

# REPORT ON MACHINERY

No. 394

MON. 30 JUN. 1919

Port of *Calcutta*

Survey held at *Calcutta*

Date, first Survey

Received at London Office

Last Survey

18

on the *(TWIN) S.S. "PRINCESS"*

(Number of Visits)

Gross *8684*  
Net *6*

*A. Lee*

Built at *Kiel*

By whom built *H. Krupp Aht. Ges*

When built *1905*

made at *Kiel*

By whom made *Do*

when made *1905*

made at *Kiel*

By whom made *Do*

when made *1905*

rated Horse Power *800*

Owners *British Gov.*

Port belonging to

Horse Power as per Section 28

Is Refrigerating Machinery fitted *Yes*

Is Electric Light fitted *Yes*

ENGINES, &c.—Description of Engines

No. of Cylinders

No. of Cranks

Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Lgth. of stern bush  
Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under  
Dia. of screw Pitch of screw No. of blades State whether moveable Total surface

Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work

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

Engine Room In Holds, &c.

Bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size

the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible

connections with the sea direct on the skin of the ship Are they Valves or Cocks

fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

pipes are carried through the bunkers How are they protected

all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times

the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges

were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight

fitted with a watertight door worked from

ARY, &c.— (Letter for record) Total Heating Surface of Boilers *1696 sq. ft* Is forced draft fitted *No*

nd Description of Boilers *One cylindrical multitubular single ended* Working Pressure *213 lbs.* Tested by hydraulic pressure to *305 lbs.*

of test *2/12/18* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *53.61 sq. ft* No. and Description of safety valves to

boiler *2 spring loaded* Area of each valve *12.56 sq. ft* Pressure to which they are adjusted *213 lbs.* Are they fitted with easing gear *Yes*

st distance between boilers or uptakes and bunkers or woodwork *10"* Mean dia. of boilers *14' 9"* Length *11'* Material of shell plates

ess *1 1/2"* Range of tensile strength Are they welded or flanged *No* Descrip. of riveting: cir. seams *Double* long. seams *Quad.*

ter of rivet holes in long. seams *1 1/2"* Pitch of rivets *1' 4"* Lap of plates width of butt straps *2' 6"*

antages of strength of longitudinal joint rivets *20* Working pressure of shell by rules *232* Size of manhole in shell *11' x 16"*

compensating ring *3' 9 3/4" x 3' 0 3/4"* No. and Description of Furnaces in each boiler *3 Corrugated* Material *steel* Outside diameter *4' 1 1/2"*

of plain part top *4"* Thickness of plates crown *3/4"* Description of longitudinal joint *Weld* No. of strengthening rings *none*

ing pressure of furnace by the rules *254 lbs.* Combustion chamber plates: Material Thickness: Sides *5/8"* Back *3/4"* Top *5/8"* Bottom *3/4"*

of stays to ditto: Sides *4 1/8" x 4"* Back *8" x 4"* Top *8" x 8 1/2"* If stays are fitted with nuts or riveted heads *Nuts + turned heads* Working pressure by rules *205*

ial of stays Diameter at smallest part *1 5/8"* Area supported by each stay *66* Working pressure by rules *282* End plates in steam space:

ial Thickness *1 1/8"* Pitch of stays *15 1/2" x 15 3/4"* How are stays secured *Double nuts* Working pressure by rules *232* Material of stays

ter at smallest part *2' 6 1/2"* Area supported by each stay *244* Working pressure by rules *230* Material of Front plates at bottom

ess *4 1/8"* Material of Lower back plate Thickness *1 1/8"* Greatest pitch of stays *8" x 4"* Working pressure of plate by rules

ter of tubes *2 1/4"* Pitch of tubes *4"* Material of tube plates Thickness: Front *1 1/8"* Back *1"* Mean pitch of stays *8"*

across wide water spaces *1' 3"* Working pressures by rules Girders to Chamber tops: Material Depth and

ess of girder at centre *1 1/2" x 1 1/2"* Length as per rule Distance apart *8"* Number and pitch of Stays in each *4 no. 8 1/2" Pitch*

ing pressure by rules Superheater or Steam chest; how connected to boiler *✓* Can the superheater be shut off and the boiler worked

tely *✓* Diameter *✓* Length *✓* Thickness of shell plates *✓* Material *✓* Description of longitudinal joint *✓* Diam. of rivet

*✓* Pitch of rivets *✓* Working pressure of shell by rules *✓* Diameter of flue *✓* Material of flue plates *✓* Thickness *✓*

ened with rings *✓* Distance between rings *✓* Working pressure by rules *✓* End plates: Thickness *✓* How stayed *✓*

ing pressure of end plates *✓* Area of safety valves to superheater *✓* Are they fitted with easing gear *✓*



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THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.



**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 boiler

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

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 Descrip. 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:—

The foregoing is a correct description,

Manufacturer.

Dates { During progress of  
work in shops - -  
of Survey { During erection on  
while { board vessel - -  
building { Total No. of visits

Is the approved plan of main boiler forwarded herewith

donkey

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

The workmanship of this boiler, is, as far as can be seen, good. It is now in good condition, and eligible in my opinion for the favourable consideration of the Committee.

Certificate (if required) to be sent to

The amount of Entry Fee. . . £ : : When applied for,  
Special . . . . . £ : : 18  
Donkey Boiler Fee . . . . £ : : When received,  
Travelling Expenses (if any) £ : : 18

Committee's Minute

FRI. JAN. 2 - 1903

Assigned

See later report.

Thomas W. C. Napier

Engineer Surveyor to Lloyd's Register of British & Foreign Ships



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