

Report on Steam Turbine Machinery. No. 592

4a.

Received at London Office **8 FEB 1957**

of writing Report **4-1-1957** When handed in at Local Office **24-1-1957** Port of **NANTES**

in Survey held at **SAINT NAZAIRE** Date, First Survey **4-8-55** Last Survey **23-1-1957**

Book (Number of Visits **124**)

500 on the **Single** Screw Vessel **S/T "GEORGE F. GETTY"** Tons (Gross **33705**)

ilt at **SAINT NAZAIRE** By whom built **CH. DE L'ATLANTIQUE (PENHOET)** Yard No. **B.17** When built **1-1957**

ines made at **id** By whom made **id** Engine No. **B.17** When made **1956**

lers made at **id** By whom made **id** Boiler No. **1904-1905** When made **1956**

ft Horse Power { Maximum **19000** Owners **TIDE WATER ASSOCIATED OIL COMPANY** Port belonging to **MONROVIA**

N. as per Rule **3800** Is Refrigerating Machinery fitted for cargo purposes **No** Is Electric Light fitted **yes**

ade for which Vessel is intended **CARRYING PETROLEUM IN BULK**

STEAM TURBINE ENGINES, &c.—Description of Engines **DOUBLE REDUCTION GEARED TURBINES (G.E.M. TYPE)**

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 2 **double reduction geared**

ect coupled to { **Alternating Current Generator** phase periods per second rated **-** Kilowatts **-** Volts at **-** revolutions per minute;

upplying power for driving **-** Propelling Motors, Type **-**

ed **-** Kilowatts **-** Volts at **-** revolutions per minute. Direct coupled, single or double reduction geared to **-** propelling shafts.

TURBINE	H. P.	H. P. ASTERN	L. P.	ASTERN.
LADING.				
ulse				
ling				
No. of rows	2	2	22	6
No. of stages	22			
No. of rows in each stage	1			

ft Horse Power at each turbine **H.P. 8850** **Revolutions per minute, at full power, of each Turbine Shaft** **19300** **Pencilled HP & RPM are as app.**

otor Shaft diameter at journals **H.P. 2.00** **Pitch Circle** **1st pinion H.P. 299.3** **1st reduction wheel 1899.2** **Width of Face** **1st reduction wheel 850**

L.P. 2.50 **Diameter** **2nd pinion H.P. 642.1** **main wheel 4435.884** **main shaft 104** **105**

istance between centres of pinion and wheel faces and the centre of the adjacent bearings **180 HP** **2nd pinion F935 A-935** **main wheel F1020 A-1020**

exible Pinion { **1st** **Pinion Shafts, diameter at bearings** **External** **1st** **2.00 LP** **4.50** **diameter at bottom of pinion teeth** **1st 290.9**

2nd **Internal** **2nd** **2.25** **2nd 630.1**

heel Shafts, diameter at bearings **1st 280** **diameter at wheel shroud** **1st 373/420** **Generator Shaft, diameter at bearings** **main 721/787** **Propelling Motor Shaft, diameter at bearings** **574**

as per rule **547.6** **as fitted** **548** **Thrust Shaft, diameter at collars** **as per rule** **574** **as fitted** **600**

intermediate Shafts, diameter **as per rule** **624** **as fitted** **655** **Is the tube** **shaft fitted with a continuous liner** **yes**

as fitted **RED. TO 575 AT COUPLING** **as fitted** **3.2** **Is the after end of the liner made watertight in the**

onze Liners, thickness in way of bushes **as per rule** **2.7** **Thickness between bushes** **as per rule** **3.2** **If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner** **yes**

opeller boss **yes** **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** **yes**

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 **yes**

two liners are fitted, is the shaft lapped or protected between the liners **yes** **Is an approved Oil Gland or other appliance fitted at the after end of the tube** **yes**

ift **yes** **If so, state type** **yes** **Length of Bearing in Stern Bush next to and supporting propeller** **182.640 in**

opeller, diameter **6.950 m** Pitch **5.337 m** No. of Blades **5** **State whether Moveable** **NO** **Total Developed Surface** **379362 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**

ndenser **yes** **No. of Turbines fitted with astern wheels** **Feed Pumps** **No. and size** **3 x 11.5 M³/H** **How driven** **STEAM TURBINE**

umps connected to the Main Bilge Line **No. and size** **1 WB. BILGE PP. 102 T/H - 1 BILGE PP. 30 T/H - 1 SEA W. SERV. PP. 159 T/H - 1 BUTTERW. & FIRE PP. 145 T/H** **How driven** **RECIP. ST. DRIV. - ELECT. DRIV. - ELECT. DRIV. - STEAM TURBINE**

illast Pumps, No. and size **1 x 102 T/H** **Lubricating Oil Pumps, including Spare Pump, No. and size** **2 x 140 M³/H**

re two independent means arranged for circulating water through the Oil Cooler **yes** **Branch Bilge Suctions, No. and size:—In Engine**

d Boiler Rooms **7 x 100 - 3 x 150 - 4 x 50** **In Pump Room** **END 1 x 100 - AEL 1 x 100**

Holds, &c. **2 x 50** **CHAIN LOCKER** **1 x 65** **Direct Bilge Suctions to the Engine and/or Boiler Room**

ain Water Circulating Pump Direct Bilge Suctions, No. and size **1 x 450** **Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes** **yes**

ilges, No. and size **3 x 150** **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**

re 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**

re all Sea Connections fitted direct on the skin of the ship **WATER BOXES & DISTANCE PIECES** **Are they fitted with Valves or Cocks** **BOTH**

re they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates **yes** **Are the Overboard Discharges above or below the deep water** **yes**

ne **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** **yes**

covering plate **BOTH** **What pipes pass through the bunkers** **-** **How are they protected** **-**

What pipes pass through the deep tanks **-** **Have they been tested as per rule** **-**

re 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 **yes**

paces, or from one compartment to another **yes** **Is the Shaft Tunnel watertight** **yes** **Is it fitted with a watertight door** **-** **worked from** **-**

DILERS, &c.—Total Heating Surface of Boilers **25780 Sq. Ft.** **No. and Description of Boilers** **2 WATER TUBE FOSTER WHEELER TYPE** **Working Pressure** **49.320**

s Forced Draught fitted **yes** **Is a Report on Main Boilers now forwarded?** **yes**

TEMP **463.00**

013588 - 013595 - 0195

Is the donkey boiler intended to be used for domestic purposes only.

Superheaters.....10/5/55 JCS.....General Pumping Arrangements.....11/5/55 JCS.....Oil Fuel Burning Arrangements 1/4/55 - 29/1/55

SPARE GEAR.

Has the spare gear required by the Rules been supplied.

CHANTIERS DE L'ATLANTIQUE (Penhoët-Loire)
CHANTIERS DE L'ATLANTIQUE
St-NAZAIRE
Capital de 2.000.000.000 de fr.

The foregoing is a correct description.

Dates of Examination of principal parts—Casings ^{1956: 13/2-24/2-7/5-28/5} 5/6-19/6-22/8-10/9 Rotors ^{7/1-7/8-10/9-26/9} 7/1-7/8-10/9-26/9 Blading ^{10/6-7/7-7/8-10/9} 10/6-7/7-7/8-10/9 Gearing ^{4/8/55-15/11/55} 4/8/55-15/11/55

Wheel shaft 7/7-10/9-25/9 Thrust shaft - Intermediate shafts 25/9-10/12-13/12 Tube shaft - Screw shaft 30/6-26/6-2

Propeller 26/6 - 2/7 Stern tube 15/1 - 15/6 - 28/6 Engine and boiler seatings 9/7 - 20/8 - Engine holding down bolts 7-11-56

Completion of fitting sea connections 7/2/56 Completion of pumping arrangements 11/1/57 Boilers fixed 24/8/56 Engines tried under steam IN SHOP

Main boiler safety valves adjusted $P^T_{285^D}$ 12-12-56 Thickness of adjusting washers P^T_{SUPH} 15ⁱⁿ DESUP FWD 25'8 AFT 22'3

Rotor shaft, Material and tensile strength HP: OH STEEL 55.5/59.2 - LP: OH STEEL 55.5/58.2 Identification Mark HP: VLN 7801

Flexible Pinion Shaft, Material and tensile strength.....1ST RED-WHEEL SHAFT.....Identification Mark.....

Pinion shaft, Material and tensile strength 1st RED { HP: 81/82.5
LP: 83.8/89.6 } 2nd RED { HP: 81/82.5
LP: 86.4/86.4 } EFFECT STEEL Identification Mark 1st RED { HP: VLN 10
LP: VLN 100 }

2. RED } ; Chemical analysis BASIC ELECTRIC STEEL
LP-VLN1110

If Pinion Shafts are made of special steel state date of approval of chemical analyses, physical properties and heat treatment. 22/4/55 - 22/5/55 - 1/1

1st Reduction Wheel Shaft, Material and tensile strength BASIC ELECT STEEL 845/812 Identification Mark VLN. 1062 & 1081

Wheel shaft, Material SAE STEEL Identification Mark SIE 743 Thrust shaft, Material AS WHEEL SHAFT Identification Mark 1

Intermediate shafts, Material 2024-T3 Identification Marks 2024-T3 Tube shaft, Material 2024-T3 Identification Marks 2024-T3

2/7-3/7-13/8-20/8-27/8-28/8-3/9-5/9-10/9-18/9-21/9-1/10

Is the first point of the c/t to be used over 1500 ft. ☐ Yes ☒ No

Full Description of Fire Extinguishing Apparatus fitted in machinery engine R/R: 2 x 15¹⁶ Ca³ - 1 x 13¹⁴ Ca³ - 1 x 13¹² Ca³ - 1 x 13¹⁰ Ca³ - 1 x 13⁸ Ca³ - 1 x 13⁶ Ca³ - 1 x 13⁴ Ca³ - 1 x 13² Ca³ - 1 x 13⁰ Ca³ - 1 x 13⁻² Ca³ - 1 x 13⁻⁴ Ca³ - 1 x 13⁻⁶ Ca³ - 1 x 13⁻⁸ Ca³ - 1 x 13⁻¹⁰ Ca³ - 1 x 13⁻¹² Ca³ - 1 x 13⁻¹⁴ Ca³ - 1 x 13⁻¹⁶ Ca³ - 1 x 13⁻¹⁸ Ca³ - 1 x 13⁻²⁰ Ca³ - 1 x 13⁻²² Ca³ - 1 x 13⁻²⁴ Ca³ - 1 x 13⁻²⁶ Ca³ - 1 x 13⁻²⁸ Ca³ - 1 x 13⁻³⁰ Ca³ - 1 x 13⁻³² Ca³ - 1 x 13⁻³⁴ Ca³ - 1 x 13⁻³⁶ Ca³ - 1 x 13⁻³⁸ Ca³ - 1 x 13⁻⁴⁰ Ca³ - 1 x 13⁻⁴² Ca³ - 1 x 13⁻⁴⁴ Ca³ - 1 x 13⁻⁴⁶ Ca³ - 1 x 13⁻⁴⁸ Ca³ - 1 x 13⁻⁵⁰ Ca³ - 1 x 13⁻⁵² Ca³ - 1 x 13⁻⁵⁴ Ca³ - 1 x 13⁻⁵⁶ Ca³ - 1 x 13⁻⁵⁸ Ca³ - 1 x 13⁻⁶⁰ Ca³ - 1 x 13⁻⁶² Ca³ - 1 x 13⁻⁶⁴ Ca³ - 1 x 13⁻⁶⁶ Ca³ - 1 x 13⁻⁶⁸ Ca³ - 1 x 13⁻⁷⁰ Ca³ - 1 x 13⁻⁷² Ca³ - 1 x 13⁻⁷⁴ Ca³ - 1 x 13⁻⁷⁶ Ca³ - 1 x 13⁻⁷⁸ Ca³ - 1 x 13⁻⁸⁰ Ca³ - 1 x 13⁻⁸² Ca³ - 1 x 13⁻⁸⁴ Ca³ - 1 x 13⁻⁸⁶ Ca³ - 1 x 13⁻⁸⁸ Ca³ - 1 x 13⁻⁹⁰ Ca³ - 1 x 13⁻⁹² Ca³ - 1 x 13⁻⁹⁴ Ca³ - 1 x 13⁻⁹⁶ Ca³ - 1 x 13⁻⁹⁸ Ca³ - 1 x 13⁻¹⁰⁰ Ca³ - 1 x 13⁻¹⁰² Ca³ - 1 x 13⁻¹⁰⁴ Ca³ - 1 x 13⁻¹⁰⁶ Ca³ - 1 x 13⁻¹⁰⁸ Ca³ - 1 x 13⁻¹¹⁰ Ca³ - 1 x 13⁻¹¹² Ca³ - 1 x 13⁻¹¹⁴ Ca³ - 1 x 13⁻¹¹⁶ Ca³ - 1 x 13⁻¹¹⁸ Ca³ - 1 x 13⁻¹²⁰ Ca³ - 1 x 13⁻¹²² Ca³ - 1 x 13⁻¹²⁴ Ca³ - 1 x 13⁻¹²⁶ Ca³ - 1 x 13⁻¹²⁸ Ca³ - 1 x 13⁻¹³⁰ Ca³ - 1 x 13⁻¹³² Ca³ - 1 x 13⁻¹³⁴ Ca³ - 1 x 13⁻¹³⁶ Ca³ - 1 x 13⁻¹³⁸ Ca³ - 1 x 13⁻¹⁴⁰ Ca³ - 1 x 13⁻¹⁴² Ca³ - 1 x 13⁻¹⁴⁴ Ca³ - 1 x 13⁻¹⁴⁶ Ca³ - 1 x 13⁻¹⁴⁸ Ca³ - 1 x 13⁻¹⁵⁰ Ca³ - 1 x 13⁻¹⁵² Ca³ - 1 x 13⁻¹⁵⁴ Ca³ - 1 x 13⁻¹⁵⁶ Ca³ - 1 x 13⁻¹⁵⁸ Ca³ - 1 x 13⁻¹⁶⁰ Ca³ - 1 x 13⁻¹⁶² Ca³ - 1 x 13⁻¹⁶⁴ Ca³ - 1 x 13⁻¹⁶⁶ Ca³ - 1 x 13⁻¹⁶⁸ Ca³ - 1 x 13⁻¹⁷⁰ Ca³ - 1 x 13⁻¹⁷² Ca³ - 1 x 13⁻¹⁷⁴ Ca³ - 1 x 13⁻¹⁷⁶ Ca³ - 1 x 13⁻¹⁷⁸ Ca³ - 1 x 13⁻¹⁸⁰ Ca³ - 1 x 13⁻¹⁸² Ca³ - 1 x 13⁻¹⁸⁴ Ca³ - 1 x 13⁻¹⁸⁶ Ca³ - 1 x 13⁻¹⁸⁸ Ca³ - 1 x 13⁻¹⁹⁰ Ca³ - 1 x 13⁻¹⁹² Ca³ - 1 x 13⁻¹⁹⁴ Ca³ - 1 x 13⁻¹⁹⁶ Ca³ - 1 x 13⁻¹⁹⁸ Ca³ - 1 x 13⁻²⁰⁰ Ca³ - 1 x 13⁻²⁰² Ca³ - 1 x 13⁻²⁰⁴ Ca³ - 1 x 13⁻²⁰⁶ Ca³ - 1 x 13⁻²⁰⁸ Ca³ - 1 x 13⁻²¹⁰ Ca³ - 1 x 13⁻²¹² Ca³ - 1 x 13⁻²¹⁴ Ca³ - 1 x 13⁻²¹⁶ Ca³ - 1 x 13⁻²¹⁸ Ca³ - 1 x 13⁻²²⁰ Ca³ - 1 x 13⁻²²² Ca³ - 1 x 13⁻²²⁴ Ca³ - 1 x 13⁻²²⁶ Ca³ - 1 x 13⁻²²⁸ Ca³ - 1 x 13⁻²³⁰ Ca³ - 1 x 13⁻²³² Ca³ - 1 x 13⁻²³⁴ Ca³ - 1 x 13⁻²³⁶ Ca³ - 1 x 13⁻²³⁸ Ca³ - 1 x 13⁻²⁴⁰ Ca³ - 1 x 13⁻²⁴² Ca³ - 1 x 13⁻²⁴⁴ Ca³ - 1 x 13⁻²⁴⁶ Ca³ - 1 x 13⁻²⁴⁸ Ca³ - 1 x 13⁻²⁵⁰ Ca³ - 1 x 13⁻²⁵² Ca³ - 1 x 13⁻²⁵⁴ Ca³ - 1 x 13⁻²⁵⁶ Ca³ - 1 x 13⁻²⁵⁸ Ca³ - 1 x 13⁻²⁶⁰ Ca³ - 1 x 13⁻²⁶² Ca³ - 1 x 13⁻²⁶⁴ Ca³ - 1 x 13⁻²⁶⁶ Ca³ - 1 x 13⁻²⁶⁸ Ca³ - 1 x 13⁻²⁷⁰ Ca³ - 1 x 13⁻²⁷² Ca³ - 1 x 13⁻²⁷⁴ Ca³ - 1 x 13⁻²⁷⁶ Ca³ - 1 x 13⁻²⁷⁸ Ca³ - 1 x 13⁻²⁸⁰ Ca³ - 1 x 13⁻²⁸² Ca³ - 1 x 13⁻²⁸⁴ Ca³ - 1 x 13⁻²⁸⁶ Ca³ - 1 x 13⁻²⁸⁸ Ca³ - 1 x 13⁻²⁹⁰ Ca³ - 1 x 13⁻²⁹² Ca³ - 1 x 13⁻²⁹⁴ Ca³ - 1 x 13⁻²⁹⁶ Ca³ - 1 x 13⁻²⁹⁸ Ca³ - 1 x 13⁻³⁰⁰ Ca³ - 1 x 13⁻³⁰² Ca³ - 1 x 13⁻³⁰⁴ Ca³ - 1 x 13⁻³⁰⁶ Ca³ - 1 x 13⁻³⁰⁸ Ca³ - 1 x 13⁻³¹⁰ Ca³ - 1 x 13⁻³¹² Ca³ - 1 x 13⁻³¹⁴ Ca³ - 1 x 13⁻³¹⁶ Ca³ - 1 x 13⁻³¹⁸ Ca³ - 1 x 13⁻³²⁰ Ca³ - 1 x 13⁻³²² Ca³ - 1 x 13⁻³²⁴ Ca³ - 1 x 13⁻³²⁶ Ca³ - 1 x 13⁻³²⁸ Ca

ST. GEAR: 1x15¹⁶ Co² - 1x2½ G. Foam. - EM. D. GEAR. 1x15¹⁶ Co². 1x2½ G. Foam.

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 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 License in accordance with approved plans, rule requirements & Secretary's letters

The quality of material & workmanship is good.

The machinery has been satisfactory installed on board examined under hull

working conditions during sea trials

During sea trials the main machinery was specially examined at engine speeds of

35 & 42 RPM (per see letter of 11-11-55) and no evidence of gear hammer or rough run.

was observed.

During & after sea trials the welded gear case was specially examined and no defects

observed

The machinery of this vessel is in my opinion eligible to be classed with the notation

LMC + 1-57

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The amount of Entry Fee ... £ 377 : 200 : When applied for.

Special ... £ 358.200 : 19

Donkey Boiler Fee GEAR CASE.	... £ 20:000:	When received.	Engineer Surveyor to Lloyd's Register of Shipping.
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Travelling Expenses (if any) £ 65 : 150 : 19

Committee's Minute.....FRIDAY 22 MAR 1957.....Lloyd's Register

Assigned TLMC 1.37