

## REPORT ON MACHINERY

No. 25881

THU. FEB. 20. 1913

Received at London Office

Date of writing Report

19

When handed in at Local Office

19. 2- 10 13 Port of Hull

No. in Survey held at  
Reg. Book.

Hull

Date, First Survey Dec 7<sup>th</sup> 1909 Last Survey Feb. 19<sup>th</sup> 1913.

on the steel screw steamer Saint Michel

(Number of Visits 101

Gross 575

Net 294

When built 1913-

Master

Built at Abbeyside

By whom built

Engines made at

Hull

By whom made

Charles C. &amp; Co

when made 1913-2

Boilers made at

Hull

By whom made

Charles C. &amp; Co

when made 1913-2

Registered Horse Power

Owners Vic Favale de l'Oranie

Port belonging to Bordeaux

Nom. Horse Power as per Section 28

64

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

## ENGINES, &amp;c.—Description of Engines Triple expansion

No. of Cylinders Three No. of Cranks 3

Dia. of Cylinders 13-18-31

Length of Stroke 21

Revs. per minute

Dia. of Screw shaft

as per rule 7.19

Material of steel

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

Is the after end of the liner made water tight

in the propeller boss

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 2'-6 1/2"

Dia. of Tunnel shaft

as per rule 6.91

as fitted 6.91

Dia. of Crank shaft journals

as per rule 6.31

as fitted 6.31

Dia. of Crank pin 6 1/2"

Size of Crank webs 13x4 1/2"

Dia. of thrust shaft under

collars 6 1/2"

Dia. of screw 8-6"

Pitch of Screw 8-3"

No. of Blades 4

State whether moveable

no

Total surface 26 1/2"

No. of Feed pumps

one

Diameter of ditto 2 1/2"

Stroke 10"

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

one

Diameter of ditto 2 1/2"

Stroke 10"

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

two duplex

Sizes of Pumps 6" 4 1/2" x 6"

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

In Engine Room

Three 2"

one in tunnel well

In Holds, &amp;c.

one 2" in each hold

one 2 1/2" in

each peak

No. of Bilge Injections

one

size 3"

Connected to condenser, or to circulating pump

pump

Is a separate Donkey Suction fitted in Engine room

&amp; size

yes 2 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

no

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

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

28-1-13

of Stern Tube

29-1-13

Screw shaft and Propeller

5-2-13

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

top platform

## BOILERS, &amp;c.—(Letter for record S)

Manufacturers of Steel

Steel Co. of Scotland

Total Heating Surface of Boilers

1210 1/2

Is Forced Draft fitted

no

No. and Description of Boilers

one single ended

Working Pressure

180 lbs

Tested by hydraulic pressure to

300 lbs

Date of test

8-11-12

No. of Certificate

1941

Can each boiler be worked separately

yes

Area of fire grate in each boiler

36.6 1/2

No. and Description of Safety Valves to

each boiler

two spring loaded

Area of each valve

3.97 1/2

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

Smallest distance between boilers

on uptakes and bunkers

on woodwork

11" lagged

Mean dia. of boilers

14 1/2"

Length

10'-0"

Material of shell plates

steel

Thickness

1"

Range of tensile strength

28-32 tons

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

double

long. seams

T.R. &amp; B. 1

Diameter of rivet holes in long. seams

1 1/16"

Pitch of rivets

7 5/8"

Lap of plates or width of butt straps

16"

Per centages of strength of longitudinal joint

rivets 86 1/2

plate 86

Working pressure of shell by rules

186

Size of manhole in shell

12" x 16"

Size of compensating ring

8" x 1"

No. and Description of Furnaces in each boiler

two plain

Material

steel

Outside diameter

41 1/2"

Length of plain part

top 79 1/4"

bottom 72"

Thickness of plates

crown 3 25/32"

bottom 3 25/32"

Description of longitudinal joint

welded

No. of strengthening rings

yes

Working pressure of furnace by the rules

187

Combustion chamber plates: Material

steel

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 1/2" x 9 1/2"

Back

10" x 6 1/2"

Top

9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

181

Material of stays

steel

Diameter at smallest part

2.07"

Area supported by each stay

90"

Working pressure by rules

207

End plates in steam space:

yes

Material

steel

Thickness

1 1/32"

Pitch of stays

7" x 15 1/2"

How are stays secured

d. to

Working pressure by rules

180

Material of stays

steel

Diameter at smallest part

5 1/8"

Area supported by each stay

263.5"

Working pressure by rules

204

Material of Front plates at bottom

steel

Thickness

1 5/16"

Material of Lower back plate

steel

Thickness

7/8"

Greatest pitch of stays

14 1/4" x 9 1/2"

Working pressure of plate by rules

192

Diameter of tubes

3 1/2"

Pitch of tubes

4 3/4" x 4 7/8"

Material of tube plates

steel

Thickness: Front

15/16"

Back

13/16"

Mean pitch of stays

9 3/8"

Pitch across wide water spaces

14 1/2"

Working pressures by rules

182 lbs

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

7 3/4" x 1 1/2"

Length as per rule

29 1/4"

Distance apart

8 1/2"

Working pressure by rules

196

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

In a Report also sent on the Hull of the Ship

Im. 212-T.

Lloyd's Register  
W1336-0157



# VERTICAL DONKEY BOILER— Manufacturers of Steel

|                                      |  |                           |                                     |                                  |
|--------------------------------------|--|---------------------------|-------------------------------------|----------------------------------|
| No.                                  | Description  |                           |                                     |                                  |
| Made at                              | By whom made   | When made                 | Where fired                         |                                  |
| Working pressure                     | tested by hydraulic pressure to                        | Date of test              | No. of Certificate                  | Fire grate area                  |
| 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 |
| 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:—Two top end bolts & nuts, Two bottom end bolts & nuts, Two main bearing bolts & nuts, one set of coupling bolts & nuts, one screw shaft  $\frac{1}{2}$ " 10 11 FLS, one crank shaft  $\frac{1}{2}$ " 10 13 FLS one set of piston rings all cylinders, one eccentric strap.

The foregoing is a correct description,  
J. J. Salethorpe Manufacturer.

Dates of Survey while building  
During progress of work in shops -- 1909. Dec 7. 16. 21. 22. 30. 1910. Jan 5. 8. 20. Feb 3. 8. 17. 23. 25. 26. Mar 2. 5. 7. 8. 9. 21. Apr 1. 4. 7. 8. 16. 22. 26. 27.  
During erection on board vessel -- May 10. 23. 28. Jun 6. 9. Dec 1. 5. 8. 13. 16. 19. 1911 Jan 3. 7. 10. 12. 14. 18. 24. 31. Feb 8. 1 April. Dec 21. 1912. Feb 6. 11. 23. 27. Mar 6. 9. 18. 27. Apr 19. May 1. 7. 9. 15. 23. Jul 11. 20. 24. 26. Aug 16. 28. Sept 6. 9. 10. 13. 23. Oct 21. 29. Nov 1. 6.  
Total No. of visits 101.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Cylinders 28-8-12 Slides 28-8-12 Covers 28-8-12 Pistons 28-8-12 Rods 28-8-12  
Connecting rods 28-8-12 Crank shaft 28-8-12 Thrust shaft 9-9-12 Tunnel shafts 11-11-12 Screw shaft 11-11-12 Propeller 23-1-12  
Stern tube 28-1-13 Steam pipes tested 10-2-13 Engine and boiler seatings 28-1-13 Engines holding down bolts 11-2-13  
Completion of pumping arrangements 11-2-13 Boilers fixed 11-2-13 Engines tried under steam 13-2-13  
Main boiler safety valves adjusted 13-2-13 Thickness of adjusting washers  $P \frac{5}{16}$   $S \frac{9}{16}$

Material of Crank shaft Steel Identification Mark on Do. 603JB Material of Thrust shaft Steel Identification Mark on Do. 1006FLS  
Material of Tunnel shafts Steel Identification Marks on Do. 1010FLS Material of Screw shafts Steel Identification Marks on Do. 1012FLS  
Material of Steam Pipes Copper solid drawn Test pressure 400 lbs

General Remarks (State quality of workmanship, opinions as to class, &c.) The Machinery for this vessel has been constructed under special survey in accordance with the approved plans & the rules of this society, the materials & workmanship are good. The Boiler has been tested by hydraulic pressure to 200 lbs found sound & tight. The Machinery has been properly fitted & secured on board & on completion was tried under steam found to work satisfactorily.

These Engines were completed, with the exception of fitting the pistons & the shafting, in 1910 they have now been completely opened up, overhauled, cleaned & examined. In my opinion the vessel is eligible for the record + L.M.C. 2-13.

It is submitted that  
this vessel is eligible for  
THE RECORD + L.M.C. 2-13.

The amount of Entry Fee .. £ 1 : 0 :  
Special .. £ 9 : 12 :  
Donkey Boiler Fee .. £ : :  
Travelling Expenses (if any) £  
When applied for, 18-2-13  
When received, 20-2-13  
FRI. FEB. 21 1913

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

Committee's Minute

Assigned

LMC 2-13



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Foundation