

## REPORT ON WATER TUBE BOILERS.

No. 7314

of writing Report 9.3. 1959 When handed in at Local Office 19 Port of Hamburg  
 in Survey held at Hamburg Date, First Survey - Last Survey see Rpt. 9 19  
 Book. 18 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 Engine No. 350 111 When built 1953  
 ers made at Hamburg By whom made Howaldtswerke AG Boiler No. 1686/87 When made 1953  
 for Register Book 24 114 sq. ft Owners Palmas Transportation Co. Port belonging to Monrovia

ATER TUBE BOILERS - MAIN, ~~AXIOMARY OF DONKEY~~ Manufacturers of Steel Mannesmann Röhrenwerke AG., Mülheim

of Approval of plan 5.3.59  
 boilers 2 - Two Drum Water Tube Boilers Working Pressure 48 kg/cm<sup>2</sup> Tested by Hydraulic Pressure to (72 kg/cm<sup>2</sup>) stated by ABS  
 of Certificate Can each boiler be worked separately yes Total Heating Surface of Boilers 2x9537 sq. ft Superheaters 2x2520 sq. ft  
 f 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 mm<sup>2</sup> 2954  
 as fitted 3300 mm<sup>2</sup> 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 12877 mm  
 lth and length 4128 x 5266 mm Steam Drums: Number in each boiler one Inside diameter 1300 mm  
 kness of plates 31 and in way of tubes 62 mm Range of tensile strength 52-62 kg/mm<sup>2</sup> Are drum shell plates welded  
 langed long welded If fusion welded, state name of welding firm Rheinische Röhrenwerke AG. Mülheim 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  
 meter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of  
 joint: Plate Rivet Diameter of tube holes in drum 44.5 x 57 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/mm<sup>2</sup>  
 kness of plates 50 mm Radius or how stayed 1120 mm Size of manhole or handhole 425 x 320 mm Water Drums: Number  
 ach boiler one Inside diameter 1022 mm Thickness of plates 49 mm Range of tensile strength 52-62 kg/mm<sup>2</sup> Are drum shell plates  
 led or flanged long welded If fusion welded, state name of welding firm Rheinische Röhrenwerke AG. Mülheim 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  
 meter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of  
 percentage strength of long. joint: Plate Rivet Diameter of tube holes in drum 44.5 x 57 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/mm<sup>2</sup>  
 kness of plates 39 mm Radius or how stayed 880 mm Size of manhole or handhole 425 x 320 mm  
 ders or Sections: Number 6 Material SM-Steel Thickness 24 + 28 mm Tested by hydraulic pressure to (84 kg/cm<sup>2</sup>, stated by ABS)  
 es: 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  
 gth Description of longitudinal joint If fusion welded, state name of welding  
 of rivets Have all the requirements for the Rules for Class I vessels been complied with Diameter of rivet holes  
 Thickness of straps Percentage strength of long. joint plate rivet  
 wn or End Plates: Range of tensile strength Thickness Radius or how stayed  
 PERHEATER ~~Donkey~~ Headers: Number in each boiler two square headers Inside diameter 178 x 178 mm 8.4.59  
 kness 20 mm Material SM Steel Range of tensile strength 45 - 50 kg/mm<sup>2</sup> Are drum shell plates welded  
 langed 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  
 meter of rivet holes in long. seams Pitch of rivets Thickness of straps Percentage strength of  
 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  
 us or how stayed Size of manhole or handhole Number, diameter, and thickness of tubes  
 ed by hydraulic pressure to 84 kg/cm<sup>2</sup> 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  
 lves 620 mm<sup>2</sup> Pressure to which they are adjusted 650 lbs Is easing gear fitted yes  
 re Gear. Has the spare gear required by the Rules been supplied yes

S.T. 842°F.

The foregoing is a correct description,

es During progress of work in shops - see Rpt. 9  
 rvey 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. -  
 ERAL 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  
 er working conditions, accumulation tests carried out and all found in good order

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

FRIDAY 10 APR 1959

Date

Committee's  
note

See Rpt. 1

Engineer Surveyor to Lloyd's Register of Shipping.

Lloyd's Register  
Foundation



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

No. in Sur  
eg. Book.

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Built at He

Owners. Pa

Installation fit

Is vessel equip

Plans, have they  
Cooking  
Heating. 22

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steam and oil

material is it an

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or triple p

as group "b

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ammeters. 2

protection devic

voltmeters

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make of fuses. A

overload <sup>set</sup> ~~2000~~

devices operate

if otherwise tha

under mazimun

Are all the cal

damage. yes

type of cables (

and laundries.

frameworks.

Are all lead sh

bulkheads provi

effectively bush

Have refrigerat

Are the motors