

## REPORT ON MACHINERY.

No. 22455

Port of SunderlandReceived at London Office 11th 5 Oct 1905No. in Survey held at SunderlandDate, first Survey 20<sup>th</sup> May 1905 Last Survey 3<sup>rd</sup> October 1905

Reg. Book.

(Number of Visits 52)521 on the Steel Screw Steamer HermesGross 3890  
TonsNet 2526When built 1905Master H. Simonson 98.05 Built at SunderlandBy whom built J. P. Thompson & Sons LtdEngines made at SunderlandBy whom made H. Clark & Cowhen made 1905Boilers made at doBy whom made dowhen made 1905

Registered Horse Power

Owners Blundgaard & Norderud & CoPort belonging to DrammenNom. Horse Power as per Section 28 329Is Refrigerating Machinery fitted for cargo purposes noIs Electric Light fitted no

ENGINES, &amp;c.—Description of Engines

Vertical Triple ExpansionNo. of Cylinders 3No. of Cranks 3tilted amidshipsDia. of Cylinders 25.41.67Length of Stroke 45Revs. per minute 65

Dia. of Screw shaft

as per rule 14Material of Ironas fitted 14.5

screw shaft

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 yes

If two

liners are fitted, is the shaft lapped or protected between the liners yesLength of stern bush 4'-8"

Dia. of Tunnel shaft

as per rule 12.4

Dia. of Crank shaft journals

as per rule 13Dia. of Crank pin 13Size of Crank webs 8.5 x 8.5 Dia. of thrust shaft undercollars 13.5Dia. of screw 17.3Pitch of screw 17-0No. of blades 4State whether moveable noTotal surface 88.5No. of Feed pumps 2Diameter of ditto 3.4Stroke 26Can one be overhauled while the other is at work yesNo. of Bilge pumps 2Diameter of ditto 4.4Stroke 26Can one be overhauled while the other is at work yesNo. of Donkey Engines 2Sizes of Pumps Red 7.5 x 4.5 x 7Black 7.5 x 4.5 x 710.5 x 4.5 x 7

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

In Engine Room 2 x 3.5 dia1 x 4 dia1 x 4.5 diaIn Holds, &c. 1 in each 3.5 dia1 in tunnel 2.5 diaNo. of bilge injections 1sizes 5.5Connected to condenser, or to circulating pump yesIs a separate donkey suction fitted in Engine room & size yes 4.5 diaAre all the bilge suction pipes fitted with roses yesAre the roses in Engine room always accessible yesAre the sluices on Engine room bulkheads always accessible yesAre all connections with the sea direct on the skin of the ship yesAre they Valves or Cocks bothAre they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates yesAre the discharge pipes above or below the deep water line aboveAre they each fitted with a discharge valve always accessible on the plating of the vessel yesAre the blow off cocks fitted with a spigot and brass covering plate yesWhat pipes are carried through the bunkers noneHow are they protected yesAre all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times yesAre the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges yesWhen were stern tube, propeller, screw shaft, and all connections examined on ways 31.8.05Is the screw shaft tunnel watertight yesIs it fitted with a watertight door yesworked from top platforms

BOILERS, &amp;c.—

(Letter for record S)Total Heating Surface of Boilers 5100Is forced draft fitted noNo. and Description of Boilers 2 Single Ended wall tubesWorking Pressure 180 lbTested by hydraulic pressure to 360 lbDate of test 8.9.05Can each boiler be worked separately yesArea of fire grate in each boiler 74

No. and Description of safety valves to

each boiler 2 on spring loadedArea of each valve 10.32Pressure to which they are adjusted 185 lbAre they fitted with easing gear yesSmallest distance between boilers or uptakes and bunkers or woodwork 16Mean dia. of boilers 15.9Length 11-0Material of shell plates 1Thickness 1.7Range of tensile strength 28.5-32Are they welded or flanged noDescrip. of riveting: cir. seams 5.10.10 long. seams 5.10.10Diameter of rivet holes in long. seams 1.8Pitch of rivets 9.5Lap of plates or width of butt straps 20.5

Per centages of strength of longitudinal joint

rivets 95.6Working pressure of shell by rules 181.6Size of manhole in shell end 16 x 13Size of compensating ring flangedNo. and Description of Furnaces in each boiler 4 Plain

Length of plain part

top 78.4

Thickness of plates

crown 4.9Description of longitudinal joint weldedNo. of strengthening rings yesWorking pressure of furnace by the rules 180Combustion chamber plates: Material 1Thickness: Sides 3.5Pitch of stays to ditto: Sides 10.5 x 9.5Back 11.5 x 9.5Top yesIf stays are fitted with nuts or riveted heads nutsWorking pressure by rules 181Material of stays 1Diameter at smallest part 1.59Area supported by each stay 93.106Working pressure by rules 195Material 1Thickness 1.86Pitch of stays 23 x 2.5How are stays secured nutsWorking pressure by rules 180.7Material of stays 1Diameter at smallest part 3.41Area supported by each stay 500Working pressure by rules 182Thickness 2Material of Lower back plate 1Thickness 5Greatest pitch of stays 15.5Working pressure of plate by rules 185Diameter of tubes 3.7Pitch of tubes 4.5 x 4.5Material of tube plates 1Thickness: Front 1.64Pitch across wide water spaces 14.5Working pressures by rules 182Girders to Chamber tops: Material Steel

Depth and

thickness of girder at centre 14 x 13Length as per rule yesDistance apart yesNumber and pitch of Stays in each yes

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

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

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with easing gear

Lloyd's Register

Foundation

W1115-0012



DONKEY BOILER— No. 1 Description Particulars appended

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

enter the donkey boiler Dia. of donkey boiler Length Material of shell plates Thickness Range of tens

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 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

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:— 1 Propeller & shaft. 2 each bolts & nuts for top & bottom ends & main bearings, set of coupling bolts, spare piston rings & valves for all pumps bolts nuts etc.

The foregoing is a correct description,

FOR GEORGE CLARK LIMITED.

James C. Clark Manufacturers of main engine & boiler

Dates of Survey while building During progress of work in shops— 1905:— May: 26 June 6, 20, 26, July 4, 13, 17, 18, 19, 24, 25, 28 Aug: 2, 3, 8, 14, 15, 18, 22, 24, 25, Sept: 1, 4, 5, 8, 19, 23, 25, 28, Oct: 3, 30, 31. Total No. of visits 32

Is the approved plan of main boiler forwarded herewith Yes   
 " " " donkey " " " Yes.

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

The machinery of this vessel has been constructed under special survey, the material & workmanship found sound & tested in accordance with the rules & eligible in my opinion for Classification with record of L.M.C. 10.05.

It is submitted that this vessel is eligible for THE RECORD L.M.C. 10.05.

5.10.05 5.10.05

The amount of Entry Fee.. £ 3 : : When applied for, 4.10.1905  
Special .. £ 36 : 9 :  
Donkey Boiler Fee .. £ : :  
Travelling Expenses (if any) £ : : When received, 6.10.1905

E. J. Stoddart. Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute FRI. 6 OCT 1905  
Assigned + LMB 1005