

REPORT ON BOILERS.

No. 10223

Received at London Office 18 APR 1929

Survey Report 6.4.1929 When handed in at Local Office 192 Port of Rotterdam

Survey held at Rotterdam Date, First Survey 29.8.28 Last Survey 22.2.1929

on the Heel screw steamer "JOSEPHINE CHARLOTTE" (Number of Visits 19) Tons {Gross 3421 Net 2055}

Built at Rotterdam By whom built Pott Droogd My Yard No. 152 When built 1929

Made at Rotterdam By whom made Pott Droogd My Engine No. 172 When made 1929

Made at Rotterdam By whom made Pott Droogd My Boiler No. 478-79-80 When made 1929

Horse Power 396 Owners Lloyds Royal Belge Port belonging to Antwerp

REMAIN

TITUBULAR BOILERS—MAIN, ~~AUXILIARY~~, OR ~~BUNKER~~.

Manufacturers of Steel Withvoets Bergbau und Eisenhutte Gesellschaft (Letter for Record 5)

Heating Surface of Boilers 6171 sq ft Is forced draught fitted Yes Coal or Oil fired Coal

Description of Boilers 3 single ended Multitubular Working Pressure 180 lbs

by hydraulic pressure to 320 lbs Date of test 22.2.29 No. of Certificate 908 Can each boiler be worked separately Yes

of Firegrate in each Boiler 56.40 No. and Description of safety valves to each boiler 2 spring loaded

of each set of valves per boiler {per boiler 2 Pressure to which they are adjusted 180 lbs Are they fitted with easing gear Yes

of donkey boilers, state whether steam from main boilers can enter the donkey boiler No donkey boiler

Distance between boilers or uptakes and bunkers or woodwork Over 50" Is oil fuel carried in the double bottom under boilers No

Distance between shell of boiler and tank top plating 36" Is the bottom of the boiler insulated Yes

Internal dia. of boilers 14' 0" Length 11' 0" Shell plates: Material J.M. Heel Tensile strength 28-32 tons

Are the shell plates welded or flanged No Description of riveting: circ. seams {end lap 2 x riv inter. 3 3/4"} Pitch of rivets {8"} Diameter of rivet holes in {circ. seams 1 3/16" long. seams 1 3/16" Percentage of strength of circ. intermediate seam {plate 68.3% rivets 49.9% Working pressure of shell by Rules 180 lbs

Percentage of strength of longitudinal joint {plate 85.1% rivets 104% combined 91%

Thickness of butt straps {outer 7/8" inner 1" No. and Description of Furnaces in each Boiler 3 Doughton patent 3.c.f.

Material J.M. Heel Tensile strength 26-30 tons Smallest outside diameter 3' 6 1/8"

Thickness of plates {crown 9/16" bottom 1 1/16" Description of longitudinal joint Welded

Working pressure of furnace by Rules 195 lbs

Plates in steam space: Material J.M. Heel Tensile strength 26-30 tons Thickness 1 1/8" Pitch of stays 16 1/2 x 17"

Working pressure by Rules 187 lbs

Material {front J.M. Heel Tensile strength 26-30 tons Thickness 7/8" back J.M. Heel Tensile strength 26-30 tons Thickness 7/8" Working pressure {front 233 lbs back -

Pitch of stay tubes in nests 8 3/4 x 15 1/8" Pitch across wide water spaces 16 1/16"

Plates to combustion chamber tops: Material J.M. Heel Tensile strength 28-32 tons Depth and thickness of girder 8 x 2 x 3/4" Length as per Rule 2' 5 3/8" Distance apart 10" No. and pitch of stays 2 in 10" Working pressure by Rules 232 lbs Combustion chamber plates: Material J.M. Heel Tensile strength 26-30 tons Thickness: Sides 1 1/16" Back 3/4" Top 1 3/16" Bottom 7/8" Are stays fitted with nuts or riveted over Riveted over Working pressure by Rules 194 lbs Front plate at bottom: Material J.M. Heel Tensile strength 26-30 tons Thickness 7/8" Lower back plate: Material J.M. Heel Tensile strength 26-30 tons Thickness 1 1/16" Are stays fitted with nuts or riveted over Fitted with nuts

Working Pressure 249 lbs Main stays: Material J.M. Heel Tensile strength 28-32 tons

At body of stay, 2 7/8" No. of threads per inch 9 Area supported by each stay 280.5 sq"

Over threads 2 3/4" Screw stays: Material J.M. Heel Tensile strength 26-30 tons

Working pressure by Rules 196 lbs At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 80 sq"

Over threads 1 1/8" 69.5 sq"

Working pressure by Rules 190 lb. Are the stays drilled at the outer ends Margin stays: Diameter ^{At turned off part.} 1 1/8"
 No. of threads per inch 9 Area supported by each stay 86.5 sq" Working pressure by Rules 245 lb.
 Tubes: Material Iron External diameter ^{Plain} 3 1/4" Thickness ^{CR 9 LSG} 3/8" = 5/16" No. of threads per inch 9
 Pitch of tubes 4 3/8" Working pressure by Rules 100 lb. Manhole compensation: Size of opening in
 shell plate 1 9/16" x 1 0 1/2" Section of compensating ring 2 2 3/4" x 2 8 3/4" No. of rivets and diameter of rivet holes 42 @ 1 1/16"
 Outer row rivet pitch at ends 8" Depth of flange if manhole flanged 3" Steam Dome: Material -
 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 - Working pressure by Rules - Thickness of crown - No. and diameter of
 stays - Inner radius of crown - Working pressure by Rules -
 How connected to shell - Size of doubling plate under dome - Diameter of rivet holes and pitch
 of rivets in outer row in dome connection to shell -

Type of Superheater Schmidt's patent Manufacturers of ^{Tubes} Nordische Stahlwerke
 Number of elements - Material of tubes S. W. Steel Internal diameter and thickness of tubes -
 Material of headers C. S. Tensile strength - Thickness - Can the superheater be shut off and
 the boiler be worked separately Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes
 Area of each safety valve 4.90" Are the safety valves fitted with easing gear Yes Working pressure as per
 Rules - Pressure to which the safety valves are adjusted 104 lb. Hydraulic test pressure
 tubes 45 kg., castings 45 kg. and after assembly in place 600 lb. Are drain cocks or valves fitted
 to free the superheater from water where necessary Yes
 Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

See F.E. report on "Astrida"
 Rot. 18823. for particulars of Superheater.

The foregoing is a correct description,
 RUTTENFRANSCHE DRAAGBOEK MAATSCHAPPIJ
 DIRECTEUR
 Manufacturer

Dates of Survey ^{During progress of work in shops} 1918 2/18 5/19 10/14 11/5 10/10 11/10 11/10 11/11 Are the approved plans of boiler and superheater forwarded herewith Forwarded
 while building ^{During erection on board vessel} 18/12 1919 1/11 2/11 2/11 5/11 11/11 12/11 (If not state date of approval.) to London office for SS. ASTRIDA
 Total No. of visits 19

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) The boilers have been made under special survey in accordance with the Society's Rules, Secretary's letters and approved plan, material tested as required and workmanship good

Survey Fee ... £ On Machinery When applied for, 192
 Travelling Expenses (if any) £ report When received, 192

J. J. Oshwa
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 26 APR 1929
 Assigned See S.P. rpt. attached



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