

# REPORT ON MACHINERY.

No. 84631

Received at London Office 8 - SEP 1921

8 - SEP 1921

8 - SEP 19

Port of London

Writing Report

When handed in at Local Office

Date, First Survey

22<sup>nd</sup> June 1920

Last Survey

8<sup>th</sup> August 1921

Survey held at

London & Rugby

(Number of Visits)

17

Book.

on the

Turbine 101031 1/2 "GEMMA"

Tons

Gross 8420

Net 5364

Built at

Schudam

By whom built

New Waterway L.B. & L.

When built

ines made at

Rugby and

By whom made

The British Thomson-Houston Co. Ltd.

when made

ers made at

Schudam

By whom made

New Waterway Shipbuilding Co. Ltd.

when made

istered Horse Power

915 N.H.P.

Owners

Nieuelt. Goudriaan & H. van der

Port belonging to Rotterdam

net Horse Power at Full Power

4000

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

BINE ENGINES, &c.

Description of Engines

Butis impulse Turbine

No. of Turbines

2

eter of Rotor Shaft Journals, H.P.

5"

L.P.

5"

Diameter of Pinion Shaft

High Speed 5.75" Low Speed 20.75"

eter of Journals

48.5-75-10"

Distance between Centres of Bearings

436.5-281.0"

Diameter of Pitch Circle

47.75" L 18.0"

eter of Wheel Shaft

16"

Distance between Centres of Bearings

81"

Diameter of Pitch Circle of Wheel

452.25 L 112"

h of Face

423" L 34"

Diameter of Thrust Shaft under Collars

Diameter of Tunnel Shaft

as per rule

as fitted

of Screw Shafts

Diameter of same

as per rule

as fitted

Diameter of Propeller

Pitch of Propeller

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

3600

Propeller

85

RTICULARS 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.
EXPANSION	1.35	2-74	2	2.46	3-1.55	1	1.25	2-11.31	2
"	1.19	2-3.23	1	3.06	3-4.14	1	2.39	6-18.3-0.81	3
"	1.24	2-4.78	1	4.62	3-7.75	1			
"	1.37	2-6.73	1	6.15	3-11.76	1			
"	1.48	2-8.78	1	8.24	4-4.88	1			
"	1.83	2-11.16	1						
"									
"									
"									

and size of Feed pumps

and size of Bilge pumps

and size of Bilge suction in Engine Room

In Holds, &c.

of Bilge Injections

sizes

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine Room & size

all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

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

Are they Valves or Cocks

they fired 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

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

at 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

the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

ILERS, &c. (Letter for record)

Manufacturers of Steel

al Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

No. of Certificate

orking Pressure

180 lbs

Tested by hydraulic pressure to

Date of test

No. and Description of Safety Valves to

in each boiler be worked separately

Area of fire grate in each boiler

Are they fitted with easing gear

ch boiler

Area of each valve

Pressure to which they are adjusted

Length

Material of shell plates

allest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Descrip. of riveting: cir. seams

ickness

Range of tensile strength

Are the shell plates welded or flanged

Lap of plates or width of butt straps

ng. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Size of manhole in shell

er centages of strength of longitudinal joint

plates

Working pressure of shell by rules

Size of manhole in shell

ze of compensating ring

No. and Description of Furnaces in each Boiler

Material

Outside diameter

ength of plain part

top

Thickness of plates

bottom

Description of longitudinal joint

No. of strengthening rings

orking pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

itch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

aterial of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space

aterial

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

Number and pitch of stays in each

ickness of girder at centre

Length as per rule

Distance apart

% of strength of joint

Diameter

Working pressure by rules

Steam dome: description of joint to shell

Diameter of rivet holes

Pitch of rivets

Thickness of shell plates

Material

Description of longitudinal joint

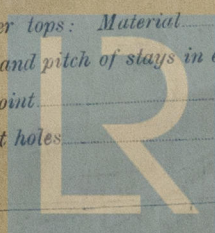
Diameter of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates: Thickness

How stayed



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Lloyd's Register

10214-0187

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,

THE BRITISH THOMSON-HOUSTON CO. LIMITED,

Manufacturer of Turbines only

At Rugby:— (1920) June 22. Sep. 23. ~~Oct. 15~~ Dec. 16 <sup>1921</sup> Jan. 5. 10. 28 Feb. 10. Mar. 9. 23 June  
At West Drayton:— <sup>1920</sup> Sep. 23. Oct. 15. Dec. 16. <sup>1921</sup> Jan. 10

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

17.

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Casings 1.6.21 Rotors 1.6.21 Blading 1.6.21 Gearing 25.2.21

Rotor shaft 1.6.21 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 fired \_\_\_\_\_ Engines tried under steam \_\_\_\_\_

Main boiler safety valves adjusted \_\_\_\_\_

Thickness of adjusting washers \_\_\_\_\_

Material and tensile strength of Rotor shaft

Steel

44/46 tons

Identification Mark on Do.

TRB

Material and tensile strength of Pinion shaft

"

45 tons

Identification Mark on Do.

444-445 JF

Material of Wheel shaft

Steel 45 tons

Identification Mark on Do.

3 1/2 WGH

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

Is this machinery a duplicate of a previous case

If so, state name of vessel

General Remarks

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

Material tested as required & approved, workmanship good.

Bearings tested to 123 lbs, Passages & nozzles to 360 lbs & stop valves to 360 lbs & all found tight & sound. Oil pump examined & satisfactory. Turbines examined under steam & working satisfactorily.

Only Turbines made - no gearing or shafting made by this firm. Reduction gearing made by Power Plant Eng Co. West Drayton. Same examined during construction by W. H. Cornish & also on Hot bench running & satisfactory - forwarding to Rotterdam for fitting.

The amount of Entry Fee

Rugby as per Sec 10 11-4

Special Extra 27.3.20 10-11-4

Donkey Boiler Fee

Travelling Expenses (if any)

10 13:5

Committee's Minute

Assigned

When applied for.

When received.

Thomas Blackie H. H. Cornish  
Engineer Surveyor to Lloyd's Register of Shipping.

Rpt. 13.

RE

Port of

No. in Reg. Book on the Building

Owners

Yard No.

DESCRIPTION

2. Dym single

Capacity of Dyn

Where is Dynan

Position of Mai

Positions of au

2 in San

If fuses are fi

circuits

If vessel is win

Are the fuses

Are all fuses

are perma

Are all switch

Total number

A Force

B Char

C Salvor

D Mictor

E

2 Mas

2

If arc lights,

Where are t

DESCRIPTION

Main cable ea

Branch cable

Branch cable

Leads to lam

Cargo light ca

DESCRIPTION

Joints in cab

Are all the j

position

Are there a

How are th

protect

To 2

G. En

J.

S.