

Rpt. 4.

REPORT ON MACHINERY.

No. 26427.

Received at London Office

MON. JUL. 7-1913

Date of writing Report

When handed in at Local Office

5-7-13. Port of Hull

Date, First Survey Dec 10th 12. Last Survey June 25th 13.No. in Survey held at
Reg. Book.

on the S.S. Van Vliet 70/04

(Number of Vessels)

Gross

Tons

Net

When built 1913

Master

Built at Hull Hardinnell By whom built Van Vliet-H.

Engines made at

Hull

By whom made

Barlis & Co Ltd

No. 166

when made 1913-6

Boilers made at

Hull

By whom made

Barlis & Co Ltd

when made 1913-6

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

104

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c. — Description of Engines

Triple expansion

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

Length of Stroke

27"

Revs. per minute

96

Dia. of Screw shaft

as per rule

8.99

Material of

steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

no liner

Is the after end of the liner made water tight

in the propeller boss

If the liner is in more than one length are the joints burned

If the liner does not fit tightly at the part

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush

3'-5 1/2"

Dia. of Tunnel shaft

as per rule

7.46

Dia. of Crank shaft journals

as per rule

7.93

as fitted

7.78

Dia. of Crank pin

7 7/8"

Size of Crank webs

5 1/2" x 13"

Dia. of thrust shaft under

collars

7 7/8"

No. of Blades

4

State whether moveable

no

Total surface

38 sq

No. of Feed pumps

two

Diameter of ditto

2 1/4"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

two

Diameter of ditto

2 1/4"

Stroke

18"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

two duplex

Sizes of Pumps

6 x 8 x 6

Bilge & Ballast

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

one 2" in P.R. one 2" in Stokes

In Holds, &c.

two 2" dia

No. of Bilge Injections

one

sizes

3 1/2"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room & size

yes

2 1/2"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

Are the sluices on Engine room bulkheads always accessible

none

Are all connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

both

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

yes

Are the Discharge Pipes above or below the deep water line

above

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

yes

What pipes are carried through the bunkers

Food suction

How are they protected

wood casing

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

yes

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

yes

Dates of examination of completion of fitting of Sea Connections

11-6-13

of Stern Tube

12-6-13

Screw shaft and Propeller

13-6-13

Is the Screw Shaft Tunnel watertight

none

Is it fitted with a watertight door

worked from

BOILERS, &c. — (Letter for record)

S

Manufacturers of Steel

Phoenix & Co. Ltd. Verin & Horde

Total Heating Surface of Boilers

1800

Is Forced Draft fitted

no

No. and Description of Boilers

two single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

27-5-13

No. of Certificate

1986

Can each boiler be worked separately

yes

Area of fire grate in each boiler

29.5 sq

No. and Description of Safety Valves to

each boiler

Two spring loaded

Area of each valve

3.14 sq

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boiler uptakes and bunkers

about 4 ft

Mean dia. of boilers

126"

Length

10'-0"

Material of shell plates

S

Thickness

15/16"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

D.R.D.B.I.

Diameter of rivet holes in long. seams

1 3/16"

Pitch of rivets

6 1/4"

Length of plates

12 3/4"

width of butt straps

12 3/4"

Per centages of strength of longitudinal joint

plate

81

Working pressure of shell by rules

184

Size of manhole in shell

12" x 16"

Size of compensating ring

8 5/16 x 15 1/16"

No. and Description of Furnaces in each boiler

two plain

Material

S

Outside diameter

37"

Length of plain part

top

8 1/4"

Thickness of plates

bottom

3 1/4"

Description of longitudinal joint

welded

No. of strengthening rings

23/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

Working pressure of furnace by the rules

195

Combustion chamber plates: Material

S

Thickness: Sides

23/32"

Back

23/32"

Top

23/32"

Bottom

23/32"

Working pressure by rules

180

Pitch of stays to ditto: Sides

11 x 8 3/4"

Back

10 1/2 x 9"

Top

10 3/4 x 9 1/4"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

193

End plates in steam space:

Material of stays

S

Material of stays

S

Thickness

15/16"

Pitch of stays

14 1/4 x 14"

How are stays secured

N. T.

Working pressure by rules

197

Material of Front plates at bottom

S

Diameter at smallest part

4.22

Area supported by each stay

199.5 sq

Working pressure by rules

220

Material of plate by rules

218

Thickness

15/16"

Material of Lower back plate

S

Thickness

15/16"

Greatest pitch of stays

14 x 9"

Working pressure of plate by rules

218

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 5/8"

Material of tube plates

S

Thickness: Front

15/16"

Back

13/16"

Mean pitch of stays

9 1/2"

Pitch across wide water spaces

14 1/4"

Working pressures by rules

188

Girders to Chamber tops: Material

S

Depth and

thickness of girder at centre

6" x 1 1/2"

Length as per rule

26 1/32"

Distance apart

10 3/4"

Number and pitch of stays in each

two 8 1/4"

Working pressure by rules

200

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Thickness

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

yes

VERTICAL DONKEY BOILER—Manufacturers of Steel

No. _____ Description _____
 Made at _____ By whom made _____ When made _____ Where fixed _____
 Working pressure _____ tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of Safety _____
 Valves _____ No. of Safety Valves _____ Area of each _____ Pressure to which they are adjusted _____ Date of adjustment _____
 If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____ Dia. of donkey boiler _____ Length _____
 Material of shell plates _____ Thickness _____ Range of tensile strength _____ Descrip. of riveting long. seams _____
 Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____ Lap of plating _____ Per centage of strength of joint _____ Rivets _____
 Working pressure of shell by rules _____ Thickness of shell crown plates _____ Radius of do. _____ No. of stays to do. _____ Dia. of stays _____
 Diameter of furnace Top _____ Bottom _____ Length of furnace _____ Thickness of furnace plates _____ Description of joint _____
 Working pressure of furnace by rules _____ Thickness of furnace crown plates _____ Radius of do. _____ Stayed by _____
 Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied: *Two top end bolts & nuts, Two bottom end bolts & nuts, two main bearing bolts & nuts, one set of coupling bolts & nuts, one set of feed, high, air circulating pump valves, 1 set of donkey pump valves, 6 gasket ring bolts one safety valve spring, one propeller.*

The foregoing is a correct description,

Thomas W. L. Manufacturer.

Dates of Survey while building: During progress of work in shops - 1912: Dec 10, 19, 24, 31, 1913: Jan 10, 16, 23, 30, Feb 8, 15, 17, 19, 24, March 6, 11, 18, 27, Apr 2, 3, 8, 11, 15, 24
 During erection on board vessel - Apr 25, May 2, 5, 8, 16, 20, 22, 23, 26, 27, 28, Jun 9, 10, 11, 12, 14, 17, 18, 19, 20, 25
 Total No. of visits *44*

Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts: Cylinders *15.2.13* Slides *15.2.13* Covers *15.2.13* Pistons *2.5.13* Rods *2.5.13*
 Connecting rods *15.4.13* Crank shaft *15.2.13* Thrust shaft *8.4.13* Tunnel shafts _____ Screw shaft *20.5.13* Propeller *20.5.13*
 Stern tube *12.6.13* Steam pipes tested *19.6.13* Engine and boiler seatings *11.6.13* Engines holding down bolts *20.6.13*
 Completion of pumping arrangements *25.6.13* Boilers fixed *20.6.13* Engines tried under steam *25.6.13*
 Main boiler safety valves adjusted *25.6.13* Thickness of adjusting washers *Starts 5 3/8 P 1 3/32 Port 5 3/8 P 7/16*
 Material of Crank shaft *Steel* Identification Mark on Do. *3249 WDA* Material of Thrust shaft *S* Identification Mark on Do. *1066 TGD*
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *steel* Identification Marks on Do. *1066 TGD*
 Material of Steam Pipes *Solid drawn copper* Test pressure *40 lbs*

General Remarks (State quality of workmanship, opinions as to class, &c.) *The Machinery of this vessel has been constructed under special survey in accordance with the approved plans & the rules of this Society. The Machinery has been properly fitted & secured on board & on completion tested under steam & found to work satisfactorily. The boilers have been tested under hydraulic pressure to 300 lbs & found sound & tight. The Safety valves have been adjusted to 185 lbs & tested for accumulation which did not exceed 192 lbs. In my opinion the vessel is eligible for the record & L.M.C. 6.13.*

It is submitted that this vessel is eligible for THE RECORD & L.M.C. 6.13.

JWD 7/7/13

Frank A. Sturgeon
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee .. £ *2 : 0 :*
 Special .. £ *15 : 12 :*
 Donkey Boiler Fee .. £ _____
 Travelling Expenses (if any) £ _____

Committee's Minute TUE. JUL 8-1913

Assigned

MACHINERY CERTIFICATE WRITTEN