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REPORT ON WATER TUBE BOILERS. No. 7314

of writing Report 9.3. 1959 When handed in at Local Office 19 Port of Hamburg
 Received at London Office 23 MAR 1959
 in Survey held at Hamburg Date, First Survey - Last Survey see Rpt.9 19
 Book. on the "TINA ONASSIS" (Number of Visits) Gross 27853
 at Hamburg By whom built Howaldtswerke AG. Yard No. 885 Tons Net 16785
 Lines made at Hamburg By whom made Howaldtswerke AG When built 1953
 Engines made at Hamburg By whom made Howaldtswerke AG Engine No. 350 111 When made 1953
 for Register Book 24 114 sq.ft Owners Palmas Transportation Co. Boiler No. 1686/87 When made 1953
 Port belonging to Monrovia

WATER TUBE BOILERS - MAIN, AUXILIARY OR DONKEY - Manufacturers of Steel. Mannesmann Röhrenwerke AG., Mühlheim
 of Approval of plan 5.3.59
 Boilers 2 - Two Drum Water Tube Boilers Working Pressure 48 kg/cm² Tested by Hydraulic Pressure to (72 kg/cm²) stated by ABS
 of Certificate Can each boiler be worked separately. yes Total Heating Surface of Boilers 2x9537 sq.ft Superheaters 2x2520 sq.ft
 of Economisers none Is forced draught fitted yes Area of Fire Grate (coal) in each Boiler oil fired
 and type of burners (oil) in each boiler 5 burners, Todd VC type
 boiler Two, Single, Spring Loaded, Full Lift Area of each set of valves per boiler { per rule 2670 mm² 2954
 as fitted 3300 mm² Pressure to which they adjusted 680 lbs Are they fitted with easing gear yes
 In case of donkey boilers state whether steam from main boilers can enter donkey boiler none
 Smallest distance between boilers or uptakes and bunkers or woodwork well clear Height of boiler 1277 mm
 Width and length 4128 x 5266 mm Steam Drums: Number in each boiler one Inside diameter 1300 mm
 Thickness of plates 31 and in way of tubes 62 mm Range of tensile strength 52-62 kg/mm² Are drum shell plates welded
 changed long welded If fusion welded, state name of welding firm Rheinische Röhrenwerke AG. Mühlheim Have all the requirements of the Rules
 Class I vessels been complied with see ABS certificate Description of riveting: - Circ. seams welded long seams welded
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of
 long joint: - Plate - Rivet - Diameter of tube holes in drum 44.5x57 mm Pitch of tube holes see boiler plan
 Percentage strength of shell in way of tubes - Steam Drum Heads or Ends: Range of tensile strength 52-62 kg/mm²
 Thickness of plates 50 mm Radius or how stayed 1120 mm Size of manhole or handhole 425 x 320 mm Water Drums: Number
 each boiler one Inside diameter 1022 mm Thickness of plates 49 mm Range of tensile strength 52-62 kg/mm² Are drum shell plates
 led or flanged long welded If fusion welded, state name of welding firm Rheinische Röhrenwerke AG. Have all the requirements of the Rules
 Class I vessels been complied with see ABS certificate Description of riveting: - Circ. seams welded long seams welded
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps -
 Percentage strength of long joint: - Plate - Rivet - Diameter of tube holes in drum 44.5x57 mm Pitch of tube holes see blr. plan
 Percentage strength of drum shell in way of tubes - Water Drum Heads or Ends: Range of tensile strength 52-62 kg/mm²
 Thickness of plates 39 mm Radius or how stayed 880 mm Size of manhole or handhole 425x320 mm
 Headers or Sections: Number 6 Material SM-Steel Thickness 24 + 28 mm Tested by hydraulic pressure to (84 kg/cm², stated by ABS)
 Diameter see back of Rpt. Thickness 3.5-6 mm Number 1204 Steam Dome or Collector: Description of
 to shell none Inside diameter - Thickness of shell plates - Range of tensile
 length - Description of longitudinal joint - If fusion welded, state name of welding
 of rivets - Thickness of straps - Percentage strength of long joint - plate - rivet -
 Down or End Plates: Range of tensile strength - Thickness - Radius or how stayed -
SUPERHEATER Headers: Number in each boiler two square headers Inside diameter 178 x 178 mm
 Thickness 20 mm Material SM Steel Range of tensile strength 45 - 50 kg/mm² Are drum shell plates welded
 changed forged headers If fusion welded, state name of welding firm - Have all the requirements of the Rules
 Class I vessels been complied with - Description of riveting: - Circ. seams - long seams -
 Diameter of rivet holes in long. seams - Pitch of rivets - Thickness of straps - Percentage strength of
 long joint: - Plate - Rivet - Diameter of tube holes in drum - Pitch of tube holes - Percentage strength of
 shell in way of tubes - Drum Heads or Ends: - Thickness - Range of tensile strength -
 Radius or how stayed - Size of manhole or handhole - Number, diameter, and thickness of tubes -
 Tested by hydraulic pressure to 84 kg/cm² Date of test see ABS certificates Is a safety valve fitted to each section of the superheater which
 be shut off from the boiler yes No. and description of safety valves One, Single, Spring Loaded, Full Lift Area of each set
 valves 620 mm² Pressure to which they are adjusted 650 lbs Is easing gear fitted yes
 Spare Gear. Has the spare gear required by the Rules been supplied yes

S.T. 842°F. The foregoing is a correct description,

During progress of work in shops - see Rpt.9
 During erection on board vessel -
 Is the approved plan of boiler forwarded herewith yes
 Total No. of visits -

boiler a duplicate of a previous case. no If so, state vessel's name and report No. -
GENERAL REMARKS (State quality of workmanship, opinions as to class, &c. These Boilers have been built under the Survey
 ABS. The boilers have now been examined, opened up, the main scantlings checked with the Makers' plans and
 materials identified with the ABS certificates, so far as practicable. The boilers have been examined
 for working conditions, accumulation tests carried out and all found in good order

Survey Fee ... £ } see Rpt. 9 } When applied for 19
 Travelling Expenses (if any) £ } No. 7313 } When received 19

FRIDAY 10 APR 1959

Date See Rpt. 1
 Committee's Note

Engineer Surveyor to Lloyd's Register of Shipping.



List of Boiler Tubes

Tubes	No. of	External Dia in mm	Thickness in mm
Downcomers	560	44.5	3.5
Downcomers	215	57	4.-
Supporting	110	44.5	5.-
Risers	125	44.5	3.5
Water Wall	96	44.5	3.5
Water Wall	62	44.5	3.5
Circulation	12	76	6.-
Bottom	12	76	5.-
Circulation	12	76	5.-
Total:	1204		

Rpt. 13.

Date of writing Re

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Built at He

Owners. Pa

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Plans, have they
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Heating. 22

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or triple p
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voltmeters

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overload ^{set} ~~2000~~
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type of cables ()
and laundries.

frameworks

Are all lead she
bulkheads prov

effectively bush

Have refrigerat
Are the motors

