

REPORT ON BOILERS.

No. 13038

Received at London Office 11 MAR 1947

Date of writing Report 10/2/47 When handed in at Local Office 12/2/47 Port of Trieste
 No. in Reg. Book. Survey held at Trieste Date, First Survey 17.9.1941 Last Survey 25.1.47
 87908 on the M.T. LIBURNIA yard No. 1253 (Number of Visits 57) Tons Gross 8194 Net 4868
 Master — Built at Trieste By whom built C.B.D. Cant. San Marco Yard No. 1253 When built 1947
 Engines made at Turin By whom made FIAT SGM Engine No. 2807 When made —
 Boilers made at Trieste By whom made CADA F.M. San Andrea Boiler No. 1270-71 When made 1947
 Nominal Horse Power 1328 Owners "SIDARMA" Societa Italiana d'Armamento Port belonging to Roma

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Witkowitz B & EG (Letter for Record 5)
 Total Heating Surface of Boilers $164 m^2 = 1764 ft^2$ Is forced draught fitted yes Coal or Oil fired Oil & W.G.
 No. and Description of Boilers Cyl. Marine adapted for waste Gas also Working Pressure 180 lbs/sq. in
 Tested by hydraulic pressure to 319 lbs/sq. in Date of test 30/4/47 No. of Certificate — Can each boiler be worked separately yes
 Area of Firegrate in each Boiler oil burn. No. and Description of safety valves to each boiler 2 impr. direct spring loaded
 Area of each set of valves per boiler per Rule 7263 m^2 as fitted 10306 m^2 Pressure to which they are adjusted 18.5 lbs Are they fitted with easing gear yes
 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 ^{Deck} top plating 600 mm Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 3700 mm Length 3340 mm Shell plates: Material SMS Tensile strength 44-55 kg/cm²
 Thickness 26 mm Are the shell plates welded or flanged no Description of riveting: circ. seams end DBL inter —
 long. seams Trebl. DBS Diameter of rivet holes in circ. seams 31 mm long. seams 28 mm Pitch of rivets 104.3
 Percentage of strength of circ. end seams plate 70 rivets 46 Percentage of strength of circ. intermediate seam plate — rivets —
 Percentage of strength of longitudinal joint plate 84.7 rivets 99 combined 93.8 Working pressure of shell by Rules 12.8 kg/cm² = 182 lbs/sq. in
 Thickness of butt straps outer 20 mm inner 23 mm No. and Description of Furnaces in each Boiler 3 Marison
 Material SMS Tensile strength 41-47 kg/cm² Smallest outside diameter 1028 mm
 Length of plain part top — bottom — Thickness of plates crown 14 mm bottom — Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom none Working pressure of furnace by Rules 13.9 kg/cm² = 198 lbs/sq. in
 End plates in steam space: Material SMS Tensile strength 41-47 kg/cm² Thickness 27 Pitch of stays 450 x 375 mm
 How are stays secured nuts & washers Working pressure by Rules 13.8 kg/cm² = 196 lbs/sq. in
 Tube plates: Material front SMS back SMS Tensile strength 41-47 kg/cm² Thickness 25 mm
 Lean pitch of stay tubes in nests 187 mm Pitch across wide water spaces 346 x 184 358 x 197 Working pressure front 14.4 kg = 204 lbs back 15.25 kg = 216 lbs
 Girders to combustion chamber tops: Material SMS Tensile strength 44-55 kg/cm² Depth and thickness of girder
 front centre 250 mm x 16 mm Length as per Rule 800 mm Distance apart 210 mm No. and pitch of stays
 d in each 3 Working pressure by Rules 16 kg/cm² = 227 lbs Combustion chamber plates: Material SMS
 Tensile strength 41-47 kg/cm² Thickness: Sides 17 mm Back 19 mm Top 17 mm Bottom 20 mm
 Pitch of stays to ditto: Sides 180 x 200 mm Back 197 x 197 mm Top 180 x 210 mm Are stays fitted with nuts or riveted over riveted Nut at margin
 Working pressure by Rules 13, 14.2, 18.5 kg/cm² Front plate at bottom: Material SMS Tensile strength 41-47 kg/cm²
 Thickness 25 mm Lower back plate: Material SMS Tensile strength 41-47 kg/cm² Thickness 23 mm
 Pitch of stays at wide water space 450 mm = main stay Are stays fitted with nuts or riveted over nuts
 Working pressure 16.7 kg/cm² = 237 lbs Main stays: Material SMS Tensile strength 44-55 kg/cm²
 diameter At body of stay 7.6 mm No. of threads per inch 6 Area supported by each stay 450 x 375 mm
 Over threads 7.6 mm Working pressure by Rules 19 kg/cm² = 270 lbs Screw stays: Material SMS Tensile strength 41-47 kg/cm²
 diameter At turned off part 38.7 mm = 1 1/2 No. of threads per inch 9 Area supported by each stay 196.4 x 196.4 mm

Working pressure by Rules 14.7-209 Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part... 44.4 mm or Over threads... 44.4 mm
No. of threads per inch 9 ✓ Area supported by each stay 196 x 273 mm Working pressure by Rules 15.2 kg/cm² = 215 lbs/sq. in.
Tubes: Material steel ✓ External diameter { Plain 63 1/2 = 2 1/2" Thickness 7.75 & 9.75 mm No. of threads per inch 9 ✓
Pitch of tubes 190 x 184 x 202 x 184 mm Working pressure by Rules 18.8 & 19.9 kg/cm² Manhole compensation: Size of opening in
shell plate 516 x 416 mm Section of compensating ring 802 x 700 mm No. of rivets and diameter of rivet holes 40 @ 1 1/16" ✓
Outer row rivet pitch at ends 183 mm Depth of flange if manhole flanged 90 mm ✓ Steam Dome: Material _____
Tensile strength 196 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 Name _____ 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 _____ Working pressure as per
Rules _____ 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,
Fabbrica Macchine S. Andrea Manufacturer.

Dates of Survey while building { During progress of work in shops - - - from 17/4/41 to 6/2/43 - 49 visits Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
During erection on board vessel - - - 1946 Aug. 24, Sept. 6, Oct. 2, Nov. 21, 22 Total No. of visits 49 + 8 = 57
1947 Jan. 3, 13, 25.

Is this Boiler a duplicate of a previous case _____ 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 at Trieste by Messrs C. A. D. A. Fabbrica Macchine San Andrea under special survey and with tested material; they are corresponding to the approved plan and the workmanship is good. The Boilers have been hydraulically tested in presence of the undersigned to 22.50 kg/cm² and found good but owing to the circumstances the Boilers have been stamped with the RI mark only with the following identification numbers 8004 & 8005. To note in the R.B.-2 DB -

Survey Fee ... £ 14.250-
Travelling Expenses (if any) £ ✓

When applied for 24/2/47
When received 19

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

For minute see F.C. Kelly Rpt



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