

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

29 JUN 1953

Date of writing Report 29-5-1953 When handed in at Local Office 19 Port of

No. in Survey held at Shimizu Japan Date, First Survey 23-12-52 Last Survey 23-5-1953
Reg. Book. (No. of Visits 16)

on the S.S. "Leonidae" Nippon steel tube Co. Ltd.
Built at Shimizu Japan By whom built Shimizu Shipyard Yard No. 151 When built 1953. 5 mo
Owners Miramonte Compania Naviera S.A Port belonging to Monrovia Liberia
Installation fitted by Nippon Steel Tube Co. Ltd., Shimizu Shipyard When fitted 1953. 5 mo
Is vessel equipped for carrying Petroleum in bulk Yes Is vessel equipped with D.E. Yes E.S.D. Yes Gy. C. Yes Sub. Sig. Radar Yes

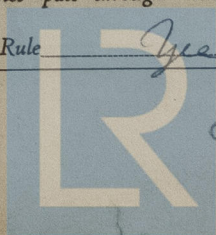
Plans, have they been submitted and approved Yes System of Distribution 3 Phase, 3 Wire Voltage of Lighting 110V
Heating 220V 110V Power 220V 3 Phase D.C. or A.C., Lighting A.C. Power A.C. If A.C. state frequency 60 Cycle
Prime Movers, has the governing been found as per Rule when full load is thrown on and off Yes Are turbine emergency governors fitted
with a trip switch Generators, are they compound wound and level compounded under working conditions
if not compound wound state distance between generators and from switchboard Are the generators arranged to run
in parallel Yes, are shunt field regulators provided Is the compound winding connected to the negative or positive pole
Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing Yes Have certificates of
test for machines under 100 kw. been supplied Yes and the results found as per Rule Yes

Position of Generators Generator plat form in engine room Port and Star board (Manoeuvring plat form)
is the ventilation in way of generators satisfactory Yes are they clear of inflammable material and protected from mechanical injury and
damage from water, steam and oil Yes Switchboards, where are main switchboards placed Manoeuvring plat form
forwards centre
are they in accessible positions, free from inflammable gases and acid fumes and protected from mechanical injury and damage from water,
steam and oil Yes, what insulation is used for the panels Synthetic resin bonded "Bakelite" if of synthetic insulating
material is it an Approved Type Yes, if of semi-insulating material are all conducting parts insulated in accordance
per Rule Is the construction as per Rule, including locking of screws and nuts Yes Description of Main Switchgear
for each generator and arrangement of equaliser switches A triple-pole linked circuit breaker with over current
trips in two phases and a reverse power relay

and the switch and fuse gear (or circuit breakers) for each outgoing circuit A triple-pole linked thermal type breaker
with over current trips in three phases.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard A.C. - 7
ammeters A.C. - 7 D.C. - 2 voltmeters / synchronising devices. For compound machines in parallel are the ammeters and reversed current
protection devices connected on the pole opposite to the equaliser connection Earth Testing, state means provided Earth
indicating lamps of metal-filament type of each 10 watts
Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes
make of fuses Fuji Electric Mfg. Co. Ltd. Siemens type Cartridge fuse, are all fuses labelled Yes If circuit breakers are provided for the generators, at what
overload do they operate 150% and at what current do the reversed current protective devices operate

Joint Boxes, Section Boards and Distribution Boards, is the construction as per Rule Yes
Cables, are they insulated and protected as per Rule Yes, if otherwise than as per Rule are they of an Approved Type Yes
state maximum fall of pressure between bus bars and any point under maximum load 3.8V, are the ends of all cables having a sectional
area of 0.01 square inch and above provided with soldering sockets Mechanical clamps. Are all paper insulated and varnished cambric insulated
cables sealed at the ends Yes Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil,
high temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates Yes, if so, are they
adequately protected Yes Are cables in machinery spaces, galleys, laundries, etc., lead covered Yes or run in conduit Yes
or of the "HR" type State how the cables are supported or protected Where not exposed to drip or
accumulation of water or oil or risk of mechanical damage, are supported by clips or straps
saddles, metal hangers or backing plates and where exposed to them are protected
by steel iron plate or heavy gauge screwed conduit
Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight
bulkheads provided with deck tubes or watertight glands Yes, where unarmoured cables pass through beams, etc., are the holes
effectively bushed Yes Refrigerated chambers, are the cables and fittings as per Rule Yes



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position Emergency diesel generator in engine room Port. 2nd deck

Navigation Lamps, are they separately wired Yes controlled by separate double pole switches and fuses Yes Are the switches and fuses in a position accessible only to the officers on watch Yes, is an automatic indicator fitted Yes Is an alternative supply provided Yes

Secondary Batteries, are they constructed and fitted as per Rule Yes, are they adequately ventilated Yes state battery capacity in ampere hours 200 Ampere Hours

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof Yes Are any fittings installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present Yes if so, how are they protected Approved flame proof type fittings and where are the controlling switches fitted Safe position apart about 20 ft Are all fittings suitably ventilated Yes

Searchlight Lamps, No. of 1, whether fixed or portable fixed, are they of the carbon arc or of the filament type filament type

Heating and Cooking, is the general construction as per Rule Yes, are the frames effectually earthed Yes, are heaters in the accommodation of the convection type — Motors, are all motors constructed and installed as per Rule and placed in well-ventilated compartments in which inflammable gases cannot accumulate and protected from damage from water, steam and oil Yes Are motors coupled to oil fuel transfer and pressure pumps capable of being stopped from a position accessible in the event of fire in the pump compartment Yes Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for motors under 100 BHP intended for essential sea services been supplied and the results found as per Rule Yes

Control Gear and Resistances, and they constructed and fitted as per Rule Yes Lightning Conductors, where required are they fitted as per Rule Yes Ships carrying Oil having a Flash Point less than 150° F. Have all the special requirements of the Rules for such ships been complied with Yes, are all fuses of an Approved Cartridge Type Yes, make of fuses Siemens type cartridge fuse Are the fittings for pump rooms, tween deck spaces, etc., in accordance with the special requirements for such ships Yes Are the cables lead covered as per Rule Yes

E. S. D., if fitted state maker Sakmarine Signal Co. location of transmitter Engine room forward and receiver Engine room forward centre

Spare Gear, if the vessel is for open sea service have spares been provided as per Rule and suitably stored in dry situations Yes

Insulation Tests, has the insulation resistance of all circuits and apparatus been tested and found satisfactory Yes

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF	No. of	MAKER.	RATED AT				PRIME MOVER.	
			Kilowatts net Generator	Volts.	Amperes.	Revs. per Min.	TYPE.	MAKER.
MAIN	2	<u>Siemens</u> <u>Electric Mfg Co Ltd</u>	<u>500 K.W.</u>	<u>230</u>	<u>1250</u>	<u>1200</u>	<u>Steam turbine</u>	<u>Shin Nippon</u> <u>K.K. Shipyard</u>
EMERGENCY ROTARY TRANSFORMER	1	<u>DTTD</u>	<u>80 K.W.</u>	<u>230</u>	<u>200</u>	<u>600</u>	<u>Diesel engine</u>	<u>Ital Engineering Co. Ltd.</u>

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet).	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or Sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	<u>500 K.W.</u>	<u>5</u>	<u>0.3 sq. in.</u>	<u>1250</u>	<u>130</u>	<u>70</u>	<u>Cambric</u>	<u>Lead alloy sheathed metal braided</u>
" " EXCITER EQUALISER	<u>6 K.W.</u>	<u>1</u>	<u>0.06 "</u>	<u>50.5</u>	<u>60</u>	<u>70</u>	<u>rubber</u>	"
EMERGENCY GENERATOR	<u>80 K.W.</u>	<u>1</u>	<u>0.3 sq. in.</u>	<u>200</u>	<u>260</u>	<u>30</u>	<u>Cambric</u>	<u>Lead alloy sheathed metal braided</u>
ROTARY TRANSFORMER: MOTOR	<u>3 K.W.</u>	<u>1</u>	<u>0.03 sq. in.</u>	<u>24.3</u>	<u>38</u>	<u>30</u>	<u>rubber</u>	"
" " GENERATOR								

MAIN DISTRIBUTION CABLES (to Section Boards, Distribution Fuse Boards, etc.).

DESCRIPTION.								
From switch board to power panel	(P-2)	1	0.06 sq. in.	75	91	55	Cambric	metal braided
"	(P-3)	1	0.06 "	54	91	150	"	"
"	(P-4)	1	0.07 "	13.1	19	150	"	"
"	(P-5)	1	0.2 "	168	200	50	"	"
"	(P-6)	1	0.03 sq. in.	50	58	60	"	"
"	(P-7)	1	0.03 "	58	58	150	"	"
"	(P-8)	1	0.1 "	98	128	200	"	"
"	(P-9)	1	0.03 "	17	58	210	"	"
"	(P-10)	1	0.03 "	17	58	230	"	"
"	(P-11)	1	0.0145 "	17	38	430	"	"
From switch board to shore connection box (220°)		1	0.3 "		260	100	"	"

LIGHTING, HEATING, WIRELESS, NAVIGATION LIGHTS, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (feet plus return feet)	INSULATION.	PROTECTIVE COVERING.
	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
Gyro compass w. Pilot	1	30.0045 sq. in.	15	30	400	Cambric	steel armoured
Wireless switch board (220°)	1	30.0045 "	20	30	400	"	"
Lighting panel board Navigation light circuit (L-1)	1	20.0045 "	10	27	490	rubber	"
Lighting panel board (L-2)(L-3)	1	20.01 "	75.4	85	85	"	"
" (L-4)(L-5)	1	20.015 "	89.9	110	490	"	"
" (L-6)	1	20.01 "	40.7	85	550	"	"
" (L-7)(L-8)	1	20.015 "	79.9	110	90	"	"
" (L-9)(L-10)	1	20.015 "	80.5	110	75	"	"
" (L-11)(L-12)(L-13)	1	20.003 "	36.6	38	55	"	metal braided
" (L-14)(L-15)	1	20.006 "	53.1	60	30	"	"
" (L-16)	1	20.003 "	29.6	38	135	"	"
" (L-17)	1	20.003 "	28.3	38	135	"	"
Navigation instruments	1	20.006 "	35	60	450	"	"
Lighting transformer	1	30.01 "	110	128	40	Cambric	steel armoured
Wireless switch board (110°)	1	20.006 "	30	60	490	rubber	metal braided
Shore connection box (110°)	1	20.003 "		240	110	"	"

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.											
Main Discharging Pump Motor	1	150	2	20.029 in.	25	200	75	Cambric	steel braided				
Forward Discharge Pump Motor	2	90	1	30.023 "	224	260	130	"	"				
Lubricating Oil Pump Motor	2	30	1	30.006 "	77	91	120	"	"				
Ballast Pump Motor	1	30	1	30.006 "	77	91	140	"	"				
Steering Gear Motor	2	20	1	30.003 "	55	58	180	"	"				
Main Condensate Pump Motor	2	15	1	30.003 "	42	58	85	"	"				
Fuel Oil Transfer Pump Motor	2	15	1	30.003 "	42	58	75	"	"				
Fuel Oil Service Pump Motor	2	5	1	30.007 "	15	19	140	"	"				
Drain Transfer Pump Motor	2	4 1/2	1	30.004 "	13.5	19	40	"	"				
Generator Turbine Circulating Pump M.	2	20	1	30.003 "	55	58	20	"	"				
" Condensate Pump Motor	2	5	1	30.007 "	15	19	35	"	"				
Drain Pump Motor for Evaporator	2	5	1	30.007 "	15	19	110	"	"				
Fuel Pump Motor	2	2 1/2	1	30.0045 "	8	14	120	"	"				
Ventilating Fan Motor	2	5	1	30.007 "	15	19	145	"	"				
"	2	3 1/2	1	30.007 "	10	19	150	"	"				



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02/19 2/2

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules.
All Insulated Conductors are guaranteed to have been tested at the maker's works as specified in the Rules.
The foregoing is a correct description.

J. Flattory

Electrical Contractors.

Date *May 27th 1953*

COMPASSES.

Have the compasses been adjusted under working conditions *yes*

G. Igaki

Builder's Signature.

Date *May 27th 1953*

Have the foregoing descriptions and schedules been verified and found correct *yes*

Is this installation a duplicate of a previous case *no* If so, state name of vessel

Plans. Are approved plans forwarded herewith *no* If not, state date of approval *Nov. 10th 1952*

Certificates. Are certificates of test for motors engaged on essential sea services and generators forwarded herewith *yes*

General Remarks. (State quality of workmanship, whether insulation tests, etc., have been made, opinions as to class, etc.)

The electric equipment of this vessel has been constructed and installed under the supervision of the Society's Surveyors in accordance with the Rules and the approved plans.

The workmanship and materials have been found satisfactory.

The equipment has been examined under working condition and insulation tested according to Rules.

It is recommended that the electric equipment of this vessel is eligible to be classed with this Society with the notation +LMC 5.5.

Total Capacity of Generators *864* Kilowatts.

The amount of Fee ... *£290,400* : When applied for, *19-6-1953*

Travelling Expenses (if any) £ : : When received, *19*

B. H. ...

Surveyor to Lloyd's Register of Shipping.

H. J. ...

FRIDAY 24 JUL 1953

Committee's Minute

Assigned *See F.E. ...*