

REPORT ON MACHINERY.

No. 13120.

Port of *West Hartlepool*

Received at London Office

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No. in Survey held at *West Hartlepool*Date, first Survey *29th June*Last Survey *8th Nov.*

1906

Reg. Book.

19^{supp} on the*Steel Screw Steamer "Dirphys"*(Number of Visits *51*)Tons } Gross *2794.79*Net *1799.91*When built *1906*Master *Papacostandopoulos* Built at *West Hartlepool* By whom built *W. & A. R. L.*Engines made at *West Hartlepool* By whom made *General Machine & Works* when made *1906*Boilers made at *West Hartlepool* By whom made *General Machine & Works* when made *1906*

Registered Horse Power

Owners *Mor à Vapeur Panhellénique*Port belonging to *Greece*Nom. Horse Power as per Section 28 *294*Is Refrigerating Machinery fitted for cargo purposes *No*Is Electric Light fitted *No*

ENGINES, &c.—Description of Engines

*Triple Compound*No. of Cylinders *Three*No. of Cranks *Three*Dia. of Cylinders *24" 38" 64"* Length of Stroke *42* Revs. per minute *85* Dia. of Screw shaft *13.0* as per rule *13.0* as fitted *13.0* Material of screw shaft *Steel*Is the screw shaft fitted with a continuous liner the whole length of the stern tube *No* Is the after end of the liner made water tightin the propeller boss *No* If the liner is in more than one length are the joints burned *No* If the liner does not fit tightly at the partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *No* If twoliners are fitted, is the shaft lapped or protected between the liners *No* Length of stern bush *53"*Dia. of Tunnel shaft *11.72* as per rule *12* Dia. of Crank shaft journals *12.5* as per rule *12.5* as fitted *12.5* Dia. of Crank pin *12 1/2* Size of Crank webs *17 1/2 x 7 1/2* Dia. of thrust shaft undercollars *13 1/2* Dia. of screw *15.9* Pitch of Screw *16.5* No. of Blades *4* State whether moveable *No* Total surface *80 sq ft*No. of Feed pumps *Two* Diameter of ditto *3 1/4* Stroke *26* Can one be overhauled while the other is at work *No*No. of Bilge pumps *Two* Diameter of ditto *4* Stroke *26* Can one be overhauled while the other is at work *No*No. of Donkey Engines *Two* Sizes of Pumps *10 x 9 x 6 x 4* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *Three 3 1/2* In Holds, &c. *Line 5, Tunnel 3*No. of Bilge Injections *Five* sizes *5* Connected to condenser, or to circulating pump *No* Is a separate Donkey Suction fitted in Engine room & size *No 5 1/2*Are all the bilge suction pipes fitted with roses *No* Are the roses in Engine room always accessible *No* Are the sluices on Engine room bulkheads always accessible *No*Are all connections with the sea direct on the skin of the ship *No* Are they Valves or Cocks *both*Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *No* 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 *No* Are the Blow Off Cocks fitted with a spigot and brass covering plate *No*What pipes are carried through the bunkers *No* How are they protected *No*Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *No*Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *No*Dates of examination of completion of fitting of Sea Connections *2/10/06* of Stern Tube *9/10/06* Screw shaft and Propeller *15/10/06*Is the Screw Shaft Tunnel watertight *No* Is it fitted with a watertight door *No* worked from *Top Platform*BOILERS, &c.—(Letter for record *S*) Manufacturers of Steel *John Channon & Sons*Total Heating Surface of Boilers *4600 sq ft* Is Forced Draft fitted *No* No. and Description of Boilers *Two Single Ended*Working Pressure *180 lb* Tested by hydraulic pressure to *360 lb* Date of test *7/10/06* No. of Certificate *3080*Can each boiler be worked separately *No* Area of fire grate in each boiler *54 sq ft* No. and Description of Safety Valves toeach boiler *Two Spring* Area of each valve *8.29 sq* Pressure to which they are adjusted *185 lb* Are they fitted with easing gear *No*Smallest distance between boilers or uptakes and bunkers or woodwork *20"* Mean dia. of boilers *15.5* Length *10.3* Material of shell plates *Steel*Thickness *1 9/16* Range of tensile strength *27 50* Are the shell plates welded or flanged *both* Descrip. of riveting: cir. seams *No*long. seams *all double* Diameter of rivet holes in long. seams *15/16* Pitch of rivets *8 7/8* Lap of plates or width of butt straps *19 1/4*Per centages of strength of longitudinal joint rivets *85.27* plate *85.27* Working pressure of shell by rules *181 lb* Size of manhole in shell *18 x 12*Size of compensating ring *Flanged* No. and Description of Furnaces in each boiler *3 High Pressure* Material *Steel* Outside diameter *45 1/8*Length of plain part *6* Thickness of plates *15/16* Description of longitudinal joint *Welded* No. of strengthening rings *One*Working pressure of furnace by the rules *183 lb* Combustion chamber plates: Material *Steel* Thickness: Sides *15/16* Back *15/16* Top *15/16* Bottom *14/16*Pitch of stays to ditto: Sides *8 1/2 x 8* Back *8 1/2 x 8 1/2* Top *7 1/2* If stays are fitted with nuts or riveted heads *No* Working pressure by rules *192 lb*Material of stays *Steel* Diameter at smallest part *1 1/2* Area supported by each stay *54 x 8* Working pressure by rules *204 lb* End plates in steam space:Material *Steel* Thickness *1 1/4* Pitch of stays *20 1/2 x 22 1/2* How are stays secured *all nut* Working pressure by rules *185 lb* Material of stays *Steel*Diameter at smallest part *3 1/4* Area supported by each stay *20 1/2 x 22 1/2* Working pressure by rules *186 lb* Material of Front plates at bottom *Steel*Thickness *1* Material of Lower back plate *Steel* Thickness *15/16* Greatest pitch of stays *14 1/2* Working pressure of plate by rules *180 lb*Diameter of tubes *3 1/4* Pitch of tubes *4 1/2* Material of tube plates *Steel* Thickness: Front *1* Back *12/16* Mean pitch of stays *9*Pitch across wide water spaces *14 1/2* Working pressures by rules *189 lb* Girders to Chamber tops: Material *Steel* Depth andthickness of girder at centre *6 x 14* Length as per rule *24* Distance apart *7 1/2* Number and pitch of stays in each *one*Working pressure by rules *223 lb* Superheater or Steam chest; how connected to boiler *No* Can the superheater be shut off and the boiler workedseparately *No* Diameter *14* Length *14* Thickness of shell plates *15/16* Material *Steel* Description of longitudinal joint *Welded* Diam. of rivetholes *15/16* Pitch of rivets *8 7/8* Working pressure of shell by rules *181 lb* Diameter of flue *14* Material of flue plates *Steel* Thickness *15/16*If stiffened with rings *No* Distance between rings *14* Working pressure by rules *181 lb* End plates: Thickness *15/16* How stayed *No*Working pressure of end plates *181 lb* Area of safety valves to superheater *181 lb* Are they fitted with easing gear *No*

002970-002977-0082

VERTICAL DONKEY BOILER—

No. one Description Cylindrical boiler Two furnaces
 Made at Stirlington By whom made Blaker, Bula Way & Co When made 1906 Where fixed Main beam
 Working pressure 306 tested by hydraulic pressure to 160 lb. Date of test 20/10/06 No. of Certificate 1790 Fire grate area 105 sq ft Description of Safety
 Valves Spring No. of Safety Valves Two Area of each 829 Pressure to which they are adjusted 85 lb. Date of adjustment 2/11/06
 If fitted with easing gear Yes If steam from main boilers can enter the donkey boiler No 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 _____
 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 _____

SPARE GEAR. State the articles supplied:— Two top end bolts. Two bottom end bolts. Two main
bearing bolts. One set coupling bolts. One set dead pump valves. One set bridge
pump valves. One set of 12 inch springs. One main check valve. Scrapper shaft
propeller. **ENGINE WORKS.**
The foregoing is a correct description,
MANAGER. Manufacturer.

Dates of Survey while building { During progress of work in shops - - 1906. June, 29. July 18, 20, 23, 24, 26, 27, 28, 31. Aug. 1, 2, 3, 5, 14, 15, 16, 17. Sept. 5, 6, 7, 8, 12, 13, 14, 17, 18, 19, 20, 25, 26, 27, 28. Oct. 1, 2, 3, 4.
 { During erection on board vessel - - 5, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 25. Nov. 2, 5, 8.
 Total No. of visits 51

Is the approved plan of main boiler forwarded herewith Yes

" " " donkey " " " Yes

Dates of Examination of principal parts—Cylinders 4/10/06 Slides 4/10/06 Covers 4/10/06 Pistons 4/10/06 Rods 27/9/06

Connecting rods 20/9/06 Crank shaft 20/9/06 Thrust shaft 20/9/06 Tunnel shafts 15/10/06 Screw shaft 5/10/06 Propeller 5/10/06

Stern tube 5/10/06 Steam pipes tested 9 & 13/10/06 Engine and boiler seatings 7/10/06 Engines holding down bolts 15/10/06

Completion of pumping arrangements 18/10/06 Boilers fixed 18/10/06 Engines tried under steam 18/10/06

Main boiler safety valves adjusted 18/10/06 Thickness of adjusting washers DORT PP 39/64 P.S 1 1/16 STAR 25 23/32 S.P 2/162

Material of Crank shaft S. Steel Identification Mark on Do. 4454 Material of Thrust shaft S. Steel Identification Mark on Do. 4454

Material of Tunnel shafts S. Steel Identification Marks on Do. 4454 Material of Screw shafts S. Steel Identification Marks on Do. 4454

Material of Steam Pipes Copper

General Remarks Test pressure 450 lb

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

The Machinery and Boilers of this Steamer have been constructed under Special Permit and placed on board in accordance with the Society's Rules. They are now in my opinion in safe working condition and the case is respectfully submitted for the Certification + LNC 11.06. in the Register Book.

It is submitted that
this vessel is eligible for
THE RECORD FILM.C.11.06. ELEC: LIGHT.

The amount of Entry Fee..	£	2	:	:	When applied for,
Special	£	34	14	:	13. 11. 06
Donkey Boiler Fee	£	:	:	:	19
Travelling Expenses (if any) £	£	:	:	:	When received,
		:	:	:	14. 11. 06
		:	:	:	19

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

Committee's Minute

Assigned

FRI. NOV 16 1906

MACHINERY CERTIFICATE
WRITTEN.

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Foundation