

REPORT ON MACHINERY.

No. 19624

Port of Hull

SAT. 30 NOV 1907

Received at London Office

No. in Survey held at Hull

Date, first Survey July 10th

Last Survey Nov 18th 1907.

(Number of Visits 32)

Reg. Book. 24 suff on the Steamer DEWLAND

Tons { Gross 236
Net 93

Master Selby Built at Selby

By whom built Bochum & Sons

When built 1907

Engines made at Hull

By whom made Amos & Smith

when made 1907

Boilers made at 5

By whom made 5

when made 5

Registered Horse Power 72

Owners W. Jenkins

Port belonging to Wilmington

Nom. Horse Power as per Section 28 72

Is Refrigerating Machinery fitted for cargo purposes No

Is Electric Light fitted No

ENGINES, &c.—Description of Engines

Triple

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders 12" x 21" x 34"

Length of Stroke 24"

Revs. per minute 114

Dia. of Screw shaft 6 1/2"

as per rule 6 1/2"

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 Yes

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 Yes

between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes

If two Yes

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

Length of stern bush 36"

Dia. of Tunnel shaft 6 1/2"

Dia. of Crank shaft journals 6 1/2"

Dia. of Crank pin 6 1/2"

Size of Crank webs 13" x 13"

Dia. of thrust shaft under collars 6 1/2"

Dia. of screw 8'-9"

Pitch of Screw 10'-10 1/2"

No. of Blades 4

State whether moveable No

Total surface 274

No. of Feed pumps 2

Diameter of ditto 2 1/2"

Stroke 13"

Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2

Diameter of ditto 2 1/2"

Stroke 13"

Can one be overhauled while the other is at work Yes

No. of Donkey Engines 2

Sizes of Pumps 6" x 4 1/2" x 6" 5" x 3 1/2" x 6"

No. and size of Suctions connected to both Bilge and Donkey pumps 2-2" (Fore & aft)

In Engine Room 2-2" (Fore & aft)

In Holds, &c. 1-2" (Fore room)

No. of Bilge Injections 1 sizes 3"

Connected to condenser, or to circulating pump Yes

Is a separate Donkey Suction fitted in Engine room & size 2" (Fore)

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 Hold suction

How are they protected 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 23.9.07

of Stern Tube 23.9.07

Screw shaft and Propeller 23.9.07

Is the Screw Shaft Tunnel watertight None

Is it fitted with a watertight door Yes

worked from None

BOILERS, &c.—(Letter for record (T))

Manufacturers of Steel Steel Co of Scotland.

Total Heating Surface of Boilers 12554

Is Forced Draft fitted No

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

Working Pressure 180

Tested by hydraulic pressure to 360 lb.

Date of test 29.10.07

No. of Certificate 1608

Can each boiler be worked separately Yes

Area of fire grate in each boiler 36.7

No. and Description of Safety Valves to each boiler 2 Spring loaded

Area of each valve 3.97

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 6"

Mean dia. of boilers 12'-6"

Length 10'-7 1/2"

Material of shell plates Steel

Thickness 1 1/2"

Range of tensile strength 28-32

Are the shell plates welded or flanged No

Descrip. of riveting: cir. seams SR. Lap

long. seams SR. Lap

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

Pitch of rivets 7.56

Lap of plates or width of butt straps 16 1/4"

Per centages of strength of longitudinal joint rivets 95

plate 85.1

Working pressure of shell by rules 181

Size of manhole in shell 16 x 12

Size of compensating ring 40 x 30 x 1 1/2"

No. and Description of Furnaces in each boiler 2 plain

Material Steel Outside diameter 43.53

Length of plain part top 5'-11 1/2"

Thickness of plates oron 1 1/2"

Description of longitudinal joint welded

No. of strengthening rings None

Working pressure of furnace by the rules 181

Combustion chamber plates: Material Steel

Thickness: Sides 2 1/2"

Back 1 1/2"

Top 5"

Bottom 2 1/2"

Pitch of stays to ditto: Sides 9 1/4" x 7 1/2"

Back 9 x 8 1/2"

Top 8 1/2" x 7 1/2"

If stays are fitted with nuts or riveted heads Yes

Working pressure by rules 208

Material of stays Iron

Diameter at smallest part 1 5/8"

Area supported by each stay 78.75

Working pressure by rules 197

End plates in steam space: None

Material Steel

Thickness 1 1/2"

Pitch of stays 16 1/4" x 15"

How are stays secured SR. Lap

Working pressure by rules 196

Material of stays Steel

Diameter at smallest part 5.05

Area supported by each stay 243.75

Working pressure by rules 207

Material of Front plates at bottom Steel

Thickness 2 1/2"

Material of Lower back plate Steel

Thickness 3"

Greatest pitch of stays 18"

Working pressure of plate by rules 180

Diameter of tubes 3 1/2"

Pitch of tubes 4 1/2" x 4 1/2"

Material of tube plates Steel

Thickness: Front 3/32"

Back 3/32"

Mean pitch of stays 9 1/2" x 9 1/2"

Pitch across wide water spaces 14"

Working pressures by rules 183

Girders to Chamber tops: Material Iron

Depth and thickness of girder at centre 8 1/2" x 2"

Length as per rule 2'-10"

Distance apart 8 1/2"

Number and pitch of stays in each 30 7 1/2"

Working pressure by rules 180

Superheater or Steam chest; how connected to boiler None

Can the superheater be shut off and the boiler worked separately Yes

Diameter None

Length None

Thickness of shell plates None

Material None

Description of longitudinal joint None

Diam. of rivet None

Pitch of rivets None

Working pressure of shell by rules None

Diameter of flue None

Material of flue plates None

Thickness None

If stiffened with rings None

Distance between rings None

Working pressure by rules None

End plates: Thickness None

How stayed None

Working pressure of end plates None

Area of safety valves to superheater None

Are they fitted with easing gear None

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 _____ 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 & two bottom end connecting rods, bolts & nuts, two main bearing bolts, one set of coupling bolts & nuts, one set of feed & bilge pump valves, one main & one donkey feed check valves, assorted bolts & nuts etc.*

FOR AMOS & SMITH

The foregoing is a correct description,

Manufacturer.

W. S. Hyde

MANAGING PARTNER.

Dates of Survey while building { During progress of work in shops - - } *1907 - Jul. 10, 20, 26, 30 Aug. 23, 31. Sep. 4, 6, 11, 13, 14, 20, 21, 23, 27, 28. Oct. 1, 4, 10.*

{ During erection on board vessel - - } *Oct. 15, 19, 22, 25, 26, 29 Nov. 6, 11, 12, 13, 15, 18*

Total No. of visits *32* Is the approved plan of main boiler forwarded herewith *yes*

Dates of Examination of principal parts—Cylinders *1.10.07* Slides *1.11.07* Covers *10.10.07* Pistons *19.10.07* Rods *27.9.07*

Connecting rods *26.10.07* Crank shaft *10.10.07* Thrust shaft *4.10.07* Tunnel shafts ✓ Screw shaft *18.9.07* Propeller *28.9.07*

Stern tube *20.9.07* Steam pipes tested *11.11.07* Engine and boiler seatings *23.9.07* Engines holding down bolts *6.11.07*

Completion of pumping arrangements *18.11.07* Boilers fixed *6.11.07* Engines tried under steam *11.11.07*

Main boiler safety valves adjusted *11.11.07* Thickness of adjusting washers *P₁: S₅⁶*

Material of Crank shaft *Steel* Identification Mark on Do. *374. J.H.G. 26.10.07* Material of Thrust shaft *Steel* Identification Mark on Do. *374. J.H.G. 26.10.07*

Material of Tunnel shafts ✓ Identification Marks on Do. ✓ Material of Screw shafts *Iron* Identification Marks on Do. *374. J.H.G. 12.10.07*

Material of Steam Pipes *Solid drawn Copper* Test pressure *360 lbs.*

General Remarks (State quality of workmanship, opinions as to class, &c. *The machinery & boiler of this vessel have been constructed under Special Survey, are of good material & workmanship & have been fitted & secured on board in accordance with the Rules. They are now in good working condition & eligible in my opinion to have the Notation - L. M. C. 11.07. in the Register Book.*

It is submitted that this vessel is eligible for THE RECORD + Emb 11.07.

1 SB-180 lbs. GS 37¢ HS. 1255¢.

2 p.f.

W. S. Hyde 30.11.07.

The amount of Entry Fee.. £ 1 : 0 : 0 When applied for. *28/11/07*

Special £ 10 : 16 : 0

Donkey Boiler Fee £ : : 0 When received. *NR*

Travelling Expenses (if any) £ : : 4 : 0 *29/11/07*

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

Committee's Minute TUES. 3 DEC 1907

Assigned + L.M.C. 11.07

MACHINELY WRITTEN.



Certificate (if required) to be sent to

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