

REPORT ON MACHINERY.

No. 6200

Received at London Office

TUE. AUG. 25. 1914

Date of writing Report 21 August 1914 When handed in at Local Office

10

Port of

Amsterdam

No. in Survey held at

Amsterdam

Date, First Survey 10 Oct 1913

Last Survey 7 August 1914

Reg. Book.

903 on the

Steel steam screw steamer "ROTTI"

(Number of Vents 35)

Gross 518

Net 473.6

When built 1914

Master

M.C. Braas

Built at

Amsterdam

By whom built

Werkspoor 119

Engines made at

Amsterdam

By whom made

Werkspoor

when made

1914

Boilers made at

Amsterdam

By whom made

Werkspoor

when made

1914

Registered Horse Power

830

Owners

Stoomvaart M^t Nederland

Port belonging to

Amsterdam

Nom. Horse Power as per Section 28

830

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines

Triple expansion

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

24 1/4" x 47 1/4" x 22 3/4"

Length of Stroke

53 1/2"

Revs. per minute

95

Dia. of Screw shaft

as per rule 16 1/2"

as fitted 17 3/4"

Material of

S.M.S.

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

Yes

Is the after end of the liner made water tight

in the propeller boss

Yes

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

Yes

If the liner does not fit tightly at the part

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive

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

Length of stern bush

47 1/2"

Dia. of Tunnel shaft

as per rule 15 1/2"

Dia. of Crank shaft journals

as per rule 15 1/2"

Dia. of Crank pin

16 1/2"

Size of Crank webs

18 x 24 1/2"

Dia. of thrust shaft under

collars

16 3/4"

Dia. of screw

18"

Pitch of Screw

16-170/8-1"

No. of Blades

4

State whether moveable

Yes

Total surface

94 1/2"

No. of Feed pumps

4 P+L P

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

2

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

2

Sizes of Pumps

11 x 15 x 24"

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

In Engine Room

5 diam.

3 1/2"

In Holds, &c.

I = 2 x 3 1/2"

II = 2 x 3 1/2"

III = 2 x 3 1/2"

IV = 2 x 3 1/2"

No. of Bilge Injections

one

size

13 3/4"

Connected to condenser, or to circulating pump

centrifugal pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

3 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

Yes

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

Yes

Are they Valves or Cocks

Lock

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

Yes

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

none

How are they protected

Yes

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

26 Jan

of Stern Tube

16 Jan

Screw shaft and Propeller

27 Jan

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from engine platform

BOILERS, &c.—(Letter for record S)

Manufacturers of Steel

Gelsenkirchen Bergwerks- & Eisenhütten-AG

Total Heating Surface of Boilers

6 x 2105 1/2

Is Forced Draft fitted

Yes

No. and Description of Boilers

6 single-ended

Working Pressure

213 lbs

Tested by hydraulic pressure to

426 lbs

Date of test

16. 5. 14

No. of Certificate

101-106

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

6 x 50 1/2"

No. and Description of Safety Valves to

each boiler

2 spring loaded

Area of each valve

5.60"

Pressure to which they are adjusted

215 lbs

Smallest distance between boilers or uptakes and bunkers or woodwork

12"

Mean dia. of boilers

13'-9"

Length

11'-1"

Material of shell plates

S.M.S.

Thickness

1 1/2"

Range of tensile strength

20-22 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

double

long. seams

Double

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 13/16"

Lap of plates or width of butt straps

21 9/16"

Per centages of strength of longitudinal joint

rivets 24 1/2%

plate 24 1/2%

Working pressure of shell by rules

249 lbs

Size of manhole in shell

12 3/4" x 16 3/4"

Size of compensating ring

19 x 24 x 1.26"

No. and Description of Furnaces in each boiler

3 corrugated

Material

S.M.S.

Outside diameter

3'-0 1/4"

Length of plain part

top

Thickness of plates

crown 3/16"

Description of longitudinal joint

Welded

No. of strengthening rings

none

Working pressure of furnace by the rules

25 7/8 lbs

Combustion chamber plates: Material

S.M.S.

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 x 7/4"

Back

7/8 x 8"

Top

7/8 x 7/8"

If stays are fitted with nuts or riveted heads

Both

Working pressure by rules

216 lbs

Material of stays

S.M.S.

Diameter at smallest part

1 1/8"

Area supported by each stay

60 1/2"

Working pressure by rules

250 lbs

End plates in steam space

Material

S.M.S.

Thickness

1 1/8"

Diameter at smallest part

7/8"

Area supported by each stay

208"

Working pressure by rules

253 lbs

Material of Front plates at bottom

S.M.S.

Thickness

15/16"

Material of Lower back plate

S.M.S.

Thickness

15/16"

Greatest pitch of stays

11 3/4"

Working pressure of plate by rules

222 lbs

Diameter of tubes

2 3/4"

Pitch of tubes

3 7/8"

Material of tube plates

S.M.S.

Thickness: Front

15/16"

Back

7/8"

Mean pitch of stays

7 3/4"

Pitch across wide water spaces

13 3/4"

Working pressures by rules

45 7/8 lbs

Girders to Chamber tops: Material

S.M.S.

Depth and

thickness of girder at centre

2 x 8 x 7/8"

Length as per rule

29 1/2"

Distance apart

8 7/8"

Working pressure by rules

23 7/8 lbs

Superheater or Steam chest; how connected to boiler

Smith's superheater

Can the superheater be shut off and the boiler worked

separately

Yes

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

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

4.90"

Are they fitted with easing gear

Yes

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

4.90"

Are they fitted with easing gear

Yes

Working pressure of end plates

Area of safety valves to superheater

4.90"

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR.

State the articles supplied:-

1 piston rod complete, 1 set of springs for each piston, 1 set of rings, 12 studs & nuts for covers, 2 ahead guide blocks, 2 valves & handles complete, 13 crank shaft, 1 eccentric with traps, rods & bolts complete, 2 sets of link bushes, 1 set of valves for pumps, 1 high pump plunger complete, 9 coupling bolts complete, 50 condenser tubes, Thomson's patent shaft coupling, 1 pair of crank pin bushes with bolts, 2 main bearings with bolts complete, 2 shoes for thrust block complete, 3 steel springs for safety valves, 32 blow pipes & 4 stay tubes, 2 brass propeller blades.

The foregoing is a correct description,

WORKSPOON

C. Hoos

Manufacturer.

Dates of Survey while building: During progress of work in shops - 6.10.21, 26.20, Dec 27-29.30, Jan 16, 22, 26, 29.30, Feb 4.5, 9.20, April 3, 6, 9.16.21; During erection on board vessel - June 2.27.20, May 11; June 9-10-10-20, July 2-16.20, 27.20, August; Total No. of visits - 35.

Is the approved plan of main boiler forwarded herewith? Yes.

" " " donkey " " " " " "

Dates of Examination of principal parts: Cylinders - 11 May 10, 18 June 2.27.20; Slides - 2.27.20; Pistons - 2.27.20; Rods - 6-9; Connecting rods - 5-9; Crank shaft - 22.29; Thrust shaft - 22.27.20; Tunnel shafts - 22.27.20; Screw shaft - 22.27.20; Propeller - 22.27.20.

Stem tube - 22.27.20; Steam pipes tested - 2 July; Engine and boiler seatings - 10 June & 20 July; Engines holding down bolts - 20 July.

Completion of pumping arrangements - 16 July; Boilers fixed - 9 June; Engines tried under steam - 7 August.

Main boiler safety valves adjusted - 7 August; Thickness of adjusting washers - 1/4".

Material of Crank shaft - S.M.S. Identification Mark on Do. 5194 HK 9-13; Material of Thrust shaft - S.M.S. Identification Mark on Do. 7763.3M 9-13.

Material of Tunnel shafts - S.M.S. Identification Marks on Do. 6064, 65, 66, PA 12-13; Material of Screw shafts - S.M.S. Identification Marks on Do. 9032.2 KH 11-13.

Material of Steam Pipes - S.M.S. Test pressure - 426 lbs.

Is an installation fitted for burning oil fuel? No. Is the flash point of the oil to be used over 150°F.?

Have the requirements of Section 49 of the Rules been complied with?

Is this machinery duplicate of a previous case? No. If so, state name of vessel.

General Remarks (State quality of workmanship, opinions as to class, &c.)

This vessel had her Machinery constructed to the Society's rules & approved plans, which are herewith returned to the London office. Marine duty, which as required and of good quality. Workmanship throughout good & to our satisfaction. Cylinders, valve casings, columns, steam tube, condenser, steam & feed pipes tested under hydraulic pressure & found sound & tight. Feed pump (H.P. & L.P.) and air pump are of the centrifugal type driven by steam turbines. Centrifugal pump for condenser & ballast pump driven by electric motors. All pumps working satisfactorily. Main boilers in number, boiler mountings & all steam pipes tested to 426 lbs found sound & tight in every respect. Schmidt's superheated feed water tested at twice the working pressure found sound & tight. Examined engines, boiler & auxiliary machinery under steam whilst on the move. Trial trip of 2 hours found working satisfactorily and without incident & heading. Pumps drawing from all compartments of the vessel. We are of opinion this vessel is eligible to be classed in the Society's register.

It is submitted that this vessel is eligible for the RECORD + L.M.C. - 8.1914.

The amount of Entry Fee ... \$ 36.00; Special ... \$ 754.20; Donkey Boiler Fee ... \$ 1.00; Travelling Expenses (if any) \$ 22.00.

Committee's Minute

Assigned

Form No. 1A

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