

REPORT ON BOILERS.

No. 56110.

26 JUN 1948

Received at London Office

Date of writing Report 25 June 1948 When handed in at Local Office 25 June 1948 Port of CARDIFF

No. in Survey held at CARDIFF Date, First Survey 13. 4. 48 Last Survey 21. 6. 1948

23185 on the S.S. "EMPIRE CONSENT" (Number of Visits 4) Tons { Gross 1942 Net 964 }

Master NYC. VAN DER GIESSEN Built at KRIMPEN a/b YSEL By whom built ZONEN'S SCHIPS Yard No. 1944 When built 1944

Engines made at AMSTERDAM By whom made VERCHURE & Co's SCHIPSW & MCFBK Engine No. 1944 When made 1944

Boilers made at AMSTERDAM By whom made VERCHURE & Co's SCHIPSW & MCFBK Boiler No. 1944 When made 1944

Nominal Horse Power 276 Owners MINISTRY OF TRANSPORT Port belonging to LONDON

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel ✓ (Letter for Record S)

Total Heating Surface of Boilers 490M² { 170×2 + 75×2 (SUPHT) } Is forced draught fitted YES Coal or Oil fired COAL

No. and Description of Boilers 2-CYLINDRICAL MULTITUBULAR "CADUS" TYPE Working Pressure 216 lbs/□

Tested by hydraulic pressure to 26.5 K/□ Date of test 6. 4. 44 No. of Certificate ✓ Can each boiler be worked separately YES

Area of Firegrate in each Boiler 4.3 M² No. and Description of safety valves to each boiler 2- SPRING LOADED HIGH LIFT.

Area of each set of valves per boiler { per Rule 9200 mm. as fitted 8788 mm. (+506.6 mm SUPHT) } Pressure to which they are adjusted 216 lbs/□ Are they fitted with easing gear YES

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler NONE FITTED

Smallest distance between boilers 177 mm. and bunkers 177 mm. Is oil fuel carried in the double bottom under boilers NO

Smallest distance between shell of boiler and tank top plating 508 mm. Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 3900 mm. Length 2300 mm. Shell plates: Material S.M. STEEL Tensile strength ✓

Thickness 31 mm. Are the shell plates welded or flanged NO Description of riveting: circ. seams { end DOUBLE RIVETED inter. ✓ }

Long. seams TREBLE RIVETED Diameter of rivet holes in { circ. seams 35 mm. long. seams 35 mm. } Pitch of rivets { 110 mm. 210 mm. }

Percentage of strength of circ. end seams { plate 69% rivets ✓ } Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓ }

Percentage of strength of longitudinal joint { plate 83.8% rivets ✓ combined ✓ } Working pressure of shell by Rules ✓

Thickness of butt straps { outer 31 mm. inner 31 mm. } No. and Description of Furnaces in each Boiler 3-CORRUGATED TYPE { FURNACE E.W.T.O. BACK TUBE PLATE }

Material STEEL Tensile strength ✓ Smallest outside diameter 930 mm.

Length of plain part { top ✓ bottom ✓ } Thickness of plates { crown 15 mm. bottom 15 mm. } Description of longitudinal joint FIREWELDED

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules ✓

End plates in steam space: Material S.M. STEEL Tensile strength ✓ Thickness 27 mm. Pitch of stays 405 × 460 mm.

How are stays secured SCREWED THROUGH PLATES NUTS & WASHERS OUTSIDE Working pressure by Rules ✓

Tube plates: Material { front S.M. STEEL back S.M. STEEL } Tensile strength { ✓ } Thickness { 27 mm. 27 mm. }

Mean pitch of stay tubes in nests 208 mm × 208 mm. Pitch across wide water spaces 360 mm. Working pressure { front ✓ back ✓ }

Girders to combustion chamber tops: Material ✓ Tensile strength ✓ Depth and thickness of girder ✓

at centre ✓ Length as per Rule ✓ Distance apart ✓ No. and pitch of stays ✓

on each ✓ Working pressure by Rules ✓ Combustion chamber plates: Material ✓

Tensile strength ✓ Thickness: Sides ✓ Back ✓ Top ✓ Bottom ✓

Pitch of stays to ditto: Sides ✓ Back ✓ Top ✓ Are stays fitted with nuts or riveted over ✓

Working pressure by Rules ✓ Front plate at bottom: Material S.M. STEEL Tensile strength ✓

Thickness 27 mm. Lower back plate: Material S.M. STEEL Tensile strength ✓ Thickness 27 mm.

Pitch of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓

Working Pressure ✓ Main stays: Material STEEL Tensile strength ✓

Diameter { At body of stay 4@75 mm / 6@85 mm / 2@75 mm or ✓ } No. of threads per inch 6 Area supported by each stay ✓

Over threads ✓ Working pressure by Rules ✓ Screw stays: Material ✓ Tensile strength ✓

Diameter { At turned off part, ✓ or ✓ } No. of threads per inch ✓ Area supported by each stay ✓

Over threads ✓

Working pressure by Rules ✓ Are the stays drilled at the outer ends ✓ Margin stays: Diameter { At turned off part, ✓
or
Over threads ✓
No. of threads per inch 770225 Area supported by each stay ✓ Working pressure by Rules ✓
Tubes: Material STEEL External diameter { Plain 76 mm ✓
Stay 76 mm ✓ Thickness { 4 mm ✓
8 mm ✓ No. of threads per inch 9
Pitch of tubes 104 mm Working pressure by Rules ✓ 10 mm ✓ Manhole compensation: Size of opening in
shell plate 320 mm x 420 mm Section of compensating ring 2 @ 190 mm x 31 mm ✓ No. of rivets and diameter of rivet holes 24 @ 35 mm DIAM.
Outer row rivet pitch at ends 152 mm Depth of flange if manhole flanged NOT FLANGED Steam Dome: Material STEEL
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 770 mm Working pressure by Rules ✓ Thickness of crown 18 mm No. and diameter of
stays ✓ Inner radius of crown 640 mm Working pressure by Rules ✓
How connected to shell DOUBLE RIVETED Size of doubling plate under dome NONE Diameter of rivet holes and pitch
of rivets in outer row in dome connection to shell 29 mm @ 108 mm

Type of Superheater RETURN TUBE ✓ Manufacturers of { Tubes ✓
Steel castings ✓
Number of elements 46 PER BOILER Material of tubes STEEL Internal diameter and thickness of tubes 17 mm @ 2.5 mm
Material of headers STEEL CASTING Tensile strength ✓ Thickness 24 mm Can the superheater be shut off and
the boiler be worked separately NO Is a safety valve fitted to ~~any part of the superheater which can be shut off from the boiler~~ YES
Area of each safety valve 506.6 sq mm Are the safety valves fitted with easing gear YES Working pressure as per
Rules Pressure to which the safety valves are adjusted 216 lbs/sq in Hydraulic test pressure:
tubes 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 23 inclusive for boilers been complied with To G.L. REQUIREMENTS.

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of work in shops - ✓
while building { During erection on board vessel - - - }
Are the approved plans of boiler and superheater forwarded herewith YES
(If not state date of approval.)
Total No. of visits ✓

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

ADDITIONAL PARTICULARS:-

WATER DRUMS - No IN EACH BOILER: 6. INSIDE DIAM: 460 mm. THICKNESS OF PLATES: 20 mm. DRUM SHELL PLATES: WELDED
DIAM OF TUBE HOLES IN DRUM: 51 mm. PITCH OF TUBES: 102 mm.

DRUM ENDS - THICKNESS OF PLATE: 20 mm. RADIUS OR HOW STAYED: FLANGED MANHOLE. SIZE OF MANHOLE: 200 mm x 300 mm
TUBES - DIAM 50 mm. THICKNESS 5 mm. NUMBER 198.

FURNACE READINGS:-	PORT BOILER			STARB. BOILER.		
MAXIMUM DEFLECTION:-	PORT FURNACE.	CENTRE FURNACE.	STARB FURNACE	PORT FURNACE.	CENTRE FURNACE.	STARB FURNACE.
	5/8"	3/8"	3/8"	1/4"	1/4"	1/4"

THESE BOILERS HAVE BEEN BUILT UNDER SURVEY AND TO CLASS OF GERMANISCHER LLOYD. THE BOILERS HAVE
BEEN SPECIALLY EXAMINED AND WORKMANSHIP AND MATERIAL APPEAR TO BE GOOD AND ARRANGEMENTS AND
FITTINGS IN ACCORDANCE WITH RULE REQUIREMENTS. THE BOILERS ARE ELIGIBLE IN MY OPINION TO BE CLASSED
WITH RECORD OF B/S 6/48

Survey Fee £ Entd on Rept. 9 : When applied for, 192
Travelling Expenses (if any) £ : : When received, 192

Thomas Donaldson.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 23 JUL 1948

Assigned

See minute on Rept. 9.



© 2021

Lloyd's Register
Foundation