

pt. 4a.

Standard Engines forwarded to Messrs Furness Withy & Co. yard  
Middlesbrough.

# REPORT ON MACHINERY.

No. 71697

Received at London Office

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. on the S/S Mar Nebout from Andalusien (Number of Visits 25)

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" Diameters of Pinion Shafts 1st gear 4 1/2", 2nd gear 9"

Diameters of Journals 1st 4 1/2", 2nd 9" Distance between Centres of Bearings 1st 2'-3", 2nd 3'-10 1/2" Diameters of Pitch Circle 1st 6'-29", 2nd 13'-55 1/2"

Diameters 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'-0 1/2" Diameter of Thrust Shaft under Collars Diameter of Tunnel Shaft as per rule as fitted

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 Body Diameter, H.P. 24 1/2" L.P. 22 1/2" Astern 20 1/2"

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 3/4"	27 1/4"	2	L.P. Astern		
"	1"	29 1/4"	1	3 1/4"	28 1/2"	2	H.P. Impulse	23 1/4"	1
"	1 1/8"	29 5/8"	1	2 3/8"	34 3/4"	1	2nd to 4 1/2"	32"	1
"	1 3/8"	30 1/8"	1	2 7/8"	35 3/4"	1	1st Reaction	1 3/4"	1
"	2 1/2"	31 3/4"	1	3 1/2"	37"	1	2nd to 2 1/2"	25"	1
"				4 1/4"	38 1/2"	3	3rd to 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 Corks  
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  
all 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

MANUFACTURERS, &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  
height of plain part Thickness of plates Description of longitudinal joint No. of strengthening rings  
bottom bottom

working 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

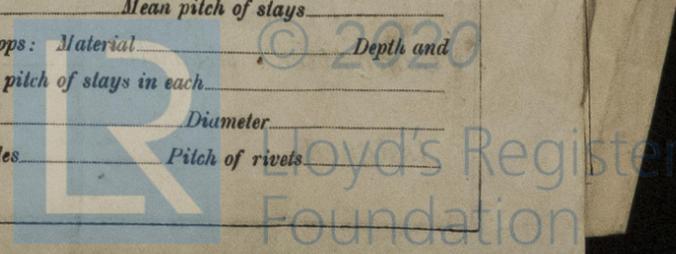
diameter of stays Diameter at smallest part Area supported by each stay Working pressure by rules End plates in steam space  
diameter Thickness Pitch of stays How are stays secured Working pressure by rules Material of stays

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  
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

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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 2-15-15-29 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 vipes 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. X. 10-18

Material and tensile strength of Pinion shaft Nickel Steel 42.8 to 42.2 tons Identification Mark on Do. J. X. 10-18

Material of Wheel shaft Steel Identification Mark on Do. J. X. 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	When received,	11/5/1920
Donkey Boiler Fee	£		
Travelling Expenses (if any)	£		

Committee's Minute  
Assigned \_\_\_\_\_