

## REPORT ON MACHINERY.

No. 22604

Port of SunderlandReceived at London Office 11th 2 FEB 1906No. in Survey held at SunderlandDate, first Survey 21<sup>st</sup> July 05 Last Survey 31<sup>st</sup> Jan 1906

Reg. Book.

(Number of Visits 59)on the S. S. "Siam"Tons { Gross 4660.17  
Net 3018.56Master R. Valentin Built at Sunderland By whom built J. L. Thompson & Sons When built 1906Engines made at Sunderland By whom made J. Dickinson & Sons when made 1906Boilers made at Sunderland By whom made J. Dickinson & Sons when made 1906

Registered Horse Power

Owners Societa Anonima Ungherese Di Armamenti Marittimi Oriente Port belonging to FiumeNom. Horse Power as per Section 28 408 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted no

## ENGINES, &amp;c.—Description of Engines

Inverted triple expansion No. of Cylinders 3 No. of Cranks 3Dia. of Cylinders 26" 42" 70" Length of Stroke 48" Revs. per minute 70 Dia. of Screw shaft as per rule 14.5 Material of Iron  
as fitted 14 5/8" screw shaftIs 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 tightin 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 partbetween the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive Yes If twoliners are fitted, is the shaft lapped or protected between the liners Yes Length of stern bush 5' 0"Dia. of Tunnel shaft as per rule 12.95 Dia. of Crank shaft journals as per rule 13.6 Dia. of Crank pin 14 1/2" Size of Crank webs 25 1/2 x 9 1/2" Dia. of thrust shaft undercollars 13 3/4" Dia. of screw 17.9" Pitch of screw 18.6" No. of blades 4 State whether moveable no Total surface 86 1/2 sq ftNo. of Feed pumps 2 Diameter of ditto 4" Stroke 25 1/2" Can one be overhauled while the other is at work YesNo. of Bilge pumps 2 Diameter of ditto 4 1/2" Stroke 25 1/2" Can one be overhauled while the other is at work YesNo. of Donkey Engines 2 Sizes of Pumps 7 1/2 x 5 x 6" & 9 x 11 x 10" No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room 4 of 3 1/2" In Holds, &c. 2 of 3 1/2" in each & 1 of 2 1/2"hold & tunnel wellNo. of bilge injections 1 sizes 5" Connected to condenser, or to circulating pump pump Is a separate donkey suction fitted in Engine room & size 2-4"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 YesAre all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks bothAre 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 aboveAre 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 YesWhat pipes are carried through the bunkers nil How 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 in dry dock new Is the screw shaft tunnel watertight YesIs it fitted with a watertight door Yes worked from top platform

## BOILERS, &amp;c.—

(Letter for record S)Total Heating Surface of Boilers 5456 sq ft Is forced draft fitted Yes, Horner'sNo. and Description of Boilers 2 single ended, cylindrical mult Working Pressure 180 lbs Tested by hydraulic pressure to 360 lbsDate of test 10.10.05 Can each boiler be worked separately Yes Area of fire grate in each boiler 62 sq ft No. and Description of safety valves toeach boiler 2 spring Area of each valve 9.62 sq ft Pressure to which they are adjusted 185 lbs Are they fitted with easing gear YesSmallest distance between boilers or uptakes and bunkers or woodwork 3' 3" Mean dia. of boilers 15' 3 1/2" Length 10' 9" Material of shell plates steelThickness 1/4" Range of tensile strength 20/32 Are they welded or flanged no Descrip. of riveting: cir. seams d.r. lap long. seams t.g. doubleDiameter of rivet holes in long. seams 1 3/8" Pitch of rivets 9 1/2" Lap of plates or width of butt straps 19 7/8" butt strapPer centages of strength of longitudinal joint 96.81 Working pressure of shell by rules 181 lbs Size of manhole in shell 16 x 12"Size of compensating ring 8 3/4 x 1 1/4" No. and Description of Furnaces in each boiler 3 Horner's Material steel Outside diameter 49"Length of plain part top Thickness of plates bottom 3 1/4" Description of longitudinal joint weld No. of strengthening rings YesWorking pressure of furnace by the rules 183.3 Combustion chamber plates: Material steel Thickness: Sides 11/16" Back 11/16" Top 11/16" Bottom 7/8"Pitch of stays to ditto: Sides 9 x 10" Back 9 x 10" Top 9 x 10" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 180-5 lbsMaterial of stays steel Diameter at smallest part 1.61 x 1.73 Area supported by each stay 9.0 sq ft Working pressure by rules 98 x 20.3 End plates in steam space:Material steel Thickness 1 1/2" Pitch of stays 20 x 19 1/4" How are stays secured double nuts Working pressure by rules 183 lbs Material of stays steelDiameter at smallest part 2.79 Area supported by each stay 34.5 x 36.5 Working pressure by rules 181 lbs Material of Front plates at bottom steelThickness 7/8" Material of Lower back plate steel Thickness 1 3/8" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 186 lbsDiameter of tubes 2 1/2" Pitch of tubes 3 3/4" x 3 3/4" Material of tube plates steel Thickness: Front 1 1/32" Back 7/8" Mean pitch of stays 7 1/2"Pitch across wide water spaces 12 1/2" Working pressures by rules 341 lbs Girders to Chamber tops: Material steel Depth andthickness of girder at centre 7 1/2" x 2" Length as per rule 30 7/8" Distance apart 9" Number and pitch of Stays in each 2-10"Working pressure by rules 185 lbs Superheater or Steam chest; how connected to boiler Can the superheater be shut off and the boiler workedseparately Yes Diameter Length Thickness of shell plates Material Description of longitudinal joint Diam. of rivetoles Pitch of rivets Working pressure of shell by rules Diameter of flue Material of flue plates Thicknessstiffened with rings Distance between rings Working pressure by rules End plates: Thickness How stayed Lloyd's RegisterWorking pressure of end plates Area of safety valves to superheater Are they fitted with easing gear Foundation

W545-0159



**DONKEY BOILER—** No. \_\_\_\_\_ Description \_\_\_\_\_

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 \_\_\_\_\_

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 \_\_\_\_\_ Percentage of strength of joint \_\_\_\_\_ Plates \_\_\_\_\_ 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, 2 bottom end, 2 main bearing + 1 set of coupling bolts, 1 set feed and bilge pump valves, bolts & nuts assorted and iron of sizes, 1 main feed check Valve, 1 donkey feed check valve, 1/2 crank shaft, 1 Propeller & 1 Propeller shaft*

The foregoing is a correct description,

**JOHN DICKINSON & SONS, LIMITED.**

Manufacturer.

Dates of Survey while building { During progress of work in shops - } 1905 July 21, Aug: 12, 15, 18, 21, 23, 24, 30, Sept, 1, 11, 12, 13, 14, 19, 22, 25, 27, 30, Nov. 1, 3, 4, 5, 10, 11, 12, 16, 19, 23, 27, 30, Dec. 1, 6, 8, 14, 20, 21, 22, 30, -06- Jan. 3, 6, 8, 11, 12, 16, 17, 20, 22, 23, 31.

During erection on board vessel - } 7, 9, 14, 18, 20, 21, 23, 25, 29, Decr 1, 6, 8, 14, 20, 21, 22, 30, -06- Jan. 3, 6, 8, 11, 12, 16, 17, 20, 22, 23, 31.

Total No. of visits 59

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 for this vessel has been constructed under special survey, the workmanship and materials used are both of good quality, the main steam pipes have been tested to twice the working pressure with satisfactory results, the Engines have been tried ahead & astern and worked well, the safety Valves have been adjusted under steam with fair working & an air pressure of 2" and worked satisfactorily*

*I beg to recommend that this vessel in my opinion is eligible to have the record **L.M.C. 1.06** in the Register Book*

*It is submitted that this vessel is eligible for THE RECORD L.M.C. 1.06 F.D.*

The amount of Entry Fee.. £ 3: : When applied for, *21.1.1906*

Special .. .. £ 40: 8: : *2.2.06*

Donkey Boiler Fee .. .. £ : : When received, *1.2.1906*

Travelling Expenses (if any) £ : : *1.2.1906*

*R. W. Coomber.*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

FRI. 2 FEB 1906

Assigned

MACHINERY CERTIFICATE  
WRITTEN.



© 2020

Lloyd's Register  
Foundation