

REPORT ON MACHINERY.

No. 1219
SAT. UL. 15. 1911

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Date of writing Report 8 July 1911 When handed in at Local Office 10 Port of Rotterdam
No. in Survey held at Flushing Date, First Survey 30 August 1910 Last Survey 28 June 1911
Reg. Book. on the Steel Screw Steamer "Oranji Nassau" (Number of Visits 12.5)
Master G. De Krom Built at Flushing By whom built Kon. Maj. De Schelde Tons { Gross 3811.0
Net 2345.06
Engines made at Flushing By whom made Kon. Maj. De Schelde when made 1911
Boilers made at 10 By whom made 10 when made 1911
Registered Horse Power 1 Owners Kon. West Indische Maatschappij Port belonging to Amsterdam
Nom. Horse Power as per Section 28 501 Is Refrigerating Machinery fitted for cargo purposes 16 Is Electric Light fitted Yes

ENGINES, &c.—Description of Engines Triple expansion No. of Cylinders 3 No. of Cranks 3
Dia. of Cylinders 15 x 41.5 x 68 Length of Stroke 31 Revs. per minute 80 Dia. of Screw shaft 15 Material of screw shaft Steel
Is the screw shaft fitted with a continuous liner the whole length of the stern tube No without liner Is the after end of the liner made water tight
in the propeller boss 10 If the liner is in more than one length are the joints burned 1 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 1 If two
liners are fitted, is the shaft lapped or protected between the liners 1 Length of stern bush 5' 1"
Dia. of Tunnel shaft 15 1/2 Dia. of Crank shaft journals 13 3/4 Dia. of Crank pin 14 Size of Crank webs 9 x 5 1/2 Dia. of thrust shaft under
collars 13 1/4 Dia. of screw 16 1/2 Pitch of Screw 18 No. of Blades 4 State whether moveable Yes Total surface 80.8
No. of Feed pumps 2 Diameter of ditto 3 1/4 Stroke 25 Can one be overhauled while the other is at work Yes
No. of Bilge pumps 2 Diameter of ditto 4 Stroke 25 Can one be overhauled while the other is at work Yes
No. of Donkey Engines 2 Sizes of Pumps 10 x 10, 10 x 8, 10 x 6, 6 x 6, 6 x 4, 4 x 4 No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room 1 each 3" in stoke hold, 1 each 3" in centre 3.5" in stoke hold, 1 each 3" in centre 3.5" in stoke hold, 1 each 3" in centre 3.5" in stoke hold
No. of Bilge Injections 1 sizes 8 Connected to circulating pump Is a separate Donkey Suction fitted in Engine room & size 4 x 5.5"
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 10
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 1 suction for hold, 1 port water head pump How are they protected wooden boxes
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. 28/3 of Stern Tube 28/3 Screw shaft and Propeller 23/3
Is the Screw Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper platform
Manufacturers of Steel 10 x 10, 10 x 8, 10 x 6, 6 x 6, 6 x 4, 4 x 4

BOILERS, &c.—(Letter for record 1) Manufacturers of Steel 10 x 10, 10 x 8, 10 x 6, 6 x 6, 6 x 4, 4 x 4
Total Heating Surface of Boilers 7827 Is Forced Draft fitted Yes No. and Description of Boilers three Horizontal marine boilers
Working Pressure 180 lb Tested by hydraulic pressure to 360 lb Date of test 17.2.1911 No. of Certificate 301
Can each boiler be worked separately Yes Area of fire grate in each boiler 61 sq ft No. and Description of Safety Valves to
each boiler two spring loaded Area of each valve 9.61 sq ft Pressure to which they are adjusted 180 lb Are they fitted with easing gear Yes
Smallest distance between boilers or uptakes and bunkers or woodwork over 16" Mean dia. of boilers 15 1/2" Length 11' 5" Material of shell plates Steel
Thickness 1 1/4" Range of tensile strength 29.5-30.5 Are the shell plates welded or flanged 16 Descrip. of riveting: cir. seams 20 x 20
long. seams 5 x 20 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 9 1/8" Lap of plates or width of butt straps 20 1/2"
Per centages of strength of longitudinal joint rivets 91.8% plate 88.7% Working pressure of shell by rules 196 lb Size of manhole in shell 18 x 16"
Size of compensating ring None No. and Description of Furnaces in each boiler three Monson Material Steel Outside diameter 4' 1"
Length of plain part top 1 bottom 1 Thickness of plates crown 19/32 Description of longitudinal joint Welded No. of strengthening rings None
Working pressure of furnace by the rules 191 lb Combustion chamber plates: Material Steel Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 1"
Pitch of stays to ditto: Sides 1 1/4 x 1 1/4 Back 1 1/4 x 1 1/4 Top 8 x 8 If stays are fitted with nuts or riveted heads 10 Working pressure by rules 215 lb
Material of stays Steel Diameter at smallest part 1 1/2 Area supported by each stay 58" Working pressure by rules 203 lb End plates in steam space:
Material Steel Thickness 1/8 x 1/8 Pitch of stays 16 1/2 x 15 How are stays secured Riveted double Working pressure by rules 427 lb Material of stays Steel
Diameter at smallest part 4.9 Area supported by each stay 147.5 Working pressure by rules 205 lb Material of Front plates at bottom Steel
Thickness 1" Material of Lower back plate Steel Thickness 1/4 Greatest pitch of stays 12 1/2 x 7 1/2 Working pressure of plate by rules 215 lb
Diameter of tubes 1 1/4 Pitch of tubes 3 1/2 x 3 1/2 Material of tube plates Steel Thickness: Front 1 Back 1/8 Mean pitch of stays 7 1/2 x 11 1/4
Pitch across wide water spaces 15 1/4 x 7 1/2 Working pressures by rules 205 lb Girders to Chamber tops: Material Steel Depth and
thickness of girder at centre 8 1/2 x 22 3/4 Length as per rule 2 1/4 Distance apart 8 Number and pitch of stays in each 5 of 8" pitch
Working pressure by rules 195 lb Superheater or Steam chest; how connected to boiler 1 Can the superheater be shut off and the boiler worked
separately 1 Diameter 1 Length 1 Thickness of shell plates 1 Material 1 Description of longitudinal joint 1 Diam. of rivet
holes 1 Pitch of rivets 1 Working pressure of shell by rules 1 Diameter of flue 1 Material of flue plates 1 Thickness 1
If stiffened with rings 1 Distance between rings 1 Working pressure by rules 1 End plates: Thickness 1 How stayed 1
Working pressure of end plates 1 Area of safety valves to superheater 1 Are they fitted with easing gear 1

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VERTICAL DONKEY BOILER— Manufacturers of Steel

No. *1111* 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 _____ Plates _____

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:—1 connecting rod top end bolts and nuts; 1 connecting rod bottom end bolts and nuts; 1 main bearing bolts, nuts; 1 set of cylinder bolts; 1 set of feed, bilge pump valves; 1 set of piston springs. A quantity of assorted bolts and nuts, iron of various sizes; 50 crossbar screws; 1 slide block; 12 piston bolts; 1 eccentric rod; 1 air pump rod; 50 plain, 6 stay tubes; 1 set fire bar; 1 crank shaft; 1 spare stem shaft; 2 blades propeller; 1 eccentric shears; 1 piston end, cross head, shoes; 2 valves up in all; The foregoing is a correct description, 1 set bottom, top end, bearing frame, thrust shoe; 1 set safety, escape valve springs.

Manufacturer. *Koninklijke Maatschappij „De Schelde“* *Schepswaer en Werktuigenfabriek*

Dates { During progress of work in shops -- Aug. 30; Oct. 3; Nov. 17; Dec. 8; Jan. 5. 17. March 17. 18.
of Survey { During erection on board vessel -- May 9. June 12. 17. 18.
while building { Total No. of visits 12.

Is the approved plan of main boiler forwarded herewith *yes*
also shafting, pumping plans
" " " " " "

Dates of Examination of principal parts—Cylinders *2 1/2 in.* Slides *1 1/2 in.* Covers *1 1/2 in.* Pistons *1 1/2 in.* Rods *1 1/2 in.*

Connecting rods *Made* Crank shaft *in* Thrust shaft *Ger* Tunnel shafts *ma* Screw shaft *my* Propeller *1 1/2*

Stern tube *7 1/2* Steam pipes tested *22. 6. 1911* Engine and boiler seatings *9 1/2 - 2 1/2* Engines holding down bolts *9 1/2 - 2 1/2*

Completion of pumping arrangements *22. 6. 11* Boilers fixed *18. 6. 11* Engines tried under steam *22. 6. 11*

Main boiler safety valves adjusted *17/6 1911* Thickness of adjusting washers *10 in. 10 1/2 in. 11 in. 11 1/2 in. 12 in. 12 1/2 in. 13 in. 13 1/2 in. 14 in. 14 1/2 in. 15 in. 15 1/2 in. 16 in. 16 1/2 in. 17 in. 17 1/2 in. 18 in. 18 1/2 in. 19 in. 19 1/2 in. 20 in. 20 1/2 in. 21 in. 21 1/2 in. 22 in. 22 1/2 in. 23 in. 23 1/2 in. 24 in. 24 1/2 in. 25 in. 25 1/2 in. 26 in. 26 1/2 in. 27 in. 27 1/2 in. 28 in. 28 1/2 in. 29 in. 29 1/2 in. 30 in. 30 1/2 in. 31 in. 31 1/2 in. 32 in. 32 1/2 in. 33 in. 33 1/2 in. 34 in. 34 1/2 in. 35 in. 35 1/2 in. 36 in. 36 1/2 in. 37 in. 37 1/2 in. 38 in. 38 1/2 in. 39 in. 39 1/2 in. 40 in. 40 1/2 in. 41 in. 41 1/2 in. 42 in. 42 1/2 in. 43 in. 43 1/2 in. 44 in. 44 1/2 in. 45 in. 45 1/2 in. 46 in. 46 1/2 in. 47 in. 47 1/2 in. 48 in. 48 1/2 in. 49 in. 49 1/2 in. 50 in. 50 1/2 in. 51 in. 51 1/2 in. 52 in. 52 1/2 in. 53 in. 53 1/2 in. 54 in. 54 1/2 in. 55 in. 55 1/2 in. 56 in. 56 1/2 in. 57 in. 57 1/2 in. 58 in. 58 1/2 in. 59 in. 59 1/2 in. 60 in. 60 1/2 in. 61 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