

REPORT ON BOILERS.

No. 11808

Received at London Office

10 DEC 1945

Date of writing Report 14th Nov. 1945 When handed in at Local Office 24th Nov. 1945 Part of Copenhagen.

No. in Survey held at Copenhagen. Date, First Survey 13-3-1940 Last Survey 7th November 1945

on the SINGLE SCREW MOTOR TANKER "ALFRED CLEGG" (Number of Visits 30) Gross 9127 Tons Net 5688

Registered at Copenhagen By whom built A.K. Rasmussen & Wain Yard No. 650 When built 1940

Engines made at Copenhagen By whom made A.K. Rasmussen & Wain Engine No. 2058 When made 1940

Boilers made at Copenhagen By whom made A.K. Rasmussen & Wain Boiler No. 1987, 1988 When made 1940

Indicated Horse Power 570 Owners Maritime Trading Co, Ltd. Port belonging to Panama City

661 Bali

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Tubes: Aschehoug A/S, Oslo. Rivets: Christiania Fingert, Oslo (Letter for Record)

Total Heating Surface of Boilers Oil fired 150,2 m², Water 58,3 m² Is forced draught fitted Yes Coal or Oil fired Oil and charcoal

No. and Description of Boilers 2 off horizontal multi-tubular - composite Working Pressure 180 lb/sq. in

Tested by hydraulic pressure to 320 lb Date of test 11-10-40 No. of Certificate 661-662 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 8730 mm² No. and Description of safety valves to each boiler 2 off 90 mm direct spring loaded. Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork No woodwork Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating Boilers placed on a platform Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 3850 mm Length 3180 mm Shell plates: Material S.M. steel Tensile strength 45,5 kg/cm²

Thickness 26 mm. Are the shell plates welded or flanged No. Description of riveting: circ. seams end double zig-zag inter. 88,24 mm

Percentage of strength of circ. end seams plate 67,2% rivets 48,7% Percentage of strength of circ. intermediate seam plate 85,3% rivets 95,5% combined 89,6%

Percentage of strength of longitudinal joint plate 85,3% rivets 95,5% combined 89,6% Working pressure of shell by Rules 182 lb/sq. in

Thickness of butt straps outer 26 mm inner 26 mm No. and Description of Furnaces in each Boiler 2 off slight bow sections.

Material S.M. steel Tensile strength 41/47 kg/cm² Smallest outside diameter 940 mm

Length of plain part top bottom Thickness of plates crown 13 mm Description of longitudinal joint none (i.e. welded)

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 200 lb/sq. in

End plates in steam space: Material S.M. steel Tensile strength 41/47 kg/cm² Thickness 27 mm Pitch of stays 350 x 490 mm

How are stays secured secured in both plates, nuts in front and back Working pressure by Rules 180 lb/sq. in

Tube plates: Material front back S.M. steel Tensile strength 41/47 kg/cm² Thickness 24 mm 19 mm

Mean pitch of stay tubes in nests 228 mm Pitch across wide water spaces 355 mm Working pressure front 214 lb/sq. in back 248 lb/sq. in

Girders to combustion chamber tops: Material S.M. steel Tensile strength 44/50 kg/cm² Depth and thickness of girder at centre (160 x 19) 2 Length as per Rule 672 Distance apart 225 mm No. and pitch of stays in each 2 off 224 mm Working pressure by Rules 192 lb/sq. in Combustion chamber plates: Material S.M. steel

Tensile strength 41/47 kg/cm² Thickness: Sides 17 mm Back 16 mm Top 17 mm Bottom 19 mm

Pitch of stays to ditto: Sides 240 x 245 mm Back 240 x 188 mm Top 225 x 224 mm Are stays fitted with nuts or riveted over nuts in both plates

Working pressure by Rules 195 lb/sq. in Front plate at bottom: Material S.M. steel Tensile strength 41/47 kg/cm² Thickness 24 mm

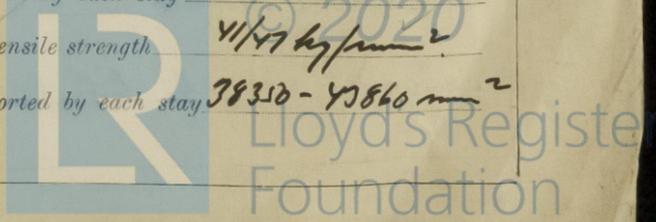
Lower back plate: Material S.M. steel Tensile strength 41/47 kg/cm² Thickness 24 mm

Pitch of stays at wide water space D = 492 mm Are stays fitted with nuts or riveted over Nuts inside and outside

Working Pressure 228 lb/sq. in Main stays: Material S.M. steel Tensile strength 44/50 kg/cm²

Diameter At body of stay 3" - 2 3/4" or Over threads 2 1/4" - 2 1/2" No. of threads per inch 11. Area supported by each stay 172000 mm²

Working pressure by Rules 208 lb/sq. in Screw stays: Material S.M. steel Tensile strength 41/47 kg/cm² Diameter At turned off part 1 1/2" or Over threads 1 7/8" No. of threads per inch 11. Area supported by each stay 38350 - 45860 mm²



Working pressure by Rules **221 lbs** Are the stays drilled at the outer ends **no** Margin stays: Diameter ^{At turned off part,} **1 3/4"**
 No. of threads per inch **11.** Area supported by each stay **53000 mm²** Working pressure by Rules **221 lbs/2"**
 Tubes: Material **SM steel** External diameter ^{Plain} **2 1/2"** Thickness ^{Stay} **7/16" - 3/8"** No. of threads per inch **11.**
 Pitch of tubes **90 x 92 mm** Working pressure by Rules **220 lbs/2"** Manhole compensation: Size of opening
 shell plate **405 x 505** Section of compensating ring **flanged** No. of rivets and diameter of rivet holes **46 off 28 mm**
 Outer row rivet pitch at ends **195 x 127 mm** Depth of flange if manhole flanged **88 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}
 Internal diameter Working pressure by Rules Thickness of crown ^{Rivets} No. and diameter
 stays Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and p
 of rivets in outer row in dome connection to shell
 Type of Superheater Manufacturers of ^{Tubes}
 Number of elements Material of tubes ^{Steel castings} Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off
 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
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressu
 tubes castings and after assembly in place Are drain cocks or valves fi
 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,
 Manufactur

Dates of Survey while building
 During progress of work in shops - - - 1940: 13/3 - 1/4 - 1/4 - 24/5 - 1/6 - 19/6 - 28/6 - 9/7 - 16/7 - 30/7 -
 2/8 - 10/8 - 9/9 - 12/9 - 30/9 - 1/10
 During erection on board vessel - - - 1941: 24/1 - 27/1 - 2/2 - 2/3 - 7/4 -
 1945: 1/6 - 9/6 - 1/7 - 1/10 - 6/10 - 8/10 - 14/10 - 26/10 - 7/11
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes**
 Total No. of visits **30.**

Is this 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.) **The above boilers have been constructed and fitted in accordance with the Rules, the approved plans and the Secretary's letter E dated 11/1-1940. The material used has been tested as required by the Rules and the workmanship is good.**

Survey Fee ... **no. 672, 75** : When applied for, **11/6.48 - 2/11** 19 **45**
 Travelling Expenses (if any) £ : : When received, **1/9.43** 19

J. Langkilde Jensen. L. Lind
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 11 JAN 1946**

Assigned **See F.E. machy. rpt.**