

Port of

Newcastle-on-Tyne

Received at London Office

25 SEP 1909

No. in Survey held at

Date, first Survey 18 May

Last Survey 16. Sept 1909

Reg. Book.

on the s/s Trawler Dale Castle

(Number of Vents 16)

Tons { Gross 246
Net 95

Master

Built at North Shields By whom built Smiths & Co Ltd 410

When built 1909

Engines made at

North Shields

By whom made

Shield Engineering & Dry Dock Co Ltd

1885

when made 1909

Boilers made at

Leahurst

By whom made

Leahurst Shipyard & Co Ltd

when made 1909

Registered Horse Power

Owners Castle Steam Trawlers Ltd

Port belonging to Swansea

Nom. Horse Power as per Section 28

80

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

7.48

No. of Cranks

7.516

Dia. of Cylinders 12 1/2 - 21. 35

Length of Stroke 26

Revs. per minute 110

Dia. of Screw shaft

as per rule 7.516

Material of (6.9)

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

Yes

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 3'-0"

Dia. of Tunnel shaft

as per rule 6.51

Dia. of Crank shaft journals

as per rule 8.82

Dia. of Crank pin 7 1/8

Size of Crank webs 10 1/2 x 4 1/2

Dia. of thrust shaft under

collars 7 1/8

Dia. of screw 9'-6"

Pitch of Screw 9'-9" mean

No. of Blades 4

State whether moveable

No

Total surface 30 1/2 sq feet

No. of Feed pumps 2

Diameter of ditto 2 1/2

Stroke 12"

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps 2

Diameter of ditto 2 1/2

Stroke 12"

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines two

Sizes of Pumps

Feed Sp. Vertical Pressure 2.9

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

Ballast Tank Supply 6 x 4 x 6

In Engine Room 2 of 2" dia.

2 1/2" ejector 6" dia. parts.

In Holds, &c. one from engine one from ejector 2" dia. each.

No. of Bilge Injections 1

sizes 3 1/2

Connected to condenser, or to circulating pump

CP

Is a separate Donkey Suction fitted in Engine room & size 4" x 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

hold suction tunnel steam exhaust

How are they protected hold suction - wood casing

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 4.8.09

of Stern Tube 4.8.09

Screw shaft and Propeller 4.8.09

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from

BOILERS, &c.—(Letter for record

Manufacturers of Steel

Total Heating Surface of Boilers 1420

Is Forced Draft fitted

No

No. and Description of Boilers 1. S.E. Cyl. Multitubular

Working Pressure 180 lb

Tested by hydraulic pressure to 360 lb

Date of test 20.7.09

No. of Certificate 7873

Can each boiler be worked separately

Yes

Area of fire grate in each boiler 50 sq ft

No. and Description of Safety Valves to

each boiler two direct spring

Area of each valve 4.9 sq"

Pressure to which they are adjusted 185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork 9"

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

End plates in steam space:

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of stays

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Working pressure of plate by rules

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Back

Mean pitch of stays

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Depth and

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

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

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

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

W321-0102

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ Description *None fitted*

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 _____ 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:— *Two top end bolts and nuts, two bottom end bolts and nuts, two main bearings bolts and nuts, spare coupling bolts and nuts, spare feed & Bilge pump valves, assorted iron bolts and nuts, spare propeller— and various stores—*

The foregoing is a correct description,

Manufacturer.

1909
 Dates of Survey { During progress of work in shops— { May 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31
 while building { During erection on board vessel— { Aug 4, 7, 10, 16, 20, 24, 14, 16
 Total No. of visits 16

Is the approved plan of main boiler forwarded herewith *Yes*
 " " " donkey " " *Please return for with date*

Dates of Examination of principal parts—Cylinders *28.8.09* Slides *4.8.09* Covers *4.8.09* Pistons *4.8.09* Rods *4.8.09*
 Connecting rods *1.4.09* Crank shaft *1.7.09* Thrust shaft *1.7.09* Tunnel shafts _____ Screw shaft *1.4.09* Propeller *28.8.09*
 Stern tube *2.7.09* Steam pipes tested *16.8.09* Engine and boiler seatings *29.4.09* Engines holding down bolts *20.8.09*
 Completion of pumping arrangements *20.8.09* Boilers fixed *20.8.09* Engines tried under steam *20.8.09*
 Main boiler safety valves adjusted *20.8.09* Thickness of adjusting washers *3/8" 3/8"*
 Material of Crank shaft *2 1/2" steel* Identification Mark on Do. *2314ATE* Material of Thrust shaft *6 3/8" N* Identification Mark on Do. *6738 N, WC*
 Material of Tunnel shafts _____ Identification Marks on Do. _____ Material of Screw shafts *6 1/2"* Identification Marks on Do. *2314ATE*
 Material of Steam Pipes *Seamless Copper* Test pressure *360 lb at Bolton Graham Works - N.S.*

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

*The machinery built under Special Survey the material and workmanship found good and efficient
 The machinery fitted up on board tested under steam and found satisfactory
 Survey opinion this vessel is now eligible for the notification of L.C.M.C. 9.09 to be made in the Register Book.*

It is submitted that
 this vessel is eligible for
 THE RECORD. + L.M.C 9.09.

J.W.D.
27/9/09. *J.R.P.*

The amount of Entry Fee. £ 1 : 0 :
 Special .. £ 12 : 0 :
 Donkey Boiler Fee .. £ : :
 Travelling Expenses (if any) £ : :
 When applied for, *24 SEP 1909*
 When received, *2.10.1909*

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

Committee's Minute

Assigned

TUES. 28 SEP 1909

MACHINERY CERTIFICATE
 WRITTEN.



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