

RECEIVED

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# REPORT ON BOILERS.

No. 117920

Received at London Office

Date of writing Report 21 MAR 1949 When handed in at Local Office 21 MAR 1949 Port of LONDON

No. in Survey held at LONDON Date, First Survey 26 JANUARY 1949 Last Survey 14 MARCH 1949

Reg. Book. on the M.T. "Lindesnas" Number of Visits 2 Tons Gross 158 Net 152

Built at GOTHENBURG By whom built LINDHOLMENS Yard No. 1011 When built 1949

Engines made at LONDON By whom made MESSRS TOWLER & SON, LTD. Engine No. 395 When made 1949

Boilers made at LONDON By whom made MESSRS TOWLER & SON, LTD. Boiler No. 395 When made 1949

Owners M.T. "Lindesnas" Port belonging to LONDON

## VERTICAL BOILER.

Made at LONDON By whom made MESSRS TOWLER & SONS, LTD. Boiler No. 395 When made 1949 Where fixed

Manufacturers of Steel Shell & Tube Plates - Messrs Bolvilles, Dalzell Tubes - Halbot Stead Tube Co, Walsall  
Thimble " - Tubes Ltd, Aston, Birmingham.

Total Heating Surface of Boiler 300 sq. ft. Is forced draught fitted  Coal or Oil fired OIL FIRED

No. and Description of Boilers ONE PATENT SPANNER "STEDDY-SWIRLYFLO" COMPOSITE BOILER Working Pressure 10.5 KGS/cm<sup>2</sup>  
= 149.3 lbs/sq.in

Tested by hydraulic pressure to 275 lbs/sq.in Date of test 14th March 1949 No. of Certificate 1432

Area of fire grate in each Boiler  No. and description of safety valves to each boiler ONE DOUBLE MARINE TYPE

Area of each set of valves per boiler { per Rule 1.50 sq. ins. Pressure to which they are adjusted  Are they fitted with easing gear YES  
 as fitted 6.28 sq. ins.

State whether steam from main boilers can enter the donkey boiler  Smallest distance between boiler or uptake and bunkers or woodwork YES

Is oil fuel carried in the double bottom under boiler  Smallest distance between base of boiler and tank top plating YES

Is the base of the boiler insulated  Largest internal dia. of boiler 4'-0" Height 10ft 3 5/8 ins

Shell plates: Material S.M. STEEL Tensile strength 28-32 tons/sq.in Thickness 1/16 ins

Are the shell plates welded or flanged NO If fusion welded, state name of welding firm YES

Have all the requirements of the Rules for Class I vessels been complied with  Description of riveting: circ. seams { ends DOUBLE ROW LAP  
1 1/2" dia. rivets

long. seams Double Butt Strap 4 rows 13 rivets Dia. of rivet holes in { circ. seams 7/8 ins. Pitch of rivets { 3 1/8 ins. Percentage of strength of circ. seams { plate 72.0%  
7/8 ins. { 3 3/4 ins. { rivets 46.92%

of longitudinal joint { plate 70.66% Thickness of butt straps { outer 1/16 ins. Shell Crown: Whether complete hemisphere, dished partial  
 rivets 71.89% { inner 1/16 ins.

spherical, or flat FLANGED Material S.M. STEEL Tensile strength 26-30 tons Thickness 5/8 ins.

Radius of flange 2.5 ins. Description of Furnace: Plain, spherical, or dished crown  Material

Tensile strength  Thickness  External diameter { top  Length as per Rule   
 bottom

Pitch of support stays circumferentially  and vertically  Are stays fitted with nuts or riveted over

Diameter of stays over thread  Radius of spherical or dished furnace crown

Thickness of Ogee Ring  Diameter as per Rule { D   
 d

Combustion Chamber: Material  Tensile strength  Thickness of top plate

Radius if dished  Thickness of back plate  Diameter if circular

Length as per Rule  Pitch of stays

Are stays fitted with nuts or riveted over  Diameter of stays over thread

Tube Plates: Material { front S.M. STEEL Tensile strength { 26-30 tons Thickness { Top 5/8 ins. Mean pitch of stay tubes in nests 4 1/2 ins.  
 back S.M. STEEL { Bottom 3/4 ins.

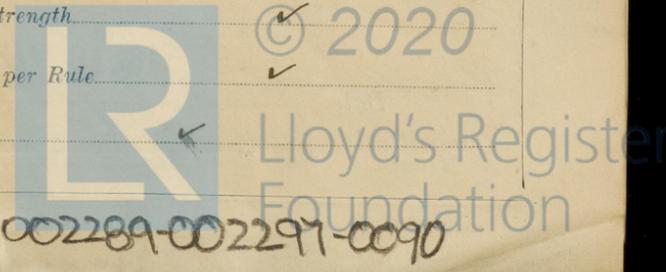
If comprising shell, dia. as per Rule { front as per Pitch in outer vertical rows { 2 1/4 ins. Dia. of tube holes { Top stay 1 9/16 ins. Bottom stay 1 9/16 ins.  
 back approved plan. { 1 9/16 { 1 1/2 ins.

Is each alternate tube in outer vertical rows a stay tube YES - in fire tube nest Thimble tubes in exhaust gas nest

Girders to Combustion Chamber Tops: Material  Tensile strength

Depth and thickness of girder at centre  Length as per Rule

Distance apart  No. and pitch of stays in each



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**Crown Stays:** Material *London* ✓ Tensile strength ✓ Diameter { at body of stay, ✓  
or over threads. ✓  
**No. of threads per inch** ✓ **Screw Stays:** Material *London* ✓ Tensile strength ✓  
Diameter { at turned off part, ✓ No. of threads per inch ✓ Are the stays drilled at the outer ends. ✓  
or over threads. ✓

**Tubes:** Material *S.M. STEEL* External diameter { *SWIRLYFLO 1 1/2 ins* ✓ Thickness { *.128 ins* ✓  
*stay 1 1/2 ins* ✓ *.25 ins* ✓  
No. of threads per inch *Welded in* Pitch of tubes *SWIRLYFLO 2.25 ins. stays as per approved plan.*

**Manhole Compensation:** Size of opening in shell plate *16 ins. x 12 ins.* Section of compensating ring *6.5 ins x .875 ins.* No. of rivets and diameter  
of rivet holes *Welded on.* Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged ✓

**Uptake:** External diameter *2 ft 1.25 ins* Thickness of uptake plate *.625 ins* ✓

**Cross Tubes:** No. ✓ External diameters { ✓ Thickness of plates. ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *YES*

The foregoing is a correct description,  
P.P. **TOWLER & SON LTD.**  
*J.B. Campbell* Manufacturer.  
TECHNICAL MANAGER

Dates of Survey while building { During progress of work in shops - - } *1949: Jan 26 Feb 3. 8. 17 Mar 3. 14* Is the approved plan of boiler forwarded herewith (if not state date of approval.) *YES*  
{ During erection on board vessel - - } Total No. of visits *6 (in shops)*

Is this Boiler a duplicate of a previous case... *YES* If so, state Vessel's name and Report No. *LINDHOLMENS YARD No's 1010 and 1011.*

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *This boiler has been built of tested material and surveyed during construction in compliance with the Rules of the Society and according to the approved plans. The workmanship is of good average standard and the Boiler is eligible in my opinion to be installed and used in a closed vessel.*

Survey Fee ... £ *10 : 0 : 0* When applied for *22 MAR 1949*  
Travelling Expenses (if any) £ : : When received *19*

FRI. 10 MAR 1950

Date \_\_\_\_\_  
Committee's Minute *In view see J.S. R.*

*Wm Robison*  
Engineer Surveyor to Lloyd's Register of Shipping.



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