

W482-0721

## REPORT ON MACHINERY.

No. 40711

Received at London Office WED. DEC. 22 1920

When handed in at Local Office 11<sup>th</sup> Dec. 1920 Port of Glasgow  
 Date, First Survey 3<sup>rd</sup> Sep 1918 Last Survey 9<sup>th</sup> Dec 1920  
 (Number of Visits 37)

Built at Glasgow By whom built Hughorn Shipbldg Coy  
 By whom made James Howden & Co Ltd MT. 78  
 By whom made ~~James Howden & Co Ltd~~  
 Owners Britannia Steamship Coy  
 Port belonging to Bergen  
 Is Refrigerating Machinery fitted for cargo purposes  
 Is Electric Light fitted

Engines, &c. — Description of Engines Double Reduction Impulse Turbines No. of Turbines 2  
 Shaft Journals, H.P. 4 1/2 L.P. 4 1/2 Diameter of Pinion Shaft as per rule  
 Distance between Centres of Bearings as fitted  
 Distance between Centres of Bearings as fitted  
 Diameter of Thrust Shaft under Collars as per rule  
 Diameter of same as fitted  
 State whether Moveable  
 of Groove, H.P. L.P. Astern  
 Diameter of Rotor Drum, H.P. L.P. Astern  
 Revs. per Minute at Full Power, Turbine 3200 Propeller 71

## RS OF BLADING.

H.P.

L.P.

ASTERN.

HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
3 1/4	3'-4 3/4	1
3 1/4	3'-4 3/4	1
3 1/4	3'-4 3/4	1
3 1/4	3'-4 3/4	1

HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
1 1/4	3'-4 3/4	1
2 7/8	3'-6 3/4	1
4 3/4	3'-8 1/2	1
6 1/2	3'-11 3/8	1

HEIGHT OF BLADES.	DIAMETER AT TIP.	NO. OF ROWS.
H.P. 3 1/4	3'-4 3/4	1
" 2 3/4	3'-4 3/4	1
L.P. 1 3/4	3'-4 3/4	1
" 2 1/2	3'-5 7/8	1
" 3 5/6	3'-7	1

pumps  
 pumps  
 suction in Engine Room

In Holds, &amp;c.

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine Room &amp; size

pipes fitted with roses

Are the roses in Engine room always accessible

th the sea direct on the skin of the ship

Are they Valves or Cocks

ly 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

th a Discharge Valve always accessible on the plating of the vessel

Are the Blow Off Cocks fitted with a spigot and brass covering plate

through the bunkers

How are they protected

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

Pipe, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

unnel watertight.

Is it fitted with a watertight door

worked from

(Letter for record)

Manufacturers of Steel

face of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Tested by hydraulic pressure to

Date of test

No. of Certificate

ked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

on boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

rivets

Working pressure of shell by rules

Size of manhole in shell

of longitudinal joint

No. and Description of Furnaces in each Boiler

Material

Outside diameter

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

urnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

ickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

aterial of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

tre

Length as per rule

Distance apart

Number and pitch of stays in each

des

Material

Description of longitudinal joint

% of strength of joint

Diameter

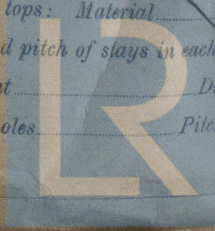
shell by rules

Crown plates: Thickness

How stayed

Diameter of rivet holes

Pitch of rivets



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GENE  
SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

FOR JAMES WATSON & CO. LIMITED

Manufacturer.

DIRECTOR

Dates of Survey while building  
During progress of work in shops -- 1918 Sep 3. 5. 10. 16. 24. 25 Oct 3. 8. 11. 14. 17. 22. 24. 29 Nov 5. 18. 27 Dec 2. 9. 13. 17. 23. 26 (1919) Jan 9. 13. 16. 24  
During erection on board vessel --- May 19. 20 Nov 12 (1920) Feb 5. Dec. 1. 9  
Total No. of visits 37

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Casing, HP 10/9/18 LP 2/10/18 Rotors 13/1/19 Blading HP 14/9/18 LP 3/10/18 Gearing

Rotor shaft HP 6/9/18 LP 3/10/18 Thrust shaft ✓ Tunnel shafts ✓ Screw shaft ✓ Propeller

Stern tube ✓ Steam pipes tested ✓ Engine and boiler seatings ✓ Engines holding down bolts

Completion of pumping arrangements ✓ Boilers fixed ✓ Engines tried under steam

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓ Identification Mark on Do 8826

Material and tensile strength of Rotor shaft ✓ Lancel Steel 49 tons & 45.6 tons Identification Mark on Do

Material and tensile strength of Pinion shaft ✓ See manufacturer's report herewith Identification Mark on Do

Material of Wheel shaft ✓ Identification Mark on Do ✓ Material of Thrust shaft ✓ Identification Mark on Do

Material of Tunnel shafts ✓ Identification Marks on Do ✓ Material of Screw shafts ✓ Identification Marks on Do

Material of Steam Pipes ✓ Test pressure ✓

Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓ If so, state name of vessel ✓

Is this machinery a duplicate of a previous case ✓

General Remarks

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

The machinery of this vessel has been

Special Survey in accordance with the rules. The materials and workmanship are sound.

The turbines and reduction gears have been cricked on shop test bed and were satisfactory.

Steam without load at 3500 Rps ahead, and 3200 Rps Astern.

The machinery is being sent to Leith where it will be fitted on board, and will be eligible to be classed \* LMC, when securely fitted on board and satisfactorily

This machinery has been constructed to the order of the Controller of Shipping.

The amount of Entry Fee

Special

Donkey Boiler Fee

Travelling Expenses (if any)

When applied for,

When received,

John W. Gegan

Engineer Surveyor to Lloyd's Register

Committee's Minute

Glasgow 21 DEC 1920

Assigned

Deferred.

FRI. 23 SEP. 19



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