Rpt. 5c.

REPORT ON WATER TUBE BOILERS. No. 14389

Received at London Office 14 JUN 1947

Date of writing Report ... 19 ... When handed in at Local Office 10/6/1947 Port of Belfast

No. in Reg. Bk. ... Survey held at Belfast. Date, First Survey ... Last Survey ... 19 ... (Number of Visits ...)

Visits included in T.2. ff.

on the S/S "LOCH GARTH" Tons { Gross ... Net ...

Built at Belfast By whom built Messrs Harland & Wolff Ltd When built 1947

Engines made at Belfast By whom made Messrs Harland & Wolff Ltd When made 1947

Boilers made at Belfast By whom made Messrs Harland & Wolff Ltd When made 1947

Nominal Horse Power 2914 Owners Royal Mail Lines Ltd Port belonging to London

WATER TUBE BOILERS—MAIN, ~~AUXILIARY, OR DONKEY~~.—Manufacturers of Steel Steam & Coal drum Reports attached

Date of Approval of plan 21.5.46 & 4 Number and Description of Boilers 2 FOSTER WHEELER - CONTROLLED SUPERHEAT

No. of Certificates 1344/5 Working Pressure 585 lbs Tested by Hydraulic Pressure to 930 lbs Date of Test 9.10.46 & 14.12.46

Can each boiler be worked separately Yes. Forced draught fitted Yes. Total Heating Surface of Boilers Barrels 14,430 sq ft Superheaters 3,200 " 22% Economisers 3,900 " total 21530 } approved 55000 lbs/hr each blr.

Area of fire grate (coal) in each Boiler - No. and type of burners (oil) in each boiler 6 (4 INBOARD FURNACE + 2 OUTBOARD FURNACE) WALLSEND MAX CAP. 476/647 cwt/hr.

No. and description of safety valves on each boiler One 1½" Single Full Bore on Steam Drum ✓ One 1¾" Double Full Bore on Superheater ✓ applied.

Area of each set of valves per boiler { per rule APPROVED LOR. 12.6.46 ✓ as fitted 6.57 sq" Pressure to which they adjusted 585 lbs Steam Drum 535 " Superheater

Are they fitted with easing gear Yes. ✓ In case of donkey boilers state whether steam from main boilers can enter donkey boiler No. Smallest distance between boilers or uptakes and bunkers ~~or woodwork~~ 2'-4" Height of boiler 19'-5½" O.A.

Width and Length 23'-0½" x 12'-7⅞" O.A. **Steam Drums:**—Number in each boiler One ✓ Inside diameter 15¼" (WRAPPER) ✓

Thickness of plates WRAPPER 1¾" TUBE PLATE 3⅛" ✓ Range of Tensile Strength 28/32 Tons ✓ Are drum shell plates welded or flanged Fusion Welded If fusion welded, state name of welding firm Broomside Boiler Co. Motherwell ✓ Have all the requirements of the rules for Class I vessels been complied with Yes - Copy of Certif attached ✓ Description of riveting:—Cir. seams - long. seams -

Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 1¼", 2", ¾" SUPPORT TUBES, 5" DOWNCOMER Pitch of tube holes 2", 3⅛", 4" ✓ Percentage strength of drum shell in way of tubes 35.52.

Thickness of plates 2⅛" ✓ Radius or ~~how stayed~~ 42" ✓ **Steam Drum Heads or Ends:**—Range of tensile strength 26/30 Tons ✓ Size of manhole or ~~handhole~~ 16" x 12" ✓

Water Drums:—Number in each boiler 2 ✓ Inside Diameter 24" ✓ Thickness of plates 1¾" MIN. ✓ Range of tensile strength 28/32 Tons ✓ Are drum shell plates welded or flanged Solid Forged ✓ If fusion welded, state name of welding firm - Have all the requirements of the rules for Class I vessels been complied with - Description of riveting:—Cir. seams - long. seam -

Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 1¼", 2", ¾" SUPPORT TUBES ✓ Pitch of tube holes 2", 3⅛", 4" ✓ Percentage strength of drum shell in way of tubes 35.52 Thickness of plates 2½" ✓ ~~Radius or how stayed~~ 3'-1½" ✓ Size of manhole or ~~handhole~~ 16" x 12" ✓

Water Drum Heads or Ends:—Range of Tensile strength 28/32 Tons ✓

Headers or Sections:—Number 3 ✓ Material M. Steel ✓ Thickness 1" ✓ Tested by Hydraulic Pressure to 930 lbs ✓

Tubes:—Diameter 1¼", 2", 3¼", 5" ✓ Thickness .128", .192", .3125", .341" ✓ Number 1203-1¼" 2-3¼" PER BLR. 269-2" 10-5" ✓ **Steam Dome or Collector:**—Description of

Joint to Shell - Inside diameter - Thickness of shell plates - Range of tensile strength - Description of longitudinal joint - If fusion welded, state name of welding

Have all the requirements of the rules for Class I vessels been complied with - Diameter of rivet holes - Pitch of rivets - Thickness of straps - Percentage strength of long. Joint - Plate - Rivet -

Crown or End Plates:—Range of tensile strength - Thickness - Radius or how stayed -

SUPERHEATER. **Drums or Headers:**—Number in each boiler 2 ✓ Inside Diameter SEE APPROVED PLAN FOR SECTION ✓

Thickness 1½" ✓ Material Forged Steel ✓ Range of tensile strength 28/32 Tons. ✓ Are drum shell plates welded or flanged Ends & Branches fusion welded ✓ If fusion welded, state name of welding firm Forth Shaft Co. Ltd - See attached Certificate ✓ Have all the requirements of the rules for Class I vessels been complied with - Description of riveting:—Cir. seams - long. seams -

Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of long. joint:—Plate - Rivet - Diameter of tube holes in drum 1⅛" ✓ Pitch of tube holes 1 13/16" Percentage strength of drum shell in way of tubes 37.1 **Drum Heads or Ends:**— Steel ✓ Thickness 1¾" Range of tensile strength 28/32 Tons

Radius or how stayed Flat. ✓ Size of manhole or handhole 2" Hand Holes Number, diameter, and thickness of tubes 310 - 1⅛" O/D x .128" PER BLR.

Tested by Hydraulic Pressure to 930 lbs ✓ Date of Test F. 1.5.47 S. 30.4.47 ✓ Is a safety valve fitted to each section of the superheater which can be shut off from the boiler Yes. ✓ No. and description of Safety Valves One 1¾" Double Full Bore on outlet. ✓ Area of each set of valves 4.8 sq" ✓ Pressure to which they are adjusted 535 lbs/in² 525 applied ✓ Is easing gear fitted Yes. ✓

Spare Gear. Has the spare gear required by the rules been supplied Yes. ✓ FOR HARLAND AND WOLFF, LIMITED.

5'25 at engines per Mr Glen Thomas owners request

The foregoing is a correct description,

Secretary. Manufacturer.

Plates { During progress of work in shops - - } Survey { During erection on board vessel - - } while building

Is the approved plan of boiler forwarded herewith

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 constructed under Special Survey in accordance with the Rules & approved plans. The material and workmanship are good. The boilers have been efficiently installed onboard the vessel, all safety valves adjusted under steam & accumulation test satisfactorily completed. Economisers fitted.

Survey Fee ... ... £ : : Travelling Expenses (if any) £ : :

When applied for, ... 19 ... When received, ... 19

Alex. D. Thomson, E. Grieves.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 18 JUL 1947

Signed See F.E. mchy. rpt.

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