

REPORT ON MACHINERY.

No. 2590^a

MON. 13 JAN 1908

Port of

Havre

Received at London Office

19

No. in Survey held at

Havre

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

Net 3410.70

When built 1907

Master J. Caston 90-08 Built at

Havre

By whom built

Forges & Chantiers

Engines made at

Havre

By whom made

Forges & Chantiers

when made 1907

Boilers made at

Havre

By whom made

Forges & Chantiers

when made 1907

Indicated Horse Power 2650.

Owners

Eugene Grosos

Port belonging to

Havre

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 25.42.9 71

Length of Stroke 48.

Revs. per minute 75.

Dia. of Screw shaft

as per rule 14.45

Material of 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

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

If two

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

Length of stern bush 9' 1/2

Dia. of Tunnel shaft as per rule 12.9

Dia. of Crank shaft journals as per rule 12.36

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 98.3

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 forced 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

size 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

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-Knauth, Eisen, Acieris S^e 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 27-8-9-1907

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 1/8"

Range of tensile strength 28 1/2 to 32

Are the shell plates welded or flanged flanged

long. seams all double

Diameter of rivet holes in long. seams 1 1/8"

Pitch of rivets 4 1/2"

width of butt straps 19 1/8"

Per centages of strength of longitudinal joint

rivets 75

plate 84

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 43 1/2"

Length of plain part top 8.10 1/2

Thickness of plates bottom 7/8

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 3/8

Back 9 1/2 x 8 1/2

Top Vertical

If stays are fitted with nuts or riveted heads nuts both ends

Material of stays Steel

Diameter at smallest part 1 1/32

Area supported by each stay 6 1/4"

Working pressure by rules 190.

Material Steel

Thickness 1 9/32

Pitch of stays 1 9/32 x 1 7/8

How are stays secured Double nuts

Diameter at smallest part 5.252

Area supported by each stay 3 7/8"

Working pressure by rules 195.

Material of Front plates at bottom Steel

Thickness 1 13/16"

Material of Lower back plate Steel

Thickness 7/16"

Greatest pitch of stays 5.8"

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

Girders to Chamber tops: Material Steel plate

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

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

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

see letter dated 14/1/08

W932-0124

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 | Plates |
| 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 rod, 1 air pump rod, 1 set 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.

H. Bricard

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

Dates of Examination of principal parts—Cylinders Dec. 07, Slides Dec. 07, Covers Dec. 07, Pistons Dec. 07, Rods Dec. 07, Connecting rods Dec. 07, Crank shaft Dec. 07, Thrust shaft Dec. 07, Tunnel shafts Dec. 07, Screw shaft Aug. 07, Propeller Aug. 07, Stern tube Aug. 07, Steam pipes tested Nov. 07, Engine and boiler seatings Nov. 07, Engines holding down bolts Nov. 07, Completion of pumping arrangements Dec. 1907, Boilers fixed Nov. 1907, Engines tried under steam Dec. 1907, Main boiler safety valves adjusted Nov. 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 & its 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 letter 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 manufacturers, in accordance with Rules requirements. The hydraulic pressure test was made to 269 lb. per square inch & the result was satisfactory.

When the engine & boilers were fitted, an experience was made on the road of Heave 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 ALMCL inserted in the Register Book.

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

Committee's Minute

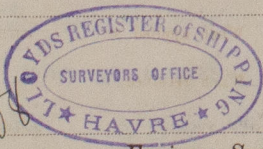
FRI. 17 JAN 1908

Assigned

+ L.M.C. 1.08

J.D. Elec. light

MACHINERY CERTIFICATE WRITTEN.



H. Cartier

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

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

F.D. Elec. light

16-1-08

Certificate (if required) to be sent to this office

(The Surveyors are requested not to write on or below the space for Committee's Minute.)

Write "Steel Structure" opposite to corresponding letter.