

REPORT ON MACHINERY.

No. 2590^a
MON. 13 JAN 1908

Port of Haarlem

Received at London Office

No. in Survey held at Haarlem

Date, first Survey 26th November 1906 Last Survey 3rd January 1908

Reg. Book.

59 on the Steel Screw Steamer "Colbert"

(Number of Visits 35)

Gross 5396.10
Tons Net 3410.70
When built 1907

Master J. Canton 90-08 Built at Haarlem

By whom built Forges & Chantiers

Engines made at Haarlem

By whom made Forges & Chantiers

when made 1907

Boilers made at Haarlem

By whom made Forges & Chantiers

when made 1907

Indicated Registered Horse Power 2650

Owners Engine Groos

Port belonging to Haarlem

Nom. Horse Power as per Section 28 478

Is Refrigerating Machinery fitted for cargo purposes No.

Is Electric Light fitted Yes.

ENGINES, &c.—Description of Engines Vertical triple expansion No. of Cylinders three No. of Cranks three

Dia. of Cylinders 25.42" & 71" Length of Stroke 48" Revs. per minute 75 Dia. of Screw shaft 14.45" Material of Steel screw shaft

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 No 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 Yes If two

liners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 9' 1/2"

Dia. of Tunnel shaft 12.9" Dia. of Crank shaft journals 13.56" Dia. of Crank pin 13.7" Size of Crank webs 9 1/2" x 20" Dia. of thrust shaft under

collars 14.57" Dia. of screw 17.6" Pitch of Screw 17.8" No. of Blades 4 State whether moveable No. Total surface 98.5 sq. ft.

No. of Feed pumps two Diameter of ditto 3 1/2" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Bilge pumps two Diameter of ditto 4 3/8" Stroke 27" Can one be overhauled while the other is at work Yes

No. of Donkey Engines three Sizes of Pumps 2 of 10" x 6" x 10" - 1 of 14" x 7" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room (3) three of 3 1/2" and 1 of 6" In Holds, &c. by Collector on forehold 4 of 3 1/2" and

aft 4 of 3 1/2" A pump down the system is fitted with suction in holds, by collectors.

No. of Bilge Injections one sizes 6" Connected to condenser, or to circulating pump circ 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 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 suction pipes of the fore holds How are they protected by the ceiling each side

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 August 1907 of Stern Tube August 1907 Screw shaft and Propeller August 1907

Is the Screw Shaft Tunnel watertight yes Is it fitted with a watertight door yes worked from top platform engine

BOILERS, &c.—(Letter for record (5)) Manufacturers of Steel John Spencer & Sons, Schulz-Knust, Eisen, Acieris S^{te} Etienne & G. Clark.

Total Heating Surface of Boilers 6943.2 Is Forced Draft fitted yes No. and Description of Boilers (3) three cylindrical horizontally

Working Pressure 185 Tested by hydraulic pressure to 269 Date of test 27-8 & 6-9-1907 No. of Certificate 58

Can each boiler be worked separately yes Area of fire grate in each boiler 173.25 No. and Description of Safety Valves to

each boiler (2) two with springs Area of each valve 5.94 Pressure to which they are adjusted 185 Are they fitted with easing gear yes

Smallest distance between boilers or uptakes and bunkers 24" Mean dia. of boilers 14' Length 12.6" Material of shell plates Steel

Thickness 1 1/4" Range of tensile strength 28 to 32 Are the shell plates welded or flanged flanged Descrip. of riveting: cir. seams all double

long. seams all double Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 4 1/2" width of butt straps 19 1/8"

Per centages of strength of longitudinal joint 75 Working pressure of shell by rules 195 Size of manhole in shell 16" x 13"

Size of compensating ring formed No. and Description of Furnaces in each boiler 3 Adams on ring Material Steel Outside diameter 45 1/2"

Length of plain part 8.10 1/2" Thickness of plates 3/8" Description of longitudinal joint Welded No. of strengthening rings three

Working pressure of furnace by the rules 195 Combustion chamber plates: Material Steel Thickness: Sides 25/32" Back 11/16" Top 13/16" Bottom 15/16"

Pitch of stays to ditto: Sides 8 1/2" - 10 7/8" Back 9 1/2" x 8 1/2" Top vertical If stays are fitted with nuts or riveted heads nuts both ends Working pressure by rules 195

Material of stays Steel Diameter at smallest part 1 1/32" Area supported by each stay 6 1/4" Working pressure by rules 190 End plates in steam space:

Material Steel Thickness 1 9/32" Pitch of stays 1 9/16" x 1 7/8" How are stays secured Double nuts Working pressure by rules 195 Material of stays Steel

Diameter at smallest part 5.257" Area supported by each stay 3 7/8" Working pressure by rules 195 Material of Front plates at bottom Steel

Thickness 1 3/16" Material of Lower back plate Steel Thickness 1 1/16" Greatest pitch of stays 5.8" Working pressure of plate by rules 190

Diameter of tubes 2 3/4" Pitch of tubes 3 5/4" Material of tube plates Steel Thickness: Front 13/16" Back 25/32" Mean pitch of stays 7 1/2"

Pitch across wide water spaces 1 1/8" Working pressures by rules yes Girders to Chamber tops: Material Steel plate Depth and

thickness of girder at centre 16" - 1 1/2" Length as per rule 4' Distance apart Number and pitch of stays in each

Working pressure by rules yes Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked

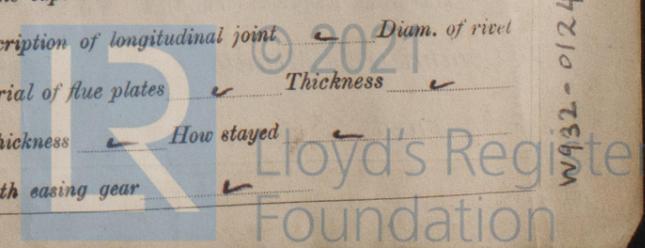
separately yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivet

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 yes

Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear yes

see letter dated 14/1/08
W932-0124



VERTICAL DONKEY BOILER— Manufacturers of Steel

No.	Description			When made	Where fixed
Made at	By whom made				
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		Stayed by		
Diameter of uptake	Thickness of uptake plates	Thickness of water tubes	Dates of survey		

SPARE GEAR. State the articles supplied:— 1 screw-shaft, 1 propeller, 1 crank-shaft, 1 circulating pump, 2 air pumps, 2 sets of pistons rings, 1 eccentric strap complete, 1 pair of cross head bearings, 1 pair of connecting rod bearings, 4 connecting rod top & bottom end bolts & nuts, 2 main bearings bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 set of check valves, 20 Condenser tubes, 30 boiler tubes ordinary, 12 stays tubes, 1 set of safety valves springs, 1 set of various bolts.

The foregoing is a correct description,

Manufacturer.

A. Briard

Dates of Survey while building	During progress of work in shops - -	1906 Dec. 22, 1907 Jan. 16, 30, Feb. 11, Mar. 29, Apr. 26, May 10, 28, Jun. 5, 20, July 11, 17, 27, Aug. 30, Sep. 6, 12	Is the approved plan of main boiler forwarded herewith	Yes.
	During erection on board vessel - -	Aug. 30, Sep. 17, 25, 26, 30, Oct. 5, 14, 26, Nov. 8, 19, 20, 23, Dec. 10, 12, 19, 21, 26, 31, 1908, January 3.		
	Total No. of visits	35.		

Dates of Examination of principal parts—	Cylinders	December 07	Slides	December 07	Covers	December 07	Pistons	December 07	Rods	December 07	
Connecting rods	December 07	Crank shaft	December 07	Thrust shaft	December 07	Tunnel shafts	December 07	Screw shaft	August 07	Propeller	August 1907
Stern tube	August 07	Steam pipes tested	November 07	Engine and boiler seatings	November 1907	Engines holding down bolts	November 1907				
Completion of pumping arrangements	December 1907	Boilers fixed	November 1907	Engines tried under steam	December 1907						
Main boiler safety valves adjusted	November 1907	Thickness of adjusting washers									
Material of Crank shaft	Steel	Identification Mark on Do.	197 A.C.	Material of Thrust shaft	Steel	Identification Mark on Do.	198 A.C.				
Material of Tunnel shafts	Steel	Identification Marks on Do.	199 A.C.	Material of Screw shafts	Steel	Identification Marks on Do.	200 A.C.				
Material of Steam Pipes	Copper	Test pressure	370 lb.								

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery of this vessel has been specially surveyed as per Rules requirements; the materials used were of good & malleable quality; the engine pieces shafts cylinders covers Condenser & et. were tested; the workmanship was satisfactory; (The engine is of the Clark System)

The three Main Boilers were built under Special Survey, as per approved plan dated of the 26th November 1906 & amended in date of 22nd January 1907 & 27th March 1907. as per Surveyor's letters of 26th Nov. (E) 1906, 22nd January (E) 1907 & 27th March (E) 1907.

The materials employed, which is of Siemens-Martin Steel were tested at works of manufacturer, in accordance with Rules requirements. The hydraulic pressure test was made to 269 lbs per square inch & the result was satisfactory.

When the engine & boilers were fitted, an experience was made on the road of Hoarse during 6 hours & the working of engine to 75 revolutions was satisfactory.

The machinery of this vessel being in good and safe working condition; in my opinion she is most fit to be classed with notation ALMGL 07 inserted in the Register Book.

The amount of Entry Fee..	£ 75.00	When applied for,	10 January 1908
Special	£ 1097.50	When received,	14/1/08
Donkey Boiler Fee, shafts..	£ 105.00		
Travelling Expenses (if any)	£ 50.00		



A. Cartier

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

Committee's Minute FRI. 17 JAN 1908

Assigned + L.N.B. 1.08 F.D. Elec. light

MACHINERY CERTIFICATE WRITTEN.

It is submitted that this vessel is eligible for THE RECORD. F.L.M.C. 1.08

Lloyd's Register of Shipping Foundation

Form No. 1B. Write "Sheer Strake" opposite the corresponding letter.

Rpt. 5a
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