

Report on Steam Turbine Machinery.

No. 133852

Date of writing Report 29-8-1951 When handed in at Local Office 5 Sept: 1951 Port of LIVERPOOL Received at London Office 3 OCT 1951
 No. in Survey held at Birkenhead Date, First Survey 16 June 1949 Last Survey 27 August 1951
 Reg. Book _____ (Number of Visits 323)

on the single screw tanker "PRESIDENTE PERON" Tons (Gross 12741)
 (Net 7395)
 Built at Birkenhead By whom built Cammell Laird & Co. Ltd. Yard No. 1205 When built 1951
 Engines made at Birkenhead By whom made Cammell Laird & Co. Ltd. Engine No. 1205 When made 1951
 Boilers made at Birkenhead By whom made Cammell Laird & Co. Ltd. Boiler No. 1205 When made 1951
 Shaft Horse Power at Full Power MAX. 6800 SERVICE 6200 Owners Yacimientos Petroliferos Fiscales Port belonging to Buenos Aires
 Nom. Horse Power as per Rule 1580 Is Refrigerating Machinery fitted for cargo purposes to Is Electric Light fitted yes
 Trade for which Vessel is intended open sea

STEAM TURBINE ENGINES, &c.—Description of Engines Double Reduction Impulse-Reaction

of Turbines Ahead 2 Direct coupled, single reduction geared to one propelling shafts. No. of primary pinions to each set of reduction gearing 2
 Astern 1 double reduction geared
 Direct coupled to Alternating Current Generator ✓ phase _____ periods per second _____
 or supplying power for driving _____ Direct Current Generator _____ rated _____ Kilowatts _____ Volts at _____ revolutions per minute;
 _____ Kilowatts _____ Volts at _____ revolutions per minute. Direct coupled, single or double reduction geared to _____ propelling shafts.

TURBINE	H. P.	I. P.	L. P.	ASTERN.
Impulse				
Reaction				
No. of rows	<u>11</u>	<u>✓</u>	<u>1</u>	<u>Two 3 row wheels</u>
No. of stages	<u>✓</u>	<u>✓</u>	<u>15</u>	<u>✓</u>
No. of rows in each stage	<u>✓</u>	<u>✓</u>	<u>2 rows in 1 stage</u> <u>1 row in 14 stages</u>	<u>✓</u>

Shaft Horse Power at each turbine
 H.P. 3600, 3530 I.P. _____ L.P. 3200, 2670
 H.P. 6800, 5618 I.P. _____ L.P. 3363, 3257
 MAX. SERVICE
 MAX. SERV. 1903.875
 MAX. SERV. 111.107.5

Motor Shaft diameter at journals
 H.P. 4 1/2" I.P. _____ L.P. 7"
 Pitch Circle Diameter
 1st pinion 8.57.14.78 1st reduction wheel 55.0608"
 2nd pinion 17.219" main wheel 140.068"
 Width of Face
 1st reduction wheel 19 + 3/4"
 main wheel 38 + 3/4"

Distance between centres of pinion and wheel faces and the centre of the adjacent bearings
 1st pinion 8 1/4" 1st reduction wheel 8 3/4"
 2nd pinion 14 3/4" main wheel 1-7 1/4"

Pinion Shafts, diameter at bearings
 External 1st 6 1/2" 2nd 11"
 Internal 1st 2" 2nd 7 5/8"
 diameter at bottom of pinion teeth
 1st 4-3 1/2" Generator Shaft, diameter at bearings _____
 2nd 11-3 3/8" Propelling Motor Shaft, diameter at bearings _____

Wheel Shafts, diameter at bearings
 1st 7 1/2" diameter at wheel shroud _____
 main 18"
 Intermediate Shafts, diameter as per rule _____ as fitted 16"
 Thrust Shaft, diameter at collars as per rule _____ as fitted _____

Tube Shaft, diameter as per rule _____ as fitted _____
 Screw Shaft, diameter as per rule 17.085" as fitted 17 3/4"
 Is the tube screw shaft fitted with a continuous liner yes
 Bronze Liners, thickness in way of bushes as per rule .823" as fitted .875"
 Thickness between bushes as per rule .617" as fitted .718"
 Is the after end of the liner made watertight in the propeller boss yes
 If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner ✓
 If the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive ✓
 If two liners are fitted, is the shaft lapped or protected between the liners ✓
 Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft to
 If so, state type _____

Length of Bearing in Stern Bush next to and supporting propeller 6-4 1/2"
 Propeller, diameter 18.75" Pitch 13.50" No. of Blades 4 State whether Moveable to Total Developed Surface 133 square feet.
 Single Screw, are arrangements made so that steam can be led direct to the L.P. Turbine yes
 Can the H.P. or L.P. Turbines exhaust direct to the condenser yes

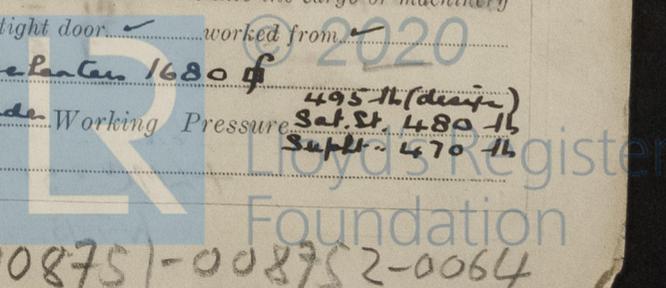
No. of Turbines fitted with astern wheels one Feed Pumps
 No. and size 2-65000-84600 1 1/2" each
 How driven steam turbine
 Pumps connected to the Main Bilge Line
 No. and size 2 @ 150 T/h, 1 @ 300 T/h
 How driven Elec. Motor

Ballast Pumps, No. and size 1 @ 300 T/h Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 11500 gal/h each
 Are two independent means arranged for circulating water through the Oil Cooler yes
 Suctions, connected both to Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Engine and Boiler Room 1 @ 6", 3 @ 3 1/2"
 In Pump Room (max) 2 @ 4" (water) 1 @ 2"

Holds, &c. 2 @ 2", 1 @ 2 1/2" (low pump)
 Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 16"
 Independent Power Pump Direct Suctions to the Engine Room
 Bilges, No. and size 1 @ 9", 1 @ 6", 1 @ 4"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes
 Are the Bilge Suctions in the Machinery Space led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges yes
 Are all Sea Connections fitted direct on the skin of the ship some on boxes Are they fitted with Valves or Cocks yes
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stowhold plates yes
 Are the Overboard Discharges above or below the deep water line below
 Are they 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
 What pipes pass through the bunkers none How are they protected ✓
 What pipes pass through the deep tanks none Have they been tested as per rule ✓

Are all Pipes, Cocks, Valves and Pumps in connection with the machinery and all boiler mountings accessible at all times yes
 Is the arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or machinery spaces, or from one compartment to another yes
 Is the Shaft Tunnel watertight ✓ Is it fitted with a watertight door ✓ worked from _____

Boilers, &c.—(Letter for record S) Total Heating Surface of Boilers 10,938 sq. ft., Superheater 1680 sq. ft.
 Forced Draft fitted yes No. and Description of Boilers 2 B+W Sectional Header Working Pressure 495 lb (design) 345 lb (max) 480 lb (suppl) 470 lb
 Is a Report on Main Boilers now forwarded? yes



Is ^{a Donkey} ~~an Auxiliary~~ Boiler fitted? Yes. Two If so, is a report now forwarded? yes
 Is the donkey boiler intended to be used for domestic purposes only to cargo pumping & tank heating
 Plans. Are approved plans forwarded herewith for Shafting 25.8.49 Main Boilers 22.6.49 Auxiliary Boilers ✓ Donkey Boilers 18.8.48
 (If not, state date of approval) 10.6.49, 28.9.49
 Superheaters Plans General Pumping Arrangements 26.7.49, 25.8.49 Oil Fuel Burning Arrangements 14.6.50
 Geared turbines situated aft. Have torsional vibration characteristics of system been approved yes Date of approval 15.3.49

SPARE GEAR.

Has the spare gear required by the Rules been supplied yes
 State the principal additional spare gear supplied ✓

*T.V. & aff. document
 f 9/3/51 in 111 R109*

[Signature]
 GANNELL LAIRD AND COMPANY LIMITED,
 Manufacturer.

The foregoing is a correct description,

ENGINEERING MANAGER.

Dates of Survey while building { During progress of work in shops - - 16/6/49
 During erection on board vessel - - 27/8/51
 Total No. of visits 323

Dates of Examination of principal parts—Casings 10.10.50, 12.12.50 Rotors 6.3.50, 21.12.50 Blading 12.12.50, 10.10.50 Gearing 25.8.51

Wheel shaft 13.12.50 Thrust shaft ✓ Intermediate shafts 13.51, 4.4.51 Tube shaft ✓ Screw shaft 29.6.50

Propeller 24.4.51 Stern tube 30.4.51 Engine and boiler seatings 22.5.51 Engine holding down bolts 7.6.51

Completion of fitting sea connections 22.5.51 Completion of pumping arrangements 23.8.51 Boilers fired 7.6.51 Engines tried under steam 23/25.8.51

Main boiler safety valves adjusted 21.8.51 Thickness of adjusting washers Port In 25/164, Out 27/164, Super 13/32, Starb In 25/164, Out 27/164, Super 13/32

Rotor shaft, Material and tensile strength Carbon steel 34-38 T/0" Identification Mark 85112 80908

Flexible Pinion Shaft, Material and tensile strength Steel 35-37 T/0" Identification Mark 81085 81086

Pinion shaft, Material and tensile strength nickel Carbon Steel 40 T/0" Identification Mark 80884 80888

; Chemical analysis ✓

If Pinion Shafts are made of special steel state date of approval of chemical analysis, physical properties and heat treatment ✓

1st Reduction Wheel Shaft, Material and tensile strength Steel 35 T/0" Identification Mark 81093 81094

Wheel shaft, Material Steel Identification Mark 81079 Thrust shaft, Material For end of gear Identification Mark ✓

Intermediate shafts, Material Steel Identification Marks 93164, 84930, 84934 Tube shaft, Material ✓ Identification Marks ✓

Screw shaft, Material Steel Identification Marks 86051 Steam Pipes, Material Steel Test pressure 1440 lb

Date of test 29.3.51 & follow-up Is an installation fitted for burning oil fuel yes

Is the flash point of the oil to be used over 150°F yes Have the requirements of the Rules for the use of oil as fuel been complied with yes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Tanker If so, have the requirements of the Rules been complied with ✓

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with ✓

Is this machinery a duplicate of a previous case yes If so, state name of vessel General Sea Martin

General Remarks. (State quality of workmanship, opinions as to class, &c.) This machinery has been constructed under Special Survey in accordance with the Approved Plans, the Society's Rules and the Secretary's letters. The materials and workmanship are good. It has been properly installed in the vessel and tried under working conditions with satisfactory results and is eligible, in my opinion to be classed with the record of LMC 8, 51, CL Fitted for Oil Fuel 8, 51, FP above 150°F.

The amount of Entry Fee ... £ 333 - : When applied for 27 SEP 1951
 Special Plans 2/3 boiler ... £ 52 - : 19
 Donkey Boiler Fee ... £ 73 : 6 :
 E.W. gear case ... £ 7 5 :
 Travelling Expenses (if any) £ ✓ : When received 19

Committee's Minute LIVERPOOL - 2 OCT 1951
 Assigned + LMC 8, 51 CL
W.T.B.

[Signature]
 Engineer Surveyor to Lloyd's Register of Shipping.



Certificate (if required) to be sent to

(The Surveyors are requested not to write on or below the space for Committee's Minute.)