

REPORT ON MACHINERY.

No. 80400

Received at London Office

26 MAY 1926

Surveying Report

19

When handed in at Local Office

22. 15

10 16 Port of

NEWCASTLE-ON-TYNE

Survey held at

Tralland

Date, First Survey

17 Sept. 1925

Last Survey

18 May

1926

Book.

on the *Double reduction gearing. Turbine for M. Pickers & Sons*
Engine No 234.

(Number of Visits 48.)

Tons { Gross
Net

er

Built at *Tunderland*

By whom built *M. Pickers & Sons*

When built *1926*

nes made at

Tralland

By whom made *Parsons Marine Steam Turbine Co.*

when made *1926*

rs made at

do.

By whom made *Parsons Marine Steam Turbine Co.*

when made *1926*

stered Horse Power

530 HP.

Owners

Port belonging to

Horse Power at Full Power *2875*

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

BINE ENGINES, &c.—Description of Engines

Double reduction geared Turbine

No. of Turbines *3*

er of Rotor Shaft Journals, H.P. *4* L.P. *5 1/2*

Diameter of Pinion Shaft

H.P. 4 1/2 L.P. 6 1/2

er of Journals

10 1/2

Distance between Centres of Bearings

6'-0"

Diameter of Pitch Circle

H.P. 4.07 L.P. 11.783 Primary 14.667

er of Wheel Shaft

16 1/2

Distance between Centres of Bearings

6'-1 7/8"

Diameter of Pitch Circle of Wheel

of Face

14 3/4

Diameter of Thrust Shaft under Collars

16 3/4

Diameter of Tunnel Shaft

as per rule 13.1

crew Shafts

ONE

Diameter of same

as fitted 14.68

Diameter of Propeller

19'-0"

Pitch of Propeller

15'-4"

blades

4

State whether Moveable

YES

Total Surface

1008

Diameter of Rotor Drum, H.P.

L.P.

astern

s at Bottom of Groove, H.P.

L.P.

Astern

Revs. per Minute at Full Power, Turbine

H.P. 1230 L.P. 2590

Propeller 815

LP. 2590

LP. 2590

LP. 2590

LP. 2590

LP. 2590

CULARS OF BLADING.

H.P.

L.P.

ASTERN.

SECTION	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.
1	9 1/8"	1'-1"	9	1 3/8"	1 3/8" 1-4 7/8" 2-7 1/2"	6	2 ROWS IMPULSE 2'-1 1/2" MEAN DIA.		
2	4 1/8"	1-1 1/4"	7	1 1/2"	2 3/8" 1-6" 2-8 3/8"	5	4		
3	1 3/4"	1-3 3/8"	6	1 5/8"	3 1/4" 1-8" 2-6 3/8"	4	4	2 ROWS IMPULSE 3'-5 3/4" M.D.	
4	7/8"	1-4 3/4"	5	1 5/8"	2 1/8" 1-10 3/8" 3-9 1/4"	3	2	EXPN. REACTION.	
5				2 3/8"	3-10 1/4"	2	1	1 1/8" 2-10 3/8"	1
6				3 3/4"	3-11 5/8"	1	2	1 3/8" 3'-0"	1
7				4"	4'-1"	1	3	1 1/2" 2'-1 3/4"	1 EACH EXPN.
8				4 1/8"	4-2 3/8"	1			
9				4 3/4"	4-4 1/2" EACH 1				

size of Feed pumps *Two main 9 1/2 x 7 x 21, one aux 7 x 8 x 12*

size of Bilge pumps *One 7 x 8 x 18*

size of Bilge suction in Engine Room *3'-5", 1'-5"*

In Holds, &c. *No. 1. 2'-3", No. 2. 2'-3", No. 3. 2 1/4" No. 4. 2'-2 1/4"*

2-2 1/2" Deep Tank 2-3 1/2"

ge Injections *1* sizes *7/2* Connected to condenser, or to circulating pump *YES* Is a separate Donkey Suction fitted in Engine Room & size *YES. 4"*

e bilge suction pipes fitted with roses *YES* Are the roses in Engine room always accessible *YES*

nnctions with the sea direct on the skin of the ship *YES* Are they Valves or Cocks *BOTH*

ired 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 *BOTH*

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 *YES*

s are carried through the bunkers *BILGE PIPES* How are they protected

ipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times *YES*

ilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges *YES*

ew Shaft Tunnel watertight *YES* Is it fitted with a watertight door *YES* worked from *2nd Deck*

RS, &c.—(Letter for record *(3)* Manufacturers of Steel

eating Surface of Boilers *6646* Is Forced Draft fitted *YES* No. and Description of Boilers *3-3*

g Pressure *180 lb.* Tested by hydraulic pressure to Date of test No. of Certificate

boiler be worked 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

istance between 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

as Diameter of rivet holes in long. seams Pitch of rivets Lap of plates or width of butt straps

ges of strength of longitudinal joint rivets Working pressure of shell by rules Size of manhole in shell

plates plates Working pressure of shell by rules

mpensating ring No. and Description of Furnaces in each Boiler Material Outside diameter

plain part top crown Thickness of plates Description of longitudinal joint No. of strengthening rings

bottom bottom

pressure of furnace by the rules Combustion chamber plates: Material Thickness: Sides Back Top Bottom

stays to ditto: Sides Back Top If stays are fitted with nuts or riveted heads Working pressure by rules

of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space

Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

at smallest part Area supported by each stay Working pressure by rules Material of Front plates at bottom

Material of Lower back plate Thickness Greatest pitch of stays Working pressure of plate by rules

of tubes Pitch of tubes Material of tube plates Thickness: Front Back Mean pitch of stays

s wide water spaces Working pressures by rules Girders to Chamber tops: Material Depth and

s of girder at centre Length as per rule Distance apart Number and pitch of stays in each

king pressure by rules Steam dome: description of joint to shell % of strength of joint Diameter

ckness of shell plates Material Description of longitudinal joint Diameter of rivet holes Pitch of rivets

king pressure of shell by rules Crown plates: Thickness How stayed

Lloyd's Register Foundation
005038-005046-0092

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:— *In accordance with the Rules as per schedule attached.*

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1925
 { During erection on board vessel --- 1926
 Total No. of visits 48

Is the approved plan of main boiler forwarded herewith

Dates of Examination of principal parts—Casings 9. 12. 15. Rotors 13. 1. 26. Blading 7. 2. 26. Gearing 30. 4. 26.
 Rotor shaft 18. 11. 25. Thrust shaft 16. 3. 26. Tunnel shafts 17. 3. 26. Screw shaft 17. 3. 26. Propeller 11. 5. 26.
 Stern tube 13. 12. 25. Steam pipes tested 14. 5. 26. Engine and boiler seatings 16. 4. 26. Engines holding down bolts 11. 5. 26.
 Completion of pumping arrangements Boilers fixed 11. 5. 26. Engines tried under steam
 Main boiler safety valves adjusted Thickness of adjusting washers

Material and tensile strength of Rotor shaft *Steel 34-38 Lcm* Identification Mark on Do. *DR 21 495*
 Material and tensile strength of Pinion shaft *nickel steel 40-45 Lcm* Identification Mark on Do. *DR*

Material of Wheel shaft *Steel* Identification Mark on Do. *495* Material of Thrust shaft *Steel* Identification Mark on Do. *DR*
 Material of Tunnel shafts *Steel* Identification Marks on Do. *DR* Material of Screw shafts *Steel* Identification Marks on Do. *DR*

Material of Steam Pipes *Steel 11. 5. 26* Test pressure *540 Lbs*
 Is an installation fitted for burning oil fuel *NO* 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 *NO* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery of this vessel has been constructed under special survey. The materials & workmanship are sound & good. It has been efficiently installed & entered the vessel in the main & auxiliary engines have been tried under steam. In my opinion the vessel is now eligible for notation + L.M.C. 7. 26. CL. FD. in the Register Book.*
 It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 7. 26. CL. FD.

3 Steam Turbines D.R. geared to 1 screw shaft.

530.N.H.

The amount of Entry Fee ... £ 6 : -
 Special ... £ 101 : 12
 Donkey Boiler Fee ... £ :
 Travelling Expenses (if any) £ :

When applied for,

25 MAY 1926

When received,

31. 7. 1926

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 27 JUL 1926

Assigned

+ L.M.C. 7: 26.
 C.L. F. D.
 3 Steam Turbines D.R. geared to 1 screw shaft

CERTIFICATE WRITTEN



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