

Rpt. 4a

Date of writing report 28-1-61 Received London Port ROUEN No. FE 35

Survey held at DUNKIRK No. of visits In shops 34 On vessel 24 First date 5-3-59 Last date 6-11-60 13 NOV 1961

FIRST ENTRY REPORT ON STEAM TURBINE MACHINERY

No. in Register Book 91062 Name J. PAUL GETTY Gross tons 40306 Owners HEMISPHERE TRANSPORT CORP Managers Port of Registry MONROVIA

Hull built at DUNKIRK By AT & CH DE FRANCE Yard No. 228 When 1960-11 Main engines made at SAINT-NAZAIRE By CH DE L'ATLANTIQUE Engine No. T18 When 1959-9 Gearing made at CIE ELECTRO MECANIQUE By PARIS Gear No. When Machinery installed at DUNKIRK By AT & CH DE FRANCE When 1960-11

Particulars of restricted service of ship if limited for classification. If ship is to be classed for navigation in ice, state whether Class 1, 2 or 3. Particulars of vegetable or similar cargo oil notation if required. Is ship an oil tanker? YES Is a refrigerating installation fitted? YES If so, is it for cargo purposes? NO Type of refrigerant METHANE Is the compartment containing the refrigerating machinery isolated from the propelling machinery space? YES Is the refrigerated cargo installation intended to be classed? NO

The following particulars should be given as fully and as clearly as possible. Dashes, ticks and other signs of doubtful meaning are not to be used. Wording not applicable to the installation should be cancelled with a black line.

BOILERS AND OTHER STEAM PRESSURE VESSELS.

No. of main boilers 2 W.T. Type and licence name, if any FOSTER WHEELER Position BOILER RM PORT 2 STARBD No. of aux./donkey boilers NONE Type and licence name, if any Saturated safety valve pressure, main boilers 50.3-50.6 KG/CM^2 Aux./donkey boilers Steam temperature if superheated 454°C Superheater safety valve pressure 43.8 KG/CM^2 Natural, forced or induced draught FORCED No. of steam heated steam generators NONE Generator safety valve pressure Report on main, aux./donkey boilers and steam heated steam generators (Port and No.) ROUEN (50) FE 35

If the boilers are oil fired, is the arrangement of pipes, valves and controls in accordance with the Rules? YES Licence name of oil burning system TODD No. and position of oil burning pressure units 2 BOILER FLAT INSD SUBD No. and position of oil fuel settling or service tanks not forming part of the hull structure

No. of forced or induced draught fans 2 How driven ELECTRIC MOTORS

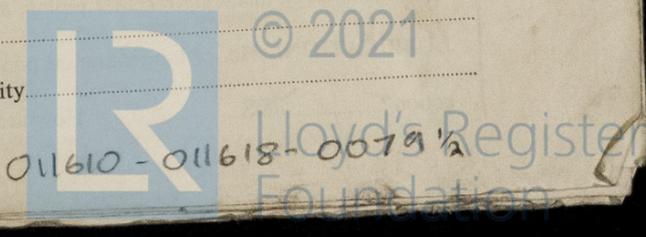
MAIN PROPULSION. (If the main steam turbines, generators or propelling motors have been constructed at another port and are covered by a separate report, the particulars given in that report should not be repeated below but the port and report No. must be stated and all other applicable information must be given.)

Geared or electric transmission? GEARED No. of propellers ONE Maximum S.H.P. for which each line of shafting has been approved 24000 at 102 R.P.M. Machinery numeral 4800

STEAM TURBINES. Description and licence name, if any. (State whether impulse, reaction, impulse-reaction, etc., and whether in tandem.)

IMPULSE REACTION NOT IN TANDEM No. of ahead turbines TWO No. of astern turbines TWO If ship is single screw, can steam be led direct to M.P. or L.P. turbine and can either H.P. or M.P. turbine exhaust direct to condenser? YES Are ahead turbines fitted with emergency overspeed governors as per Rule? YES Is provision made for reheating the exhaust steam from the H.P. or M.P. turbines? NO If so, state pressure and temperature of steam on entering reheater and leaving reheater What means are provided for protecting reheat boiler against overheating when by-passed?

Temperature of stabilisation of H.P. rotor Residual eccentricity



TURBINES	H.P.		M.P.		L.P.	
	Ahead	Astern	Ahead	Astern	Ahead	Astern
No. of velocity compounded impulse stages						
No. of other impulse stages						
Material of blades						
Material of nozzles						
No. of rows of reaction blading						
Material of blades						
Type of glands						
Type of rotor construction						
Material of rotor shaft						
Tensile strength						
Rotor shaft diameter at bearings						
Span of bearing centres						
S.H.P. at approved maximum power						
Corresponding R.P.M.						
Type of casing construction and material. State if fabricated						

PLEASE SEE HAWES RPT No 731

REDUCTION GEARING. (Full particulars to be reported on Form 4e) Port Report No. \_\_\_\_\_

ELECTRIC PROPULSION. (Full particulars to be reported on Form 4d) Port Report No. \_\_\_\_\_

No. of alternators \_\_\_\_\_ Kw. each alternator \_\_\_\_\_ at \_\_\_\_\_ R.P.M. Position in ship \_\_\_\_\_

motor \_\_\_\_\_ at \_\_\_\_\_ R.P.M. Position in ship \_\_\_\_\_

LINE SHAFTING. THRUST SHAFT (If not integral with gearwheel or electric motor shaft) Is it forward or abaft of the gear case or motor? \_\_\_\_\_

Diameter at collar \_\_\_\_\_ Minimum approved tensile strength \_\_\_\_\_ INTERMEDIATE SHAFT Diameter \_\_\_\_\_ 595%

Minimum approved tensile strength 44 kcs/mm<sup>2</sup> SCREWSHAFT Diameter of cone at large end 711%

Is continuous liner fitted? Yes Type of propeller key SLED RUNNER TUBESHAFT (If separate from screwshaft) \_\_\_\_\_

Diameter \_\_\_\_\_ Is continuous liner fitted in way of sterntube? Yes Thickness of screw/tubeshaft liner at bearings 33%

Thickness between bearings 28.5% How is end of liner made watertight in propeller boss? RUBBER RING JOINT

Is an approved oil gland fitted? No If so, state type \_\_\_\_\_ Length of bearing next to and supporting

propeller 2750% Material of bearing LIGNUM-VIRAE In multiple screw ships, is the liner between sterntube and

"A" bracket continuous? \_\_\_\_\_ If not, is the exposed length of shafting between liners readily visible in drydock? \_\_\_\_\_

Minimum approved tensile strength of screw/tubeshaft 44 kcs/mm<sup>2</sup> Is screw/tubeshaft of approved corrosion resisting material? No

PROPELLER. If of special design, state type No Is it of reversible pitch type? No

If so, is it of approved design? \_\_\_\_\_ State method of control \_\_\_\_\_

Propeller	Diameter	Pitch	Built or solid	Total developed surface	No. of blades	Blade thickness at top of root fillet	Blade material	Tensile strength kcs/mm <sup>2</sup>	Design moment of inertia of propeller (dry) KG/M <sup>2</sup>	For Class 1 or 2 ice strengthening only			
										Blade thickness at 25% radius	Blade thickness at tip	Length of blade section at 25% radius	Rake of blade
Working	7500%	VAR.	SOLID	-	5	305%	HT ALUM BRONZE	63mm	416160				
Spare	7500%	VAR.	SOLID	-	5	320.7%	HT BRASS	44mm	463600				

TORSIONAL VIBRATION CHARACTERISTICS. Date of approval with (a) working propeller 19.3.58 (b) spare propeller 19.3.58

State barred speed ranges if imposed with (a) working propeller NONE (b) spare propeller NONE

STEAM PIPES. Material of main steam pipes ALLOY STEEL CHROMIUM Tensile strength 48/58 kg/cm<sup>2</sup>

External diameter 244.5% - 193.7% Thickness 14% - 11% How are flanges attached? WELDED

Material of valves and fittings for superheated steam CHROMIUM MOLYBDENUM STEEL Are any auxiliary steam pipes for essential

services over 3" bore? Yes If so, what is the material? CARBON STEEL Tensile strength 36/47 kg/cm<sup>2</sup>

Hydraulic test pressure on steam pipes: main 86.4 kg/cm<sup>2</sup> auxiliary 20 kcs/cm<sup>2</sup> Is adequate drainage provided for

the steam piping, including reheater piping, and fittings? Yes

LUBRICATION. No. of lubricating oil pumps 2 Are their capacities sufficient to maintain normal oil supply with any one pump out of

action? Yes How are the pumps driven? ELECTRICALLY

Is an emergency supply of oil automatically available as per Rule? Yes Is an alarm device fitted to give warning of failure or reduction of the oil supply from the pumps? Yes No. of oil coolers 2

Are duplex strainers/filters fitted on the suction/pressure side of the pumps? Yes

Are they of magnetic type? Yes

FEED SYSTEM. Are all boilers provided with two separate means of feed? Yes No. of pressure feed heaters NONE

Temperature of feed water at admission to boilers 210°C No. of duplex feed filters: suction 1 pressure - No. of feed water evaporators 2

Capacity of each in tons/hour 40 tons/24 hrs 1 - MAKE UP 30 tons/24 hrs Is feed water distilled from fresh water carried on board, or sea water? SEA WATER

Is the feed water single or double distilled? DOUBLE Is the feed system closed? Yes

No. of condensers: main 1 aux. 1 Cooling surface of main condensers 2136 m<sup>2</sup>

Material specification of condenser tubes HT BRASS No. of air ejectors, main 2 aux. 2

PUMPS Name below each essential pump and state its position. Give capacities of bilge pumps.	Service for which each pump is connected to be marked thus x												
	SUCTION							DELIVERY					
	Bilge Main	Bilge Direct	Ballast Main	Oil Fuel Main	Cond. Extr.	Sea	Feed Tanks	AFT P	Boiler Feed	Main Cond. Cooling	Oil Fuel Burners	Oil Fuel Tanks	Fire Main
GENERAL SERV. & FIRE 150 m <sup>3</sup> /hr						X							X
S.S. ER INBD	X	X								X			X
BALLAST 150 m <sup>3</sup> /hr	X	X	X										
S.S. ER CENTRE	X	X											
BILGE 50 m <sup>3</sup> /hr	X												
S.S. ER OUTBD						X				X			
2. MAIN CIRCG													
P.S. ER FORWARD - AFT					X								
2. MAIN EXTRACTION													
P.S. ER INBD - OUTBD													
2. MAIN LUBR OIL													
P.S. ER FORWARD - AFT					X					X			
1. AUX CIRCG													X
S.S. ER													
1. FUEL OIL TANKS					X								
P.S. ER													
4. AUX EXTRACTION						X							
S.S. ER FORWARD - AFT								X		X			
3. FEED PUMPS													
S.S. ER FORWARD - AFT													
1. BILGE & BALLAST							X						
FORWARD PUMP ROOM	100 m <sup>3</sup> /hr	X					X						
1. BALLAST								X					
AFT PUMP ROOM													

BILGE SUCTIONS. No. and size in each hold, deep tank or pump room IN EACH PUMP ROOM 1-150% D

HOLD 2-50% D CHAIN LOCKER 1-65% D MAIN CATERING FORWARD & AFT 1 PORT SIDE 76% D

No. and size connected to main bilge line in main engine room 5 PORT SIDE 5 STARBOARD SIDE 125% D - 6-50% D TO COFFERDAMS

in boiler room \_\_\_\_\_ in tunnel \_\_\_\_\_

Size and position of direct bilge suction in machinery spaces 1 PORT SIDE 150% D 1 STARBOARD SIDE 175% D

Size and position of emergency bilge suction in machinery spaces 2-350% D PORT SIDE Are all bilge suction valves of non-return

type? Yes Is the bilge or ballast system fitted with means for separating oily water on the overboard discharge side? Yes

Do the pumping arrangements comply with the Rules, including special requirements for oil tankers, ships carrying cargo oil, or classed for navigation in

ice Class 1, 2 or 3? (Strike out words not applicable) Yes

ELECTRIC GENERATOR PRIME MOVERS.

Position of each	Prime Mover	Made by	Port and No. of Report or Certificate	Output in Kw.	Volts	Amps.
FLAT STARBOARD SIDE ER FORWARD	STEAM TURBINE	MAISON BREGUET	PAR RPT 14	900	450	1445
FLAT STARBOARD SIDE ER AFT	STEAM TURBINE	MAISON BREGUET	"	900	450	1445
HOUSE ON BOAT DECK ENERGY INBD	DIESEL ENG	ACIERIS DU NORD	VAL RPT 3	200	450	380
HOUSE ON BOAT DECK ENERGY OUTBD	DIESEL ENG	ACIERIS DU NORD	"	200	450	380
" " AFT	DIESEL ENG	"	"	200	450	380

If electric current is used for essential services at sea, state the minimum No. and capacity of generators required in order that the ship may operate at sea

ONE - 900 KW.

STEERING GEAR. (State type, also No. of steam engines, electric motors, hydraulic pumps and other particulars, including particulars of the alternative means

of steering) ELECTRIC HYDRAULIC HAVING TWO INDEPENDENT SETS OF PUMPS & MOTORS

WITH SEPARATE LOADS FROM THE SOURCE OF POWER

AIR COMPRESSORS AND RECEIVERS FOR ESSENTIAL SERVICES. (State purpose, capacity, prime mover, position in ship, Port and No. of Certificate)

Have the Rules for fire extinguishing arrangements been complied with? **YES** Brief description of arrangements **WATER SERVICE, PORTABLE FIRE EXTINGUISHERS, FROTH EXTINGUISHER, CO<sub>2</sub> APPARATUS IN MACH. SPACE, STEAM SMOTHERING APPARATUS FOR PUMP ROOM, HOLD, CARGO TANKS, OIL FUEL BUNKER TANKS, COFFERDAMS**

Has the spare gear required by the Rules been supplied? **YES** Has all the machinery been tried under full working conditions and found satisfactory? **YES**

Has the manœuvring of the main engines been tried and found satisfactory? **YES** Date and duration of full-power sea trials of main engines **23-24/10/60 - 24 hrs**

Does this machinery installation contain any features of a novel or experimental nature? (State particulars) **No**

Date of approval of plans for: Main boilers **12-9-57** Auxiliary boilers \_\_\_\_\_ Donkey boilers \_\_\_\_\_

Superheaters **15-8-58** Economisers **31-12-58** Steam heated steam generators \_\_\_\_\_ Main steam pipes **9-1-58**

Shafting **19-3-58** Pumping and piping arrangements **General 2/12/58, 17/12/58, 22/12/58**

**OIL FUEL 7-5-58, 2-6-58** Separate oil fuel tanks \_\_\_\_\_ Propeller (including spare if supplied) **14-1-59**

If the installation is a duplicate of a previous case, state name of ship **No**

The foregoing description of the main engines and installation is correct and the particulars are as approved for torsional vibration characteristics. (Strike out words not applicable.)



**GENERAL REMARKS.** (State if machinery has been constructed and/or installed under special survey in accordance with the Rules, approved plans and Secretary's letters. State quality of materials and workmanship and give recommendations for classification, including any special notation to be assigned. Where existing machinery is submitted for classification, the circumstances should be explained as fully as possible.) **THE MACHINERY HAS BEEN SECURELY**

**FITTED ON BOARD AND EXAMINED UNDER WORKING CONDITIONS DURING SEA TRIALS IN ACCORDANCE WITH THE RULES AND APPROVED PLANS. NO EVIDENCE OF TORQUE REVERSAL IN THE FORM OF CLEAR HUMMING WAS NOTED IN THE MAIN GEARING AND IN ACCORDANCE WITH THE TERMS OF THE SECRETARY'S LETTER**

**DATED 27 AUGUST 1957 THE TIGHT CONTACT DISTRIBUTION OF THE PISTONS AND RODS WERE COATED WITH AN APPROVED SPIRIT LACQUER AND ON EXAMINATION AFTER SEA TRIALS THE MARKING INDICATING FREESON FROM HARD BEARING OF MORE THAN 70% CONTACT ACROSS THE PISTON OVER THE INVOLEUTE PROFILE THE MATERIALS & WORKMANSHIP ARE GOOD. THE TWO MAIN BOILERS HAVE BEEN SECURELY FITTED ON BOARD (FITTED TO BURN OIL FUEL F. APPROXIMATELY) IN ACCORDANCE WITH RULE REQUIREMENTS AND SAFETY VALVES ADJUSTED UNDER STEAM TO APPROVED WORKING PRESSURE. THE MACHINERY IS ENDEAVOURING IN OUR OPINION TO HAVE NOTATION**

Engineer Surveyor to Lloyd's Register of Shipping  
**C. Balme, J. Martin & S.**

**PARTICULARS OF IDENTIFICATION MARKS** (including port of origin) of important Forgings and Castings. Copies of certificates to be forwarded with report.

Turbine Rotors \_\_\_\_\_ ↑ \_\_\_\_\_  
Turbine Casings \_\_\_\_\_ **NANTES RPT 781** \_\_\_\_\_

Flexible Couplings \_\_\_\_\_ ↓ \_\_\_\_\_

Thrust Shaft \_\_\_\_\_ Intermediate Shafts **MARSEILLES 234 - 238**

Screw and Tube Shafts **MARSEILLES 230** Propellers **NAVY 381**

Other important items \_\_\_\_\_

**DATES OF EXAMINATION OF PRINCIPAL PARTS.**

Casings **NANTES RPT 781** Rotors **NANTES RPT 781**

Flexible Couplings **NANTES RPT 791** Alignment of Turbines and Gearing **24-8-60**

Alignment of Straight Shafting **24-8-60** Boiler Supports **15-4-60** Fitting of Sterntube **4-3-60**

Fitting of Propeller **13-4-60, 15-4-60** Completion of Sea Connections **15-4-60** Testing of Pumping Arrangements **16-9-60**

Oil Fuel Lines **30-8-60** Steering Machinery **22-10-60** Windlass **22-10-60**

Date of Committee \_\_\_\_\_ Special Survey Fee \_\_\_\_\_

Decision \_\_\_\_\_ Expenses **SEE PREVIOUS RPT**

Date when a/c rendered \_\_\_\_\_

