

REPORT ON BOILERS.

No. 4474.

Received at London Office 18 APR 1935

Date of writing Report 11/1 1935 When handed in at Local Office 11/1 1935 Port of Oslo

No. in Survey held at Oslo Date, First Survey 11/12-1924 Last Survey 7/1 1935

81638 on the Toni Se. 4 Mast "N.T. NIELSEN-ALONSO" (Number of Visits 4) Tons { Gross 9341
Net 5558

Master J.M. Built at Glasgow By whom built C. Connell & Co. Yard No. When built 1900

Engines made at Glasgow By whom made Dunsmuir & Jackson Engine No. When made 1900

Boilers made at Glasgow By whom made Dunsmuir & Jackson Boiler No. When made 1900

Whale oil boiler made at Oslo, by Kjeller Bryg, 1935

Nominal Horse Power 690 Owners Kjeller Bryg Port belonging to Larvik

Whale oil boiler

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Apply: Frodingham Steel Co. Ltd.
Viktorians Mines Steel & Iron Corp. (Letter for Record)

Total Heating Surface of Boilers ✓ Is forced draught fitted ✓ Coal or Oil fired ✓

No. and Description of Boilers 1 whale oil boiler with rotating drum Working Pressure 60 lbs

Tested by hydraulic pressure to 120 lbs Date of test 7.1.35 No. of Certificate ✓ Can each boiler be worked separately ✓

Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler 1 spring loaded

Area of each set of valves per boiler { per Rule ✓
as fitted 2.24 sq. Pressure to which they are adjusted ✓ Are they fitted with easing gear ✓

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

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

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

Largest internal dia. of boilers 2600 mm Length 7015 mm Shell plates: Material steel Tensile strength 44-55

Thickness 13 mm Are the shell plates welded or flanged not flanged Description of riveting: circ. seams { end S.R. Lap
inter. S.R. single strap

Long. seams S.R. single strap Diameter of rivet holes in { circ. seams 23.5 mm
long. seams 23.5 mm Pitch of rivets { 69.3 mm
75.2 mm

Percentage of strength of circ. end seams { plate 61
rivets 41.5 Percentage of strength of circ. intermediate seam { plate 61
rivets 41.5

Percentage of strength of longitudinal joint { plate 68.6
rivets 60.4 Working pressure of shell by Rules 6.3 kg. cm²

Thickness of butt straps { outer 15 mm
inner ✓ No. and Description of Furnaces in each Boiler ✓

Material ✓ Tensile strength ✓ Smallest outside diameter ✓

Length of plain part { top ✓
bottom ✓ Thickness of plates { crown ✓
bottom ✓ Description of longitudinal joint ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules ✓

Head plates in steam space: Material steel Tensile strength 26-30 Thickness 25 mm Pitch of stays ✓

How are stays secured dished ends, radius 3300 mm Working pressure by Rules 6.43 kg. cm²

Side plates: Material { front ✓
back ✓ Tensile strength { ✓
Thickness { ✓

Can pitch of stay tubes in nests ✓ Pitch across wide water spaces ✓ Working pressure { front ✓
back ✓

Orders to combustion chamber tops: Material ✓ Tensile strength ✓ Depth and thickness of girder ✓

Centre ✓ Length as per Rule ✓ Distance apart ✓ No. and pitch of stays ✓

Each ✓ Working pressure by Rules ✓ Combustion chamber plates: Material ✓

Tensile strength ✓ Thickness: Sides ✓ Back ✓ Top ✓ Bottom ✓

Pitch of stays to ditto: Sides ✓ Back ✓ Top ✓ Are stays fitted with nuts or riveted over ✓

Working pressure by Rules ✓ Front plate at bottom: Material ✓ Tensile strength ✓

Thickness ✓ Lower back plate: Material ✓ Tensile strength ✓ Thickness ✓

Pitch of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓

Working Pressure ✓ Main stays: Material ✓ Tensile strength ✓

At body of stay, ✓ No. of threads per inch ✓ Area supported by each stay ✓
Over threads ✓

Working pressure by Rules ✓ Screw stays: Material ✓ Tensile strength ✓

At turned off part, ✓ No. of threads per inch ✓ Area supported by each stay ✓
Over threads ✓

Working pressure by Rules Are the stays drilled at the outer ends Margin stays: Diameter { At turned off part, or Over threads }
No. of threads per inch Area supported by each stay Working pressure by Rules
Tubes: Material External diameter { Plain Stay } Thickness { No. of threads per inch }
Pitch of tubes Working pressure by Rules Manhole compensation: Size of opening
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 Rivets }
Internal diameter Working pressure by Rules Thickness of crown 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
of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of { Tubes Steel castings }
Number of elements Material of tubes 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 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,

Dates of Survey { During progress of work in shops - - } 11/12, 27/12, 29/12-1934 and 7/1.35 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 29/12.34
while building { During erection on board vessel - - - } Total No. of visits 4.

Is this Boiler a duplicate of a previous case Yes If so, state Vessel's name and Report No. 'S. Lancing' Vol. rep. 4348

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

This boiler was examined during construction and was constructed in accordance with approved plans. The steel material supplied by approved works and tested by the Society's Surveyors. The workmanship is good. The boiler was tested on completion by hydraulic pressure to 120 lbs per sq inch and found in order. The boiler was marked: R. LLOYD TEST 120 LBS. W.P. 60 LBS. 7.1.35. P.B.R.

Survey Fee £. 40 : When applied for, 11/1 1935
Travelling Expenses (if any) £ 6 : When received, 22/2/35

Per John R. ...
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute WED. 8 MAY 1935 TUE. 8 OCT 1935

Assigned