

4a.

REPORT ON MACHINERY.

No. 12509

Received at London Office

WED. NOV. 18 1922

Date of writing Report 24-10-1922 When handed in at Local Office

Port of Rotterdam

in Survey held at Schiedam

Date, First Survey 3-3-22.

Last Survey 24 Oct 1922

Log. Book.

on the Steel Screw Steamer "GAASTERDIJK"

(Number of Visits 29)

Tons { Gross 8873
Net 5164

Master

Built at Schiedam By whom built New Waterway Ship Co When built 1922

Lines made at Clydebank By whom made John Brown & Co. Ltd when made 1922

Machinery made at Schiedam By whom made New Waterway Ship Co when made 1922

Registered Horse Power 880 N.H.P. Owners Holland Amerika Lijn Port belonging to Rotterdam

Horse Power at Full Power 4200 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

TURBINE ENGINES, &c.

Description of Engines

D. B. General Brown & Co. Turbines

No. of Turbines

Please see Glasgow Rep No 42046

Diameter of Rotor Shaft Journals, H.P.

L.P.

Diameter of Pinion Shaft

Diameter of Journals

Distance between Centres of Bearings

Diameter of Pitch Circle

Diameter of Wheel Shaft

Distance between Centres of Bearings

Diameter of Pitch Circle of Wheel

Thickness of Face

Diameter of Thrust Shaft under Collars

Diameter of Tunnel Shaft

as per rule

Diameter of Screw Shafts

Diameter of same

as per rule

Diameter of Propeller

19' 6"

Pitch of Propeller

19"

Number of Blades

4

State whether Moveable

No

Total Surface

108 sq ft

Diameter of Rotor Drum, H.P.

L.P.

Astern

Thickness at Bottom of Groove, H.P.

L.P.

Astern

Revs. per Minute at Full Power, Turbine

Propeller

78

PARTICULARS OF BLADING.

H.P.

L.P.

ASTERN.

	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
EXPANSION									
D									
D									
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H									
H									

No. and size of Feed pumps 2 à 12" x 9" x 24" 1 Aux. à 12" x 9" x 24"

No. and size of Bilge pumps 2 à 10" x 10" x 10" General service 12" x 8" x 10" Oil fuel transfer pump 5" x 8" x 8" Terged lubricating pump 8" x 8" x 15"

No. and size of Bilge suction in Engine Room 4 à 4" One in Tunnel à 3"

In Holds, &c. 2 in No. 1 à 5" 2 in No. 2 à 5" 2 in No. 3 à 5" 2 in No. 4 à 5" 2 in No. 5 à 5" 2 in No. 6 à 5" 2 in No. 7 à 5" 2 in No. 8 à 5" 2 in No. 9 à 5" 2 in No. 10 à 5"

No. of Bilge Injections 1 sizes 1 1/2" Connected to circulating pump Is a separate Donkey Suction fitted in Engine Room & size 4" x 8"

Are all the bilge suction pipes fitted with roses Yes

Are the roses in Engine room always accessible Yes

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 flying 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 Bilge suction pipes

How are they protected Steel

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

Is the Screw Shaft Tunnel watertight Yes

Is it fitted with a watertight door Yes

worked from Upper platform

OILERS, &c. (Letter for record 5)

Manufacturers of Steel John Brown & Co. Ltd. Daniel Colville

Total Heating Surface of Boilers 11308 sq ft

Forced Draft fitted Yes

No. and Description of Boilers 4 single ended Marine boilers

Working Pressure 215 lbs

Tested by hydraulic pressure to 345 lbs

Date of test 20-6-22

No. of Certificate 765

Can each boiler be worked separately Yes

Area of fire grate in each boiler 61.8 sq ft

No. and Description of Safety Valves to

each boiler 2 spring loaded

Area of each valve 14.5 sq in

Pressure to which they are adjusted 215 lbs

Are they fitted with easing gear Yes

Smallest distance between boilers or uptakes and bunkers or woodwork Over 24"

Mean dia. of boilers 16' 0"

Length 12' 0"

Material of shell plates Steel

Thickness 1 1/8"

Range of tensile strength 28.5-32 tons

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams lap 5 x riv

long. seams Double butt 3 x riv

Diameter of rivet holes in long. seams 1 1/16"

Pitch of rivets 10 1/4"

Lap of plates or width of butt straps 22 1/4"

Per centages of strength of longitudinal joint

rivets 85%

Working pressure of shell by rules 233 lbs

Size of manhole in shell

16" x 18"

Size of compensating ring 16" x 1 1/8"

No. and Description of Furnaces in each Boiler 3 Morrison's

Material Steel

Outside diameter 4' 1 1/4"

Length of plain part

top

Thickness of plates

crown 3 1/2"

bottom 3 1/8"

Description of longitudinal joint

Welded

No. of strengthening rings

Working pressure of furnace by the rules 252 lbs

Combustion chamber plates: Material Steel

Thickness: Sides 3/4"

Back 3/4"

Top 3/4"

Bottom 1 1/8"

Pitch of stays to ditto: Sides 7/8" x 8 1/4"

Back 7/8" x 8 1/4"

Top 8 1/4" x 8 1/4"

Material of stays Steel

Diameter at smallest part 2.070"

Area supported by each stay 60 sq in

Working pressure by rules 252 lbs

End plates in steam space

How are stays secured

Working pressure by rules 252 lbs

Material of stays Steel

Material of Front plates at bottom

Steel

Thickness 1"

Material of Lower back plate Steel

Thickness 1"

Greatest pitch of stays 14 1/4" x 8 1/4"

Working pressure of plate by rules 252 lbs

Pitch of tubes 3 1/4"

Material of tube plates Steel

Thickness: Front 7/16"

Back 1/8"

Mean pitch of stays 13 1/8" x 8 1/4"

Pitch across wide water spaces 16 1/16"

Working pressures by rules 440 lbs

Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 10" x 2 x 1"

Length as per rule 2' 9 1/8"

Distance apart 8 1/4"

Number and pitch of stays in each 3 à 8 1/8"

Working pressure by rules 261 lbs

Steam dome: description of joint to shell

1/3 of strength of joint

Diameter of rivet holes

Pitch of rivets

Thickness of shell plates

Material

Description of longitudinal joint

How stayed

Working pressure of shell by rules

Crown plates: Thickness

How stayed

Diameter of rivet holes

Pitch of rivets

Thickness of shell plates

Material

Description of longitudinal joint

How stayed

Working pressure of shell by rules

Crown plates: Thickness

How stayed

Diameter of rivet holes

Pitch of rivets

Thickness of shell plates

Material

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Working pressure of shell by rules

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