

REPORT ON WATER TUBE BOILERS.

No. 14014

14 AUG 1954

Received at London Office

Date of writing Report 20th July 1954 When handed in at Local Office 10.8.1954 Port of TRIESTE

No. in Survey held at Trieste - Montefalcone Date, First Survey Please see Last Survey Rpt. 4a 19
 Reg. Bk. H0694 on the S.T. "MARE NOSTRUM" Number of Visits ✓ Gross 20451 Tons Net 12458
 Master ✓ Built at Montefalcone By whom built Cant. Rinn. depp' Adriat. When built 1954
 Engines made at Lynn Mass. U.S.A. By whom made General Electric Co. When made 1954
 Boilers made at Cartered N.Y. U.S.A. By whom made F.W. Co. & Cant. Rinn. depp' Adriat. When made 1954
 Shaft Horse Power 10,000 Owners Fratelli d'Amico - Frumatori Port belonging to Palermo

WATER TUBE BOILERS—MAIN, AUXILIARY, OR DONKEY.—Manufacturers of Steel Luckens - Claymont - Dalmine
 (Letter for Record ✓) Date of Approval of plan 21.4.52 New York Number and Description or Type of Boilers 2 Water Tube F. Wheeler ✓ Working Pressure 650 lbs. Tested by Hydraulic Pressure to 1025 lbs. Date of Test 17.12.53
 No. of Certificate 108 & 409 Can each boiler be worked separately ✓ Total Heating Surface of Boilers {Boiler - 6710 } sq. ft. each
 Is forced draught fitted ✓ Area of fire grate (coal) in each Boiler ✓ Total grate area of boilers in vessel including Main and Auxiliary ✓ No. and type of burners (oil) in each boiler 3 (odd) No. and description of safety valves on each boiler 2 full bore on main drum Area of each valve 3.1416 sq. ins. Pressure to which they are adjusted 675 & 670 lbs. ✓
 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 ample Height of Boiler 24' 11" Width and Length 18' x 15' 4"
Steam Drums:—Number in each boiler one Inside diameter 48" Material of plates E.F.S. Thickness 1 3/16" & 3 7/16" ✓
 Range of Tensile Strength 70,000 p.s.i. min. Are drum shell plates welded or flanged welded ✓ Description of riveting:—
 Cir. seams ✓ long. seams ✓ Diameter of rivet holes in long. seams ✓ Pitch of Rivets ✓
 Lap of plate or width of butt straps ✓ Thickness of straps ✓ Percentage strength of long. joint:—Plate ✓ Rivet ✓
 Diameter of tube holes in drum {1.278" } Pitch of tube holes 1.875" x 4.5" Percentage strength of shell in way of tubes 31.3 & 54.7
 If Drum has a flat side state method of staying ✓ Depth and thickness of girders at centre (if fitted) ✓ Distance apart ✓ Number and pitch of stays in each ✓ Working pressure by rules as app. **Steam Drum Heads or Ends:**—Material E.F.S. Thickness {plain 1 3/16" } Radius or how stayed ellipsoidal
 Size of Manhole or Handhole 16" x 12" **Water Drums:**—Number in each boiler one Inside Diameter 30 1/2" ✓
 Material of plates E.F.S. Thickness 2 5/16" Range of tensile strength 70,000 p.s.i. min. Are drum shell plates welded or flanged welded ✓ Description of riveting:—Cir. seams ✓ long. seams ✓ Diameter of Rivet Holes in long. seams ✓ Pitch of rivets ✓ Lap of plates or width of butt straps ✓ Thickness of straps ✓
 Percentage strength of long. joint:—Plate ✓ Rivet ✓ Diameter of tube holes in drum {1.278" } Pitch of tube holes 1.875" x 4.5"
 Percentage strength of drum shell in way of tubes 31.3 & 54.7 **Water Drum Heads or Ends:**—Material E.F.S. Thickness {plain 1 3/16" }
 Radius or how stayed ellipsoidal Size of manhole or handhole 16" x 12" **Headers or Sections:**—Number 3
 Material E.F.S. Thickness .906" Tested by Hydraulic Pressure to 1025 lbs. Material of Stays ✓
 Area at smallest part ✓ Area supported by each stay ✓ Working Pressure by Rules as app. **Tubes:**—Diameter 3" - 2" & 1 1/4"
 Thickness .315" & .203" / .148" / .109" Number 12/210/1254 **Steam Dome or Collector:**—Description of Joint to Shell ✓
 Percentage strength of Joint ✓ Diameter ✓ Thickness of shell plates ✓ Material ✓
 Description of longitudinal joint ✓ Diameter of Rivet Holes ✓ Pitch of Rivets ✓ Working Pressure of shell by Rules ✓
Crown or End Plates:—Material ✓ Thickness ✓ How stayed ✓

SUPERHEATER. Type F.W. Co. Date of Approval of Plan app. by New York Surv. Tested by Hydraulic Pressure to 1025 lb/sq. in.
 Date of Test 17.12.53 Is a safety valve fitted to each section of the superheater which can be shut off from the Boiler yes
 Diameter of Safety Valve 1 1/2" Pressure to which each is adjusted 624 lb/sq. in. Is easing gear fitted yes
 Is a drain cock or valve fitted at lowest point of superheater yes Number, diameter, and thickness of tubes 190 - 1 1/4" - .118"
 Spare Gear. To Caskets or joints. Mandrel Rule Handhole requir. Handhole plates

The foregoing is a correct description,

CANTIERE NAVALI MONTAFALCONE

Manufacturer.

Dates of Survey { During progress of work in shops - - }
 while { During erection on board vessel - - - }

see Rpt. 4a

Is the approved plan of boiler forwarded herewith app. in N.Y.

Total No. of visits ✓

GENERAL REMARKS

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

The fusion welded steam & water drums of these boilers together with headers, superheaters & economisers were made and tested under the inspection of the Soc. Surveyors in the U.S.A. (Please see N.Y. Rpt. 52820 - E. 9206 / Class. C. 8433-8434-8435 / Ph. C. 6597-6598) and subsequently despatched to Messrs. C.R.D.A. at Trieste where the boilers have been assembled and tested to Rule requirements. The workmanship and materials are good. The boilers were efficiently installed aboard the vessel, a satisfactory accumulation test made under steam, found tight and the safety valves adjusted for a working pressure of 650 lb/sq. in. at the main drums and of 624 lb/sq. in. at the superheater outlets. These boilers are, in my opinion, eligible for classification with records of: 2 WT (Spt.) 650 lb - HS 20980 sq. ft. - FD

Survey Fee ... When applied for, 19
 Travelling Expenses (if any) £ ... When received, 19

Committee's Minute

TUESDAY 14 SEP 1954

Assigned

See Rpt. 4a.

DUAL CLASS
L.R. & F.I.

Engineer Surveyor to Lloyd's Register of Shipping.