5a.

REPORT ON BOILERS. No. 2189.

13th Nov. 43. When handed in at Local Office 16th Nov. 43. Received at London Office
Port of Malmö.

Malmö Date First Survey 20th Jan., 1942. Last Survey 30th April, 1943.
Single Screw Motor Tanker "JULIAN" (Number of Visits 23.)
Tons {Gross / Net}

Built at Malmö. By whom built Kockums M.V.A.-B. Yard No. 224. When built 1943.
Malmö By whom made Kockums Mek. V.A.-B. Engine No. 251. When made 1943.
Malmö By whom made Kockums Mek. V.A.-B. Boiler No. 982/83. When made 1943.
1361 Owners Hilman Rederierna Port belonging to Bergen.

TUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Material of shell Messrs. Vitkovice Mining Steel & Ironworks Corp., Vitkovice. (Letter for Record S)
Heating surface of Boilers 2 × 122 = 244 m². Is forced draught fitted Yes. Coal or Oil fired Oil.
Description of Boilers Two S.E.
Hydraulic pressure to 306 lbs/□" Date of test 17.8.42 No. of Certificate 118 & 119 Working Pressure 171 lbs/□" Can each boiler be worked separately Yes.
Integrate in each Boiler ✓ No. and Description of safety valves to each boiler 2. Direct spring loaded.
Each set of valves per boiler {per Rule 5900 mm². 5-710 / as fitted 7697 "} Pressure to which they are adjusted not adjusted. Are they fitted with easing gear Yes.
If donkey boilers, state whether steam from main boilers can enter the donkey boiler ✓
Distance between boilers or uptakes and bunkers or woodwork The boilers placed on a platform at after end of eng. room. Is oil fuel carried in the double bottom under boilers ✓
Distance between shell of boiler and tank top plating ✓ Is the bottom of the boiler insulated Yes.
Internal dia. of boilers 3400 mm. Length extr. 3400 mm. Shell plates: Material Steel. Tensile strength 45.2-48.9 kg. mm². 22.5 mm. Are the shell plates welded or flanged Yes. Description of riveting: circ. seams D.R. D.B.S. {end D.R. / inter. ✓}
Diameter of rivet holes in {circ. seams 26 mm. / long seams 23.5 mm.} Pitch of rivets {83 mm. / 171.5 mm.}
Percentage of strength of circ. end seams {plate 68.6% / rivets 45.3%}
Percentage of strength of circ. intermediate seams {plate ✓ / rivets ✓}
Percentage of strength of longitudinal joint {plate 86.3% / rivets 83.8% / combined 89.3%}
Working pressure of shell by Rules 12.1 kg. cm².
Inner butt straps 17 mm. Outer butt straps 20 mm. No. and Description of Furnaces in each Boiler Two corrugated.
Steel. Tensile strength 42.8-43.1 kg. mm². Smallest outside diameter 1076 mm.
Combustion part {Top ✓ / Bottom ✓} Thickness of plates 13 mm. Description of longitudinal joint Welded.
Ends of stiffening rings on furnace or combustion bottom ✓ Working pressure of furnace by Rules 12.2 kg. cm².
Combustion space: Material Steel. Tensile strength 41.8-46.2 kg. mm². Thickness 22 mm. Pitch of stays 350 × 406 mm.
Stays secured Dbl. nuts and washers. Working pressure by Rules 13.0 kg. cm².
Material {front Steel. / back Steel.} Tensile strength {42.6-46.2 kg. mm². / 43.7 "} Thickness {22 mm. / 21 mm.}
Plain stay tubes in nests 223 mm. Pitch across wide water spaces 330 mm. Working pressure {front 14.5 kg. cm². / back 14.3 "}
Combustion chamber tops: Material Steel. Tensile strength 48.9 kg. mm². Depth and thickness of girders (180 × 20) mm.
Length as per Rule 735 mm. Distance apart 210 mm. No. and pitch of stays 228 mm.
Working pressure by Rules 15.0 kg. cm². Combustion chamber plates: Material Steel.
46.3-48.9 kg. mm². Thickness Sides 17.5 mm. Back 18 mm. Top 17.5 mm. Bottom 17.5 mm.
To dimensions: Side 228×176-210 mm. Back 216 × 203 mm. Top 228 × 210 mm. Are stays fitted with nuts or riveted over Both.
Are by Rules 12.0 kg. cm². Front plate at bottom: Material Steel. Tensile strength 42.6-46.2 kg. mm².
22 mm. Lower back plate: Material Steel. Tensile strength 41.8-42.3 kg. mm². Thickness 22 mm.
At wide water space 330 × 216 mm. Are stays fitted with nuts or riveted over Nuts.
Area 17.8 kg. cm². Main stays: Material Steel. Tensile strength 44-50 kg. mm².
Diameter 2 3/8" & 3". No. of threads per inch 6 Area supported by each stay 142100 mm².
Working pressure by Rules 12.6 kg. cm². Screw stays: Material Steel. Tensile strength 41-47 kg. mm².
Diameter 1 1/2", 1 5/8". No. of threads per inch 9 Area supported by each stay 43848 mm².

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Working pressure by Rules 12 kg.cm⁻² Are the stays drilled at the outer ends? no. Margin stays: Diameter { As turned off part / Over threads } 1½", 1⅞" & 1 3/4"

No. of threads per inch 9 Area supported by each stay 57560 mm² Working pressure by Rules 12.0 kg.cm⁻²

Tubes: Material Steel External diameter { From 2½" / Stay 2½" } Thickness { 3.25 mm / 8 mm } No. of threads per inch 9

Pitch of tubes 89 × 92 mm Working pressure by Rules 12.5 kg.cm⁻² Manhole compensation: Size of opening in shell plate 400 × 500 mm Section of compensating ring 14040 mm² No. of rivets and diameter of rivet holes 44-26 mm

Outer row rivet pitch at ends 190 mm Depth of flange if manhole flanged 82 mm 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 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 from 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 Working pressure by Rules

Pressure to which the safety valves are adjusted Hydraulic test pressure tubes forgings and castings and after assembly in place Are drain cock 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

The foregoing is a correct description.

Kockums mek. V. A.-B.
sgd/ G. Lindegrist
Manager

Dates of Survey { During progress of work in shops: 20/1.29/1.13/2.20/2.23/2.3/3.9/3.19/3.23/3.24.7/4.13/4. 15/4.20/4.17/8.1942. } Are the approved plans of boiler and superheater forwarded herewith? Approved: 24.1.

Dates of Survey while building { During erection on board vessel: 21/12.28/12.31/12.1942.4/1.12/1.20/2.24/3.30/4.1943. } Total No. of visits 23.

Is this Boiler a duplicate of a previous case Yes. If so, state Vessel's name and Report No. M/T "BEAUREGARD", Rpt. no. 2150

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

These boilers have been built under special survey in accordance with the Rules and approved plans.

The material used has been tested as per Rule and the workmanship is good.

To complete boiler survey:-

The safety valves of the boilers to be adjusted under steam.

It cannot be stated when the survey will be completed.

(90% of total fee has been applied for.)

Survey Fee £ 199:25 When applied for. 16th Nov., 1943.

Travelling Expenses (if any) £ When received. 19

Engineer Surveyor to Lloyd's Register of Shipping

FRI. 14 JAN 1944

see minute on L.R. Rpt.