material of stays *Steel* Diameter at smallest part *4 1/16"*Area supported by each stay *324 sq in* Working pressure by rules *134 lbs* Material of Front plates at bottom *Steel* Thickness *3/4"* Material ofLower 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 widewater spaces *1'-2 1/4"* Working pressures by rules *134 lbs* Girders to Chamber tops: Material *Steel* Depth and thickness ofgirder 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 *how* Can the superheater be shut off and the boiler workedseparately *✓* 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. Hebbcock Manufacturer.

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *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" F. A 5/16" F.

Survey Fee ... £ 10 : 7 : 0 When applied for, *23-5-1925*
 Travelling Expenses (if any) £ : : When received, *14/6/25*

William Butler, H. M. Grinick
 Engineer Surveyors to Lloyd's Register of British and Foreign Shipping.

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

002222-002228-0019