

## REPORT ON MACHINERY.

Port of

Dublin

Received at London Office JUN 6 1902

Survey held at

Dublin

Date, first Survey

30<sup>th</sup> April

Last Survey

4<sup>th</sup> June 1902

(Number of Visits 7)

on the

Machinery of the Twin Screw Barge "Slaney"

Tons { Gross  
Net

Built at

Dublin

By whom built

Rop &amp; Walpole

When built

1892

made at

Dublin

By whom made

Rop &amp; Walpole

when made

1892

made at

By whom made

- " -

when made

1892

Horse Power

Owners

A Guinness Son &amp; Co Ltd

Port belonging to

Dublin

Power as per Section 28

13.5 5.76

Is Refrigerating Machinery fitted

no

Is Electric Light fitted

no

S, &amp;c.—Description of Engines

Simple Non Condensing Inverted

No. of Cylinders

2

No. of Cranks

2

Cylinders

10"

Length of Stroke

14

Revs. per minute

90

Dia. of Screw shaft

as per rule

3 1/2

Lgth. of stern bush

10"

Screw shaft

as per rule

3 1/4

Dia. of Crank shaft journals

as per rule

3 1/4

Dia. of Crank pin

3 1/4

Size of Crank webs

1 1/2 x 2 1/2

Dia. of thrust shaft under

4 Dia. of screw

4' 0"

Pitch of screw

7' 6"

No. of blades

3

State whether moveable

no

Total surface

4.8

Pumps 1 Injector

Diameter of ditto

1"

Stroke

-

Can one be overhauled while the other is at work

-

Pumps 1 Injector

Diameter of ditto

3"

Stroke

-

Can one be overhauled while the other is at work

-

Key Engines none

Sizes of Pumps

none

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

Room

2 1/2

In Holds, &amp;c.

2 1/2 + 2 1/2 to Rack tank.

Injections - sizes

Connected to condenser, or to circulating pump

Is a separate donkey suction fitted in Engine room &amp; size

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

-

Connections with the sea direct on the skin of the ship

yes

Are they Valves or Cocks

Cocks

And 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

And 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

no

Are carried through the bunkers

none

How are they protected

-

S, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

yes

Suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

yes

Stern tube, propeller, screw shaft, and all connections examined in dry dock

yes

Is the screw shaft tunnel watertight

-

With a watertight door

-

worked from

-

S, &amp;c.— (Letter for record)

S

Total Heating Surface of Boilers

4070 sq ft

Is forced draft fitted

no

Description of Boilers

one

Scotch Marine Type

Working Pressure

100

Tested by hydraulic pressure to

150 lb

9<sup>th</sup> April Can each boiler be worked separately

-

Area of fire grate in each boiler

8 1/2 sq ft

No. and Description of safety valves to

2 - direct spring loaded

Area of each valve

4.9

Pressure to which they are adjusted

92 lb

Are they fitted with easing gear

yes

Space between boilers or uptakes and bunkers or woodwork

12" from bunkers

Mean dia. of boilers

6' 7 1/2"

Length

7' 8"

Material of shell plates

Steel

Range of tensile strength

-

Are they welded or flanged

no

Descrip. of riveting: cir. seams

single

long. seams

double

Rivet holes in long. seams

1 3/16"

Pitch of rivets

3 5/16"

2 rows

Lap of plates or width of butt straps

8 1/2"

of strength of longitudinal joint

rivets

75%

Working pressure of shell by rules

120 lb

Size of manhole in shell

14 1/2 x 10 1/2

insulating ring

24 1/2 x 20 3/4

No. and Description of Furnaces in each boiler

one, plain

Material

Steel

Outside diameter

2' 9"

in part

top

5' 1/2"

Thickness of plates

crown

1/2"

Description of longitudinal joint

welded

No. of strengthening rings

none

sure of furnace by the rules

132 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

7/16"

Back

7/16"

Top

7/16"

Bottom

7/16"

to ditto: Sides

6 7/8 x 9 5/8"

Back

8 x 8 1/2"

Top

8 x 8 1/2"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

77 lb

stays

Steel

Diameter at smallest part

1 3/4"

Area supported by each stay

70 sq in

Working pressure by rules

110 lb

End plates in steam space:

Steel

Thickness

1/2"

Pitch of stays

1 1/2 x 4"

How are stays secured

double nut

Working pressure by rules

106 lb

Material of stays

Steel

smallest part

1 3/4"

Area supported by each stay

106 sq in

Working pressure by rules

116 lb

Material of Front plates at bottom

Steel

Material of Lower back plate

Steel

Thickness

1/2"

Greatest pitch of stays

15 x 7"

Working pressure of plate by rules

100 lb

tubes

1 1/2"

Pitch of tubes

25 lb

Material of tube plates

Steel

Thickness: Front

9/16"

Back

5/8"

Mean pitch of stays

9 1/2"

wide water spaces

10"

Working pressures by rules

172 lb

Girders to Chamber tops: Material

Steel

Depth and

girder at centre

4 1/2 x 2"

Length as per rule

20"

Distance apart

8 1/2"

Number and pitch of Stays in each

2 at 8' pitch

pressure by rules

180 lb

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

th rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear



**DONKEY BOILER**— No. \_\_\_\_\_ Description *None*

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from \_\_\_\_\_

enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_

strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays \_\_\_\_\_

Dia. of stays. \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_

joint \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— *None*

The foregoing is a correct description,

Manufacturer.

Dates \_\_\_\_\_ During progress of work in shops - -  
 of Survey \_\_\_\_\_ During erection on board vessel - -  
 while building \_\_\_\_\_ Total No. of visits \_\_\_\_\_

Is the approved plan of main boiler forwarded herewith

“ “ “ donkey “ “ “

**General Remarks** (State quality of workmanship, opinions as to class, &c.

*Workmanship good.*

*Engines & Boiler efficient & suitable for service in this Barge  
 whilst engaged in River work only.*

Material of screw shaft *Iron* 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 *no* If the liner is in more than one length are the joints burnt

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 non-corrosive *fits tightly* If two liners are fitted, is the shaft lapped or protected between the liners *✓*

*Screw shafts examined*

It is submitted that  
 this vessel is eligible for  
 THE RECORD. B & M 56.02

*C.M.  
 6.6.02*

*J.L.  
 7.6.02*

The amount of Entry Fee.. £ *2 : 10* : \_\_\_\_\_ When applied for, *5/6/02*

Special .. .. £ : : \_\_\_\_\_

Donkey Boiler Fee .. .. £ : : \_\_\_\_\_ When received, *5-7-02*

Travelling Expenses (if any) £ : : \_\_\_\_\_

*John Macwilliams*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Vessels

Committee's Minute

*TUES. 10 11 02*

Assigned

*B & M 56.02*

MACHINERY CERTIFICATE  
 WRITTEN



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 Foundation

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