

# REPORT ON BOILERS.

No. 4125

19 SEP 1933

Received at London Office

Report made on 11/9/33 When handed in at Local Office 16/9 1933 Port of Oslo  
Survey held at Oslo Date, First Survey 5/5 Last Survey 177 1933  
on the A. S. "SVEND FOYN" (Oslo Regt. 4111) (Number of Visits 7) Tons { Gross 14596  
Net 8032  
Built at Haverton Hill By whom built Turners Shipb. Co. Yard No. \_\_\_\_\_ When built 1911  
made at Hartlepool By whom made Richardson, Wadsworth & Co. Engine No. \_\_\_\_\_ When made \_\_\_\_\_  
made at Oslo By whom made M/S Kvarner Bruig Boiler No. \_\_\_\_\_ When made 1933  
Horse Power \_\_\_\_\_ Owners St. Helen Shipowners Ltd. Port belonging to London

Oil extractors not to be put on R.B. as separate boilers as they are  
connected to the Rotating Exhaust  
Boilers described in the Report  
No 4125.  
TUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel approved works (Letter for Record E 20/1/33)

Working Surface of Boilers Is forced draught fitted  Coal or Oil fired

Description of Boilers Oil extractors Working Pressure 60 lbs/sq. in.

hydraulic pressure to 120 lbs/sq. in. Date of test 15.11.33 No. of Certificate 10415 Can each boiler be worked separately yes

Firegrate in each Boiler  No. and Description of safety valves to each boiler 1 off, single opening loaded, 1" dia.

each set of valves per boiler { per Rule 0.44 sq. in. Pressure to which they are adjusted  Are they fitted with easing gear

of donkey boilers, state whether steam from main boilers can enter the donkey boiler

distance between boilers or uptakes and bunkers or woodwork  Is oil fuel carried in the double bottom under boilers

distance between shell of boiler and tank top plating  Is the bottom of the boiler insulated

internal dia. of boilers 2250 mm Length 3400 mm Shell plates: Material S.M. steel Tensile strength 28-35 tons/sq. in.

10 mm Are the shell plates welded or flanged mid pl. flanged Description of riveting: circ. seams { end single riveted  
inter.

ms. double riveted lap Diameter of rivet holes in { circ. seams 20 mm Pitch of rivets { 52.2 mm  
long. seams " " " 66.7

age of strength of circ. end seams { plate 66.7% Percentage of strength of circ. intermediate seam { plate   
rivets 44.4% rivets

age of strength of longitudinal joint { plate 75.2% Working pressure of shell by Rules 5.6 kg./cm<sup>2</sup>  
rivets 69.5% combined

ss of butt straps { outer  No. and Description of Furnaces in each Boiler \_\_\_\_\_  
inner

Tensile strength \_\_\_\_\_ Smallest outside diameter \_\_\_\_\_

of plain part { top \_\_\_\_\_ Thickness of plates { crown \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_  
bottom \_\_\_\_\_ bottom \_\_\_\_\_

ions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules \_\_\_\_\_

ates in steam space: Material S.M. steel Tensile strength 26-30 tons/sq. in. Thickness 20 mm Pitch of stays

re stays secured  Working pressure by Rules \_\_\_\_\_

lates: Material { front \_\_\_\_\_ Tensile strength { \_\_\_\_\_ Thickness { \_\_\_\_\_  
back \_\_\_\_\_

itch of stay tubes in nests \_\_\_\_\_ Pitch across wide water spaces \_\_\_\_\_ Working pressure { front \_\_\_\_\_  
back \_\_\_\_\_

to combustion chamber tops: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Depth and thickness of girder \_\_\_\_\_

Length as per Rule \_\_\_\_\_ Distance apart \_\_\_\_\_ No. and pitch of stays \_\_\_\_\_

Working pressure by Rules \_\_\_\_\_ Combustion chamber plates: Material \_\_\_\_\_

strength \_\_\_\_\_ Thickness: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Bottom \_\_\_\_\_

f stays to ditto: Sides \_\_\_\_\_ Back \_\_\_\_\_ Top \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

g pressure by Rules \_\_\_\_\_ Front plate at bottom: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

ess \_\_\_\_\_ Lower back plate: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_

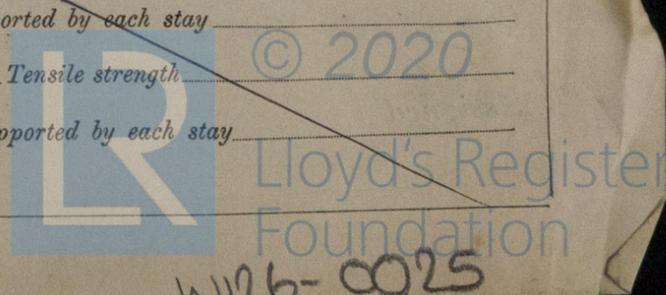
f stays at wide water space \_\_\_\_\_ Are stays fitted with nuts or riveted over \_\_\_\_\_

f Staying Pressure \_\_\_\_\_ Main stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

er { At body of stay, \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_  
or \_\_\_\_\_  
Over threads \_\_\_\_\_

g pressure by Rules \_\_\_\_\_ Screw stays: Material \_\_\_\_\_ Tensile strength \_\_\_\_\_

er { At turned off part, \_\_\_\_\_ No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_  
or \_\_\_\_\_  
Over threads \_\_\_\_\_



Working pressure by Rules \_\_\_\_\_ Are the stays drilled at the outer ends \_\_\_\_\_ Margin stays: Diameter { At turned off part, \_\_\_\_\_  
 No. of threads per inch \_\_\_\_\_ Area supported by each stay \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_  
**Tubes:** Material \_\_\_\_\_ External diameter { Plain \_\_\_\_\_ Thickness { \_\_\_\_\_ No. of threads per inch \_\_\_\_\_  
 Pitch of tubes \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Manhole compensation: Size of opening in  
 shell plate \_\_\_\_\_ Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_  
 Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged \_\_\_\_\_ **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 \_\_\_\_\_  
 stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ No. and diameter of  
 How connected to shell \_\_\_\_\_ Size of doubling plate under dome \_\_\_\_\_ Diameter of rivet holes and pitch  
 of rivets in outer row in dome connection to shell \_\_\_\_\_

**Type of Superheater** \_\_\_\_\_ Manufacturers of { Tubes \_\_\_\_\_  
 Number of elements \_\_\_\_\_ Material of tubes \_\_\_\_\_ Steel castings \_\_\_\_\_  
 Material of headers \_\_\_\_\_ Tensile strength \_\_\_\_\_ Thickness \_\_\_\_\_ Internal diameter and thickness of tubes \_\_\_\_\_  
 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 per  
 Rules \_\_\_\_\_ Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure: \_\_\_\_\_  
 tubes \_\_\_\_\_, castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks or valves fitted  
 to free the superheater from water where necessary \_\_\_\_\_

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
**Pr. A/s KVAERNER BRUG** Manufacturer.

Dates of Survey { During progress of work in shops - - } 2/5, 5/5, 10/5, 30/6, 6/6, 29/6  
 while building { During erection on board vessel - - } 1/7, 4/7, 5/7.  
 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval) 20/7/33  
 Total No. of visits 9

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. C. G. Larsen, 'Vikingsen' No. 12.

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

The whale oil extractors have been constructed in accordance with the plans which were subsequently approved. The amendments indicated on the plans were already embodied in the actual extractors. The extractors were examined during construction, tested by hydraulic pressure to 120 lbs./in<sup>2</sup> and found tight and sound at that pressure. The workmanship is good. The cast steel materials and the steel plates employed have been made at approved steel works and tested by the Society's Surveyors. The extractors were not examined under steam as steam is not raised on whale oil extractor range until the vessel is on the whaling grounds.

The extractors were marked

R Lloyd's Test.  
 120 LBS.  
 W.P. 60 LBS.  
 Date \_\_\_\_\_  
 P.B.E. R.E.

It is recommended that this extractor be classed in the Society's Register Book

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

*Phurde* *Perfor-Lien*  
 Engineer Surveyor to Lloyd's Register of Ship

Committee's Minute TUE. 26 SEP 1933 TUE. 12 DEC 1933

Assigned \_\_\_\_\_

