

REPORT ON MACHINERY

No. 5010  
MON. AUG. 14 1922

Rpt. 4a.

Date of writing Report

19

When handed in at Local Office

12<sup>th</sup> Aug 1922 Port of MANCHESTER

No. in Survey held at MANCHESTER

Date, First Survey 12<sup>th</sup> Aug 1921 Last Survey 10<sup>th</sup> July 1922

Reg. Book.

on the Turbine No 1960/1 and Double Reduction Gearing No 2000 for S.S. British Commander No 282

(Number of Visits 19)

Tons  
Gross  
Net

Master

Built at Dundee

By whom built Galedon S & Eng. Co. Ltd.

When built

Engines made at Manchester

By whom made Metropolitan-Vickers Electrical Co. Ltd.

when made 1922

Boilers made at

By whom made

when made

Registered Horse Power

Owners

Port belonging to

Shaft Horse Power at Full Power 3200

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

TURBINE ENGINES, &c.—Description of Engines Ratan Impulse H.P. & L.P.

No. of Turbines Two

Diameter of Rotor Shaft Journals, H.P.

L.P.

Diameter of Pinion Shaft 1<sup>st</sup> Reduction 3<sup>1</sup>/<sub>2</sub>" 2<sup>nd</sup> Reduction 5<sup>1</sup>/<sub>2</sub>"

Diameter of Journals 1<sup>st</sup> Red: 6" 2<sup>nd</sup> Red: 10"

Distance between Centres of Bearings 1<sup>st</sup> Red: 7<sup>1</sup>/<sub>2</sub>" 2<sup>nd</sup> Red: 2<sup>1</sup>/<sub>2</sub>"

Diameter of Pitch Circle 1<sup>st</sup> Red: 6.794" 2<sup>nd</sup> Red: 11.649"

Diameter of Wheel Shaft 1<sup>st</sup> Red: 10" 2<sup>nd</sup> Red: 19"

Distance between Centres of Bearings 1<sup>st</sup> Red: 3<sup>1</sup>/<sub>2</sub>" 2<sup>nd</sup> Red: 5<sup>1</sup>/<sub>2</sub>"

Diameter of Pitch Circle of Wheel 1<sup>st</sup> Red: 43.100" 2<sup>nd</sup> Red: 73.267"

Width of Face 1<sup>st</sup> Red: 20" 2<sup>nd</sup> Red: 40"

Diameter of Thrust Shaft under Collars

Diameter of Tunnel Shaft

as per rule

No. of Screw Shafts

Diameter of same

as per rule  
as fitted

Diameter of Propeller

Pitch of Propeller

No. of Blades

State whether Moveable

Total Surface

Diameter of Rotor Drum, H.P.

L.P. ✓ Astern ✓

Thickness at Bottom of Groove, H.P. ✓

L.P. ✓

Astern ✓

Revs. per Minute at Full Power, Turbine 3125

Propeller 72.9

PARTICULARS OF BLADING.

	H.P.			L.P.			ASTERN.		
	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.	HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1ST EXPANSION	1 1/2"	3-2 1/2"	2	1 5/16"	3-3 5/16"	1	1"	3-2 3/4"	2
2ND	1 1/16"	3-2 1/2"	1	1 3/16"	3-3 3/8"	1	2 1/8"	3-5 7/8"	1
3RD	7/8"	3-2 3/8"	1	2 5/16"	3-4 1/16"	1	L.P.	L.P.	L.P.
4TH	7/8"	3-2 3/8"	1	4 3/16"	3-6 3/16"	1	L.P.	L.P.	L.P.
5TH	1"	3-3"	1	6 3/8"	3-8 3/8"	1	2 1/2"	3-0 1/2"	1
6TH				8 1/4"	3-10 1/4"	1	6 3/16"	3-4 3/16"	1
7TH				10 3/16"	4-0 3/16"	1			
8TH									

No. and size of Feed pumps

No. and size of Bilge pumps

No. and size of Bilge suction in Engine Room

In Holds, &c.

No. of Bilge Injections sizes Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine Room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

Are they 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

Are they 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

What pipes are carried through the bunkers

How are they protected

Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record) Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each Boiler

Material

Outside diameter

Length of plain part

top

Thickness of plates

crown

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates: Thickness

How stayed

W351-0059



