

28 LUG. 1953

Rpt. 5a.

## REPORT ON BOILERS.

No. 19901  
110 JUL 1958

Received at London Office

Date of writing Report 9-7-1958 When handed in at Local Office 9-7-1958 Port of West Hartlepool

No. in Reg. Book. Survey held at West Hartlepool Date, First Survey 12<sup>th</sup> March, 1958 Last Survey 21<sup>st</sup> June, 1958

on the *Giovanella D'Amico* (Number of Visits 31) Gross Tons Net Tons

Built at West Hartlepool By whom built Cantieri Navale Breda Yard No. 207 When built

Engines made at By whom made Wm Gray & Co. Ltd. Engine No. When made

Boilers made at West Hartlepool By whom made Central Marine Engine Works Boiler No. R.444 When made 1958

MN as per Rule Owners Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd.

Total Heating Surface of Boilers 13,500  $\pm$  each boiler Of Superheaters

Total for Register Book 2 x 3,500  $\pm$  Is forced draught fitted Yes Coal or Oil fired Oil

No. and Description of Boilers 2-Single ended Multitubular Scotch Boilers Working Pressure 185 lbs/sq in

Tested by hydraulic pressure to 328 lbs Date of test 20<sup>th</sup> June 1958 No. of Certificate Star-4284 HPL Can each boiler be worked separately Yes

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 20 2 3/4" Improved High Lift

Area of each set of valves per boiler per Rule 10.94 sq in as fitted 11.88 sq in Pressure to which they are adjusted Are they fitted with easing gear

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 Is oil fuel carried in the double bottom under boilers

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 15'-0" Length 10'-9" Shell plates: Material S.M. Steel Tensile strength 29/33 tons/sq in

If fusion welded, state name of welding Firm Have all the requirements of the Rules for Class 1 vessels been complied with Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams end D.R. LAP inter 3.95" long seams T.R.D.B. STRAPS Diameter of rivet holes in circ. seams 1 5/16" long seams 1 5/16" Pitch of rivets 8 15/16"

Percentage of strength of circ. end seams plate 66.8 rivets 43.42 Percentage of strength of circ. intermediate seam plate rivets 85.33

Percentage of strength of longitudinal joint plate 90.03 rivets 88.63 combined

Thickness of butt straps outer 3 1/2" inner 1 3/2" No. and Description of Furnaces in each Boiler 3-Deighton Section

Material S.M. Steel Tensile strength 26-30 tons/sq in Smallest outside diameter 3'-6 5/8"

Length of plain part top bottom Thickness of plates 9/16" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom

End plates in steam space: Material S.M. Steel Tensile strength 26-30 tons/sq in Thickness 1 3/16" Pitch of stays 19" x 18 1/4"

How are stays secured Double Nuts

Tube plates: Material front S.M. Steel back S.M. Steel Tensile strength 26-30 tons/sq in Thickness 15/16" 23/32"

Mean pitch of stay tubes in nests 9 9/16" Pitch across wide water spaces 13 1/2" x 6 3/4"

Girders to combustion chamber tops: Material S.M. Steel Tensile strength 28-32 tons/sq in Depth and thickness of girder at centre 8 1/2" x 1 1/4" Length as per Rule 2'-4 5/8" Distance apart 9 1/4" No. and pitch of stays in each Welded at c.c. top Combustion chamber plates: Material S.M. Steel

Tensile strength 26-30 tons/sq in Thickness Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 23/32"

Pitch of stays to ditto: Sides 7 7/8" x 10 1/8" Back 7 3/4" x 9 3/8" Top Welded girders Are stays fitted with nuts or riveted over Nuts

Front plate at bottom: Material S.M. Steel Tensile strength 26-30 tons/sq in Thickness 15/16"

Lower back plate: Material S.M. Steel Tensile strength 26-30 tons/sq in Thickness 13/16"

Pitch of stays at wide water space 1 1/4" x 9 3/8" Are stays fitted with nuts or riveted over Nuts

Main stays: Material S.M. Steel Tensile strength 28-32 tons/sq in

Diameter At body of stay 3" No. of threads per inch 6" Over threads

Screw stays: Material S.M. Steel Tensile strength 26-30 tons/sq in

Diameter At turned off part 1 5/8" No. of threads per inch 9 Over threads

If not, state whether, and when, one will be sent?

Is a Report also sent on the Hull of the Ship?

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Are the stays drilled at the outer ends. *No* Margin stays: Diameter { At turned off part, *1 1/8"* or *2 1/8"* Over threads. *1 1/8"*, *2 1/8"*

No. of threads per inch. *9*

Tubes: Material *Hot rolled welded steel* External diameter { Plain *2 1/2" (SWIRLY FLO)* Stay *2 1/2"* Thickness { *3/16"*, *1/4"*, *3/8"*, *1/2"* No. of threads per inch. *9*

Pitch of tubes. *3 1/2" x 3 3/8"* Manhole compensation: Size of opening in shell plate. *16" x 12"* Section of compensating ring. *2'-8" x 2'-5" x 1 1/4"* No. of rivets and diameter of rivet holes. *28 @ 1 1/2"*

Outer row rivet pitch at ends. *10 1/4"* Depth of flange if manhole flanged. *~* Steam Dome: Material. *S.M. Steel*

Tensile strength. *26-30 tons/sq. in.* Thickness of shell. *5/8"* Description of longitudinal joint. *S.R. LAP*

Diameter of rivet holes. *1"* Pitch of rivets. *2 3/8"* Percentage of strength of joint { Plate *57.9* Rivets *46.8*

Internal diameter. *2'-7 3/4"* Thickness of crown. *5/8"* No. and diameter of stays. *~* Inner radius of crown. *2'-6"*

How connected to shell. *Riveted* Size of doubling plate under dome. *~* Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell. *1 1/4" 8.2"*

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 and 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. *~*

Pressure to which the safety valves are adjusted. *~* Hydraulic test pressure: tubes. *~* forgings and castings. *~* and after assembly in place. *~* Are drain cocks or 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. *Yes*

The foregoing is a correct description, for WILLIAM GRAY & COMPANY LIMITED

*P.H. & Co. Ltd.* Manufacturer:

Dates of Survey while building { During progress of work in shops - - 1958. March 12, 18, 19, 27. April 1, 14, 17, 20. May 22, 28, 30. June 2, 3, 4, 5, 6, 16, 19, 24, 27. Are the approved plans of boiler and superheater forwarded to the Registrar? *No* 11/4/58. (If not state date of approval.)

During erection on board vessel - - - Total No. of visits. *31*

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 two boilers have been built under Special Survey in Accordance with the Rules, the Approved Plans, and the Secretary's letter. The material has been tested according to the Rules and the workmanship is good. These two boilers are eligible in my opinion to be fitted in a vessel classed with the Society.*

Note:- The welded joints A & B have been radiographically examined for their full length, and the welded joints C, D, & H, for 30% of their length. From each of the joints A & B, and from a joint representative of the combustion chamber joints, tensile, bend, and three impact tests have been made with satisfactory results in compliance with the Rules of the Registro Italiano Navale.

Survey Fee +30% £ 126 : 15 : 0 When applied for, 9-7-1958

Travelling Expenses (if any) £ : : When received 19-

FEE To LLOYDS 90% = £114-1-6.

" " R.I.N.A 10% = £12-13-6.

*R. Bolton.*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRIDAY - 3 JUL 1959

Assigned *See Rpt. 1.*



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