

REPORT ON MACHINERY.

No.

8719

TUES. 8 AUG 1893

Port of *Hull*

Received at London Office

18

No. in Survey held at
Reg. Book.

Hull

Date, first Survey

Jan 8th Last Survey

July 20th 1893.

2nd Sup. on the

Iron Steam Trawler Rhine

(Number of Visits *7*)

Tons { Gross *117*
Net *58.36*

Master

Built at *Berkeley*

By whom built *Cochran & Cooper*

When built *1893*

Engines made at

Hull

By whom made

Charles & Holmes & Co

when made *1893*

Boilers made at

Hull

By whom made

Charles & Holmes & Co

when made *1893*

Registered Horse Power

44

Owners

G & J Sleight

Port belonging to *Grimsby*

Nom. Horse Power as per Section 28 *✓*

ENGINES, &c.—

Description of Engines

Compound Inverted

No. of Cylinders

two

Diameter of Cylinders

14" x 32"

Length of Stroke

21

Revolutions per minute

110

Diameter of Screw shaft

as per rule *5.75*

Diameter of Tunnel shaft

as per rule *5.49*

Diameter of Crank shaft journals

6"

Diameter of Crank pin

6"

Size of Crank webs

8" x 4 1/4"

Diameter of screw

7.9"

Pitch of screw

9.0" to 10.0"

No. of blades

4

State whether moveable

Yes

Total surface

22 sq ft

No. of Feed pumps

One

Diameter of ditto

2 1/4"

Stroke

12"

Can one be overhauled while the other is at work *—*

No. of Bilge pumps

One

Diameter of ditto

2 1/4"

Stroke

12"

Can one be overhauled while the other is at work *—*

No. of Donkey Engines

One

Sizes of Pumps

3" x 6"

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

In Engine Room

One

2"

In Holds, &c.

One

2"

3" Ejector with suction in the Engine Bilge and flush well and discharge on the

No. of bilge injections

One

sizes *3"*

Connected to condenser, or to circulating pump *Is a separate donkey suction fitted in Engine room & size 3" - ejector*

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 to Inward

How are they protected

board case

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

When were stern tube, propeller, screw shaft, and all connections examined in dry dock *and now* Is the screw shaft tunnel watertight *in tunnel*

Is it fitted with a watertight door

—

worked from *—*

BOILERS, &c.—

(Letter for record *S*)

Total Heating Surface of Boilers

No. and Description of Boilers

One cylindrical hull

Working Pressure

90 lb

Tested by hydraulic pressure to *180 lb*

Date of test

7/7/93

Can each boiler be worked separately

—

Area of fire grate in each boiler

279 sq ft

No. and Description of safety valves to

each boiler

See Spring loaded

Area of each valve

4.91 sq in

Pressure to which they are adjusted

92 lb

Are they fitted

with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7"

Mean diameter of boilers *10.6"*

Length

9.0

Material of shell plates

Steel

Thickness

10/16

Description of riveting: circum. seams

all

long. seams *30 lb riv lap*

Diameter of rivet holes in long. seams

1"

Pitch of rivets

5 1/4"

Lap of plates or width of butt straps

7 3/4"

Per centages of strength of longitudinal joint

rivets *81.4%*

plate *80.9%*

Working pressure of shell by rules

95 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

6" x 10/16"

No. and Description of Furnaces in each boiler

two plain

Material

Steel

Outside diameter *37"*

Length of plain part

top *6.0"*

bottom *6.0"*

Thickness of plates

crown *1/2"*

bottom *1/2"*

Description of longitudinal joint

brided

No. of strengthening rings *—*

Working pressure of furnace by the rules

100 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

9/16"

Pitch of stays to ditto: Sides

9"

Back

9"

Top

9"

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules *95 lb*

Material of stays

steel

Diameter at smallest part

1 1/8"

Area supported by each stay

9 x 9"

Working pressure by rules

97 lb

End plates in steam space:

Material

Steel

Thickness

1 1/16"

Pitch of stays

15 1/2"

How are stays secured

all nuts

Working pressure by rules

94 lb

Material of stays

Steel

Diameter at smallest part

2 1/4"

Area supported by each stay

15 1/2" x 2"

Working pressure by rules

—

Material of Front plates at bottom

Steel

Thickness

10/16"

Material of Lower back plate

Steel

Thickness

10/16"

Greatest pitch of stays

9"

Working pressure of plate by rules *90 lb*

Diameter of tubes

3 1/4"

Pitch of tubes

4 3/4"

Material of tube plates

Steel

Thickness: Front

10/16"

Back

1 1/16"

Mean pitch of stays

14 1/4" x 9 1/2"

Pitch across wide water spaces

15"

Working pressures by rules

90 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

5 1/4" x 1 1/2"

Length as per rule

25"

Distance apart

7 1/2"

Number and pitch of Stays in each

two

9"

Working pressure by rules

120 lb

Superheater or Steam chest; how connected to boiler

—

Can the superheater be shut off and the boiler worked

DONKEY BOILER— Description *In Donkey Boiler*

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 main boilers can enter the donkey boiler _____ Diameter of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____
 Description of riveting long. seams _____ Diameter of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____
 Lap of plating _____ Per centage of strength of joint _____ Rivets _____ 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 _____ Thickness of furnace crown plates _____ Stayed by _____ Working pressure of shell by rules _____
 Working pressure of furnace by rules _____ Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____

SPARE GEAR. State the articles supplied :— *Two top end bolts. Two bottom end bolts. Two main bearing bolts. One set coupling bolts. One set feed pump valve one set Bridge pump valve. set Check valve. & Safety valve lifting. The vessel efficient with masts and sails as a hauler.*
The foregoing is a correct description,
Charles Holmes Manufacturer.

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

The Machinery and Boiler of this Steam Hauler have been constructed under Special Survey and placed on board in accordance with The Societys Rules. They are now in my opinion in safe working condition and The Case is Respectfully submitted in the notification + L M C. 7. 93. in The Register Book.

It is submitted that this vessel is eligible for THE RECORD + L M C. 7. 93 -

Per 8/8/93 -

Certificate (if required) to be sent to *The Surveyors, Hull*
 The amount of Entry Fee.. £ *0 0 0* : : :
 Special £ *0 0 0* : : :
 Donkey Boiler Fee £ *✓* : : :
 Travelling Expenses (if any) £ *✓* : : :
 When applied for, *5/9 93*
 When received, *13. 9 93*

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

Committee's Minute

TUES. 8 AUG 1893

Assigned

+ L M C. 7. 93



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