

pt. 4a.

# REPORT ON MACHINERY.

No. 71697

WED. 26 MAR. 1919

Date of writing Report 19th Dec. 1918 When handed in at Local Office 10 Port of NEWCASTLE-ON-TYNE  
No. in Survey held at Newcastle Date, First Survey 22nd May 18 Last Survey 17th Dec 1918  
Reg. Book. S/S Mar Nebur from Andalusia (Number of Visits 28)  
Master                      Built at                      By whom built                      When built                       
Engines made at Newcastle By whom made Parsons Marine Steam Turbine Co 165 when made 1918  
Boilers made at                      By whom made                      when made                       
Registered Horse Power                      Owners The Shipping Controller Port belonging to                       
Shaft Horse Power at Full Power 2900 Is Refrigerating Machinery fitted for cargo purposes                      Is Electric Light fitted                     

**TURBINE ENGINES, &c.**—Description of Engines Geared Turbines No. of Turbines 2  
Diameter of Rotor Shaft Journals, H.P. 4 1/2" L.P. 4 1/2" Diameter of Pinion Shafts 1st gear 4 1/2", 2nd gear 9"  
Diameter of Journals 1st 4 1/2", 2nd 9" Distance between Centres of Bearings 1st 2'-3" 2nd 3'-10 1/2" Diameter of Pitch Circle 1st 6'-29" 2nd 13'-55 1/8"  
Diameter of Wheel Shafts 1st 9" 2nd 14 3/4" Distance between Centres of Bearings 1st 2'-2" 2nd 3'-9 1/2" Diameter of Pitch Circle of Wheel 549-666-76-584"  
Width of Face 1st 2'-7 1/2" 2nd 2'-15" Diameter of Thrust Shaft under Collars                      Diameter of Tunnel Shaft                      as per rule                       
No. of Screw Shafts                      Diameter of same                      as fitted                      Diameter of Propeller                      Pitch of Propeller                       
No. of Blades                      State whether Moveable                      Total Surface                      Diameter of Rotor                      as fitted                       
Thickness at Bottom of Groove, H.P. Solid L.P. Solid Astern Solid Revs. per Minute at Full Power, Turbine 3500 Propeller 78

## PARTICULARS OF BLADING.

	H.P. Impulse			L.P. Reaction			HP 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" - 1 1/4"	29 1/4" - 29 15/16"	2	2 1/2"	26 1/4"	2	1 1/4" - 2"	29 1/2" - 30 1/4"	2
"	3/4"	29"	1	2 5/8"	27 1/4"	2	L.P. Astern		
"	1"	29 1/4"	1	3 1/4"	28 1/2"	2	1st Impulse 2 3/4"	30 1/2"	1
"	1 1/8"	29 5/8"	1	2 3/4"	34 3/4"	1	2nd do 4 1/8"	32"	1
"	1 3/8"	30 1/8"	1	2 7/8"	35 3/4"	1	1st Reaction 1 3/4"	23 1/2"	1
"	2 1/2"	31 3/4"	1	3 1/2"	37"	1	2nd do 2 1/2"	25"	1
"				4 1/4"	38 1/2"	3	3rd do 3 1/2"	27"	3

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 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                       
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                       
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                       
Screw Shaft Tunnel watertight                      Is it fitted with a watertight door                      worked from                     

**BOILERS, &c.**—(Letter for record                     ) Manufacturers of Steel                       
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                       
each boiler be worked separately                      Area of fire grate in each boiler                      No. and Description of Safety Valves to                       
boiler                      Area of each valve                      Pressure to which they are adjusted                      Are they fitted with easing gear                       
least 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                       
seams                      Diameter of rivet holes in long. seams                      Pitch of rivets                      Lap of plates or width of butt straps                       
percentages of strength of longitudinal joint                      rivets                      Working pressure of shell by rules                      Size of manhole in shell                       
plates                       
of compensating ring                      No. and Description of Furnaces in each Boiler                      Material                      Outside diameter                       
top                      crown                       
h of plain part                      Thickness of plates                      Description of longitudinal joint                      No. of strengthening rings                       
bottom                      bottom                       
ing pressure of furnace by the rules                      Combustion chamber plates: Material                      Thickness: Sides                      Back                      Top                      Bottom                       
of stays to ditto: Sides                      Back                      Top                      If stays are fitted with nuts or riveted heads                      Working pressure by rules                       
ial of stays                      Diameter at smallest part                      Area supported by each stay                      Working pressure by rules                      End plates in steam space                       
ial                      Thickness                      Pitch of stays                      How are stays secured                      Working pressure by rules                      Material of stays                       
ter at smallest part                      Area supported by each stay                      Working pressure by rules                      Material of Front plates at bottom                       
ness                      Material of Lower back plate                      Thickness                      Greatest pitch of stays                      Working pressure of plate by rules                       
ter of tubes                      Pitch of tubes                      Material of tube plates                      Thickness: Front                      Back                      Mean pitch of stays                       
across wide water spaces                      Working pressures by rules                      Girders to Chamber tops: Material                      Depth and                       
ess of girder at centre                      Length as per rule                      Distance apart                      Number and pitch of stays in each                       
ing pressure by rules                      Steam dome: description of joint to shell                      % of strength of joint                      Diameter                       
ess of shell plates                      Material                      Description of longitudinal joint                      Diameter of rivet holes                      Pitch of rivets                       
ing pressure of shell by rules                      Crown plates: Thickness                      How stayed                     

004382-004386-6202 1



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,

Manufacturer.

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

1918  
May 22.30 Jun 3.19 Jul 5.10.16.18.22.26 Aug 2.13.15.29 Sep 6.12.17.23 Oct 3.11  
22.25.29 Nov 11.25 Dec 2.12.17

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Casings

11.10.18

Rotors

3.10.18

Blading

25.11.18

Gearing

25.11.18

Rotor shafts

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

Material and tensile strength of Rotor shafts Steel 35-38.2 tons

Identification Mark on Do. J. H. 10.18

Material and tensile strength of Pinion shaft

nickel steel 42.8 to 42.2 tons

Identification Mark on Do. J. H. 10.18

Material of Wheel shaft Steel

Identification Mark on Do. J. H. 10.18

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.)

These turbines & gearing have been constructed under special survey & the materials & workmanship are found to be good; they have been tried under steam in the erecting shop & found satisfactory.

FOR THE PARSONS MARINE STEAM TURBINE CO., LIMITED.

Stanley S. Cook  
TECHNICAL MANAGER.

Thomas Field  
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee

£

When applied for,

27/3/1920

Special

£

72 : 15 : 2

Donkey Boiler Fee

£

When received,

11/5/1920

Travelling Expenses (if any)

£

Committee's Minute

Assigned



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