

REPORT ON BOILERS.

No. 29316

Received at London Office 12 OCT 1926

Date of writing Report 11th Oct 1926When handed in at Local Office 11th Oct 1926

Port of Sunderland

No. in Survey held at Reg. Book.

Sunderland

Date, First Survey

Last Survey 7th Oct 1926

(Number of Visits)

Gross

Tons

Net

on the new steel S.S. "NIDARNES"

Master _____ Built at Newcastle By whom built *Low Hunter & Wyham Richardson* No. 1289 When built 1926
Engines made at *Sunderland* By whom made *MacColl & Pollock Ltd* Engine No. 348 When made 1926
Boilers made at *Sunderland* By whom made *MacColl & Pollock Ltd* Boiler No. 348 When made 1926
Nominal Horse Power 114 Owners *Rederiaktreselskapet Nidaros* Port belonging to *Oslo.*
(Manager) *A. M. Embustredt.*

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel *The Steel Company of Scotland Limited* (Letter for Record *S.*)
Total Heating Surface of Boilers *2081.46* ²⁵⁸ Is forced draught fitted *No* Coal or Oil fired *Coal*
No. and Description of Boilers *Two single ended marine type* Working Pressure *180 lbs*
Tested by hydraulic pressure to *320 lbs* Date of test *23-4-26* No. of Certificate *3434* Can each boiler be worked separately *Yes*
Area of Firegrate in each Boiler *36.89* No. and Description of safety valves to each boiler *Two Direct spring loaded*
Area of each set of valves per boiler {per Rule *6.44* as fitted *4.952* Pressure to which they are adjusted *185 lbs* Are they fitted with easing gear *Yes*
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler *none fitted*
Smallest distance between boilers or uptakes and bunkers or woodwork *12"* Is oil fuel carried in the double bottom under boilers *No*
Smallest distance between shell of boiler and tank top plating *2 1/2"* Is the bottom of the boiler insulated *No*
Largest internal dia. of boilers *10'-10 3/16"* Length *10'-6"* Shell plates: Material *Steel* Tensile strength *28-32 tons*
Thickness *29"* Are the shell plates welded or flanged *No* Description of riveting: circ. seams {end *D.R. Lap* inter. *✓*
long. seams *T.R.D.B.S.* Diameter of rivet holes in {circ. seams *1 1/2"* long. seams *3/4"* Pitch of rivets { *3 3/16"* *7/16"*
Percentage of strength of circ. end seams {plate *71.04* rivets *42.5* Percentage of strength of circ. intermediate seam {plate *✓* rivets *✓*
Percentage of strength of longitudinal joint {plate *86.28* rivets *88.45* combined *90.4* Working pressure of shell by Rules *182.4 lbs*
Thickness of butt straps {outer *13"* inner *7"* No. and Description of Furnaces in each Boiler *Two plain - with drawables*
Material *Steel* Tensile strength *26 to 30 tons* Smallest outside diameter *3'-4"*
Length of plain part {top *6'-4 3/8"* bottom *5'-10 3/8"* Thickness of plates {crown *3/4"* bottom *3/4"* Description of longitudinal joint *Welded*
Dimensions of stiffening rings on furnace or c.c. bottom *✓* Working pressure of furnace by Rules *190 lbs*
End plates in steam space: Material *Steel* Tensile strength *26 to 30 tons* Thickness *3/16"* Pitch of stays *15" x 15"*
How are stays secured *Double nuts* Working pressure by Rules *192 lbs*
Tube plates: Material {front *Steel* back *Steel* Tensile strength { *26 to 30 tons* Thickness { *27/32"* *13/16"*
Mean pitch of stay tubes in nests *11.09"* Pitch across wide water spaces *13 1/2"* Working pressure {front *209.8 (in nest)* back *192.8*
Girders to combustion chamber tops: Material *Steel* Tensile strength *26 to 30 tons* Depth and thickness of girder
at centre *20 1/8" x 27/32"* Length as per Rule *2'-4 7/8"* Distance apart *9"* No. and pitch of stays
in each *20 9"* Working pressure by Rules *183 lbs* Combustion chamber plates: Material *Steel*
Tensile strength *26 to 30 tons* Thickness: Sides *5/8"* Back *2 1/2"* Top *2 1/2"* Bottom *5/8"*
Pitch of stays to ditto: Sides *8 1/4" x 9"* Back *8 7/16" x 9 1/4"* Top *9" x 9"* Are stays fitted with nuts or riveted over *Nuts in c.c.*
Working pressure by Rules *181 lbs* Front plate at bottom: Material *Steel* Tensile strength *26 to 30 tons*
Thickness *27/32"* Lower back plate: Material *Steel* Tensile strength *26 to 30 tons* Thickness *13/16"*
Pitch of stays at wide water space *8 7/16" x 12 1/2"* Are stays fitted with nuts or riveted over *Nuts on Margin stays*
Working Pressure *236 lbs* Main stays: Material *Steel* Tensile strength *28 to 32 tons*
Diameter {At body of stay *2 1/2"* No. of threads per inch *6* Area supported by each stay *225 sq"*
Over threads *2 1/2"* Working pressure by Rules *197 lbs* Screw stays: Material *Steel* Tensile strength *26 to 30 tons*
Diameter {At turned off part *1 5/8"* No. of threads per inch *9* Area supported by each stay *74.25 sq"*
Over threads *1 5/8"* *78 sq"*

1954 side

Working pressure by Rules 205... *Yes* Are the stays drilled at the outer ends *Yes* Margin stays: Diameter { At turned off part, *1 3/4"* or Over threads *1 3/4"*

No. of threads per inch *9* Area supported by each stay *9.8"* Working pressure by Rules *198 lbs*

Tubes: Material *Walt Iron* External diameter { Plain *3 1/2"* Stay *3 1/2"* Thickness { *9 W.G.* No. of threads per inch *9*

Pitch of tubes *4 7/16" x 4 7/16"* Working pressure by Rules *Main 180 lb Stay 200 lb* Manhole compensation: Size of opening in shell plate *16" x 12"* Section of compensating ring *2 @ 4" x 1 1/2"* No. of rivets and diameter of rivet holes *32 @ 3/4" dia*

Outer row rivet pitch at ends *7 1/2"* Depth of flange if manhole flanged *Yes* Steam Dome: Material *Yes*

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 of stays

How connected to shell Inner radius of crown Working pressure by Rules

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 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 and 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 23 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,
PER PRO MACCOLL & POLLOCK LTD

Manufacturer.

Dates of Survey { During progress of work in shops - - }
while building { During erection on board vessel - - }

Please see Machy Rpt.

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

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

The materials and workmanship are good.

The boilers have been constructed under special survey and satisfactorily fitted in the vessel.

Survey Fee ... £

Travelling Expenses (if any) £

When applied for,

192

When received,

192

George Anderson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 5 NOV 1926

Assigned

See F.E. rpt. on mach attached



© 2019

Lloyd's Register Foundation