

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

1 FEB 1949

Received at London Office.....

Date of writing Report..... 18/1 19 49 When handed in at Local Office..... 18/1 19 49 Port of..... GDYNIA

No. in Survey held at..... Gdansk Date, First Survey..... 9/8/48 Last Survey..... 19/10 19 48
Reg. Book..... (Number of Visits..... six.)

78213 on the..... M.V. "TURNIA" Tons { Gross..... 634
Net..... 430

Built at..... Rochester N.Y. By whom built..... Odenbach Shipbuild. Corp. Yard No..... - When built..... 1944

Owners..... Polish Government Port belonging to..... Gdynia

Electrical Installation fitted by..... Contract No..... When fitted..... 1944

Is vessel fitted for carrying Petroleum in bulk..... Yes Is vessel equipped with D.F..... - E.S.D..... - Gy.C..... - Sub.Sig..... -

Have plans been submitted and approved..... - System of Distribution..... 3 phase 3 wire Voltage of supply for Lighting..... 110 Volt
single phase

Heating..... Steam Power..... 240. Direct or Alternating Current, Lighting..... AC Power..... AC If Alternating Current state periodicity..... 60 Prime Movers,
P yes

has the governing been tested and found as per Rule when full load is suddenly thrown on and off..... S. no Are turbine emergency governors fitted with a
trip switch as per Rule..... - Generators, are they compound wound..... - are they level compounded under working conditions..... -

if not compound wound state distance between generators..... - and from switchboard..... - Where more than one generator is fitted are they
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..... No Have certificates of
test for machines under 100 kw. been supplied..... No and the results found as per rule..... - Are the lubricating arrangements and the construction

of the generators as per rule..... Yes Position of Generators..... In Engine room (p. & s. f.)

....., is the ventilation in way of generators satisfactory..... yes are they clear of inflammable material..... yes, if situated
near unprotected combustible material state distance from same horizontally..... - and vertically..... - are the generators protected from mechanical

injury and damage from water, steam and oil..... Yes, are the bedplates and frames earthed..... yes and the prime movers and generators in metallic
contact..... Yes Switchboards, where are main switchboards placed..... In Engine room fwd. midships and placed athwart ship

..... are they in accessible positions, free from inflammable gases and acid fumes..... Yes, are they protected from mechanical injury and damage from water, steam
and oil..... Yes, if situated near unprotected combustible material state distance from same horizontally..... - and vertically..... - what insulation

material is used for the panels..... Panels of steel all fittings insulated if of synthetic insulating material is it an Approved Type..... - if of
semi-insulating material (slate or marble) are all conducting parts insulated therefrom as per Rule..... Yes Is the frame effectually earthed..... yes

Is the construction as per Rule..... - including accessibility of parts..... Yes, absence of fuses on the back of the board..... Yes, individual fuses
to pilot and earth lamps, voltmeters, etc.,..... Yes locking of screws and nuts..... - labelling of apparatus and fuses..... Yes, fuses on the "dead"

side of switches..... Yes Description of Main Switchgear for each generator and arrangement of equaliser switches..... 300 A - 250 V 3 phase
un-fused kniveswitches dead front type with 600 A frame 600 V 3 phase circuit breakers, dead front type

and synchronizing switches..... exciter field rheostat and voltage regulators

and for each outgoing circuit..... 100 A frame 230 V AC 3 phase

..... Are compartments containing switchboards composed of fire-resisting material or lined as per Rule..... Yes Instruments on main switchboard..... 2

ammeters..... AC 3 voltmeters..... 1 synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the
equaliser connection..... - Earth Testing, state means provided..... 3 lamps

Switches, Circuit Breakers and Fuses, are they as per Rule..... - are the fuses an approved type..... yes, are all fuses labelled as
per Rule..... Yes If circuit breakers are provided for the generators, at what overload current did they open when tested..... 230, are the reversed current

protection devices connected on the pole opposite to the equaliser connection..... yes, have they been tested under working conditions, and at what current
did they operate..... 20, 20 Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule..... Yes

Cables, are they insulated and protected as per the appropriate Tables of the Rules..... Yes, if otherwise than as per Rule are they of an approved type..... -
state maximum fall of pressure between bus bars and any point under maximum load..... 1% are the ends of all cables having a sectional area of 0.04

square inch and above provided with soldering sockets..... yes Are paper insulated and varnished cambric insulated cables sealed at the ends..... none

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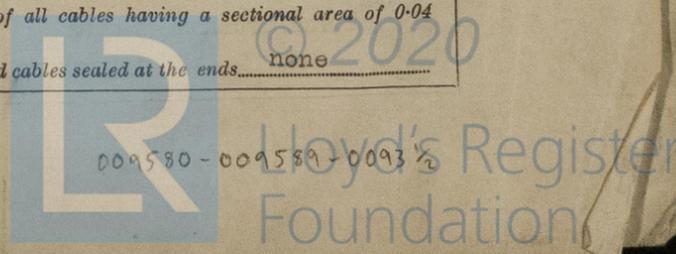
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with insulating compound or waterproof insulating tape. Are all the cable runs in accessible positions, not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage. Yes, are cables laid under machines or floorplates. No, if so, are they adequately protected. Are cables in machinery spaces, galleys, laundries, etc., lead covered. Yes or run in conduit. State how the cables are supported and protected. All cables clipped to stools which E.W. to structure of ship.

Are all lead sheaths, armouring and conduits effectually bonded and earthed. Yes. Refrigerated chambers, are the cables and fittings as per Rule. 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 and with what material. lead. Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes. Emergency Supply, state position. None and method of control.

Navigation Lamps, are they separately wired. Yes controlled by separate double pole switches. Yes 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. Secondary Batteries, are they constructed and fitted as per Rule. Yes, are they adequately ventilated. Yes what is the battery capacity in ampere hours. 1200

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. Yes. Are 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. glass flame proof covers

and where are the controlling switches fitted. inside focsle and bridge spaces, are all fittings suitably ventilated. Yes, are all fittings and accessories constructed and installed as per Rule. Yes. Searchlight Lamps, No. of none, whether fixed or portable. are their fittings as per Rule. Yes. 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. Yes. Motors, are all motors constructed and installed as per Rule. Yes and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage from water, steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally. Yes and vertically. Yes. Are motors coupled to oil fuel transfer and unit 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 services been supplied and the results found as per Rule. Yes. Control Gear and Resistances, are 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 the cartridge type. Yes are they of an approved type. Yes. 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. Spare Gear, if the vessel is for open sea service have spares been provided as per Rule. Yes, are they 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 GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN	2	60	240	181	1200	Diesel engine	-	-
EMERGENCY								
ROTARY TRANSFORMER	1		220	20	1735	A.C. Motor	-	-

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR (Port)	75 KVA	1	27/2.2	181	184	14	Rubber	Lead Covered & Metal Braided
" " EQUALISER (Star)	75 KVA	1	27/2.2	181	184	20	do.	do.
ALL MEASUREMENTS IN METRIC								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR		1	7/1.6	20	40	14	Rubber	do.
" " GENERATOR	5	1	7/1.6	45.4	46	14	do.	do.

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
AUX. SWITCHBOARDS AND SECTION BOARDS	1	7/1.0	35	46	4	Rubber	Lead Covered & Metal Braided
Distribution Box in Engine Room	1	7/1.0	45	46	28	do.	do.
Distribution Box in Accommodation							
ALL MEASUREMENTS IN METRIC							

LIGHTING AND HEATING, ETC., CABLES.

DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
	No. in Parallel For Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
WIRELESS	1	7/0.6	6-7	10	40	Rubber	Lead Covered & Metal Braided
NAVIGATION LIGHTS	1	7/0.6	3	10	50	do.	do.
LIGHTING AND HEATING							

MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	mm ²						
Cargo Pump	2	25	1	7/2.7 (40)	85	85	35 EA	Rubber	Lead Covered & Metal Braided
Cargo Drain Pump	1	2	1	7/0.6 (1.9)	6.75	10	30	"	do.
Fire Pump	1	20	1	7/2.7	51	85	32	"	do.
Compressor	1	7.5	1	7/1.0	21.1	24	32	"	do.
P.O. Transfer & L.O. Pump	1	3	1	7/0.6	9.27	10	30	"	do.
Bilge Pump	1	5	1	7/1.0	15.2	24	28	"	do.
Domestic Refrigerator	2	.75	1	7/0.6	2.6	10	24 EA	"	do.
Steering Gear (D.C)	1	5	1	7/1.3	38.9	37	14	"	do.
General Service Pump	1	1.5	1	7/0.6	5	10	28	"	do.
Windlass	1	20	1	7/2.7	70	85	88	"	do.
Capstan	1	10	1	7/1.9 (20)	33.5	53	40	"	do.
Forwd. Bilge Pump	1	1.5	1	7/0.6	5	10	28	"	do.

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.

..... Electrical Engineers. Date

Measurements in Ft.

COMPASSES.

Minimum distance between electric generators or motors and standard compass 30 Ft.

Minimum distance between electric generators or motors and steering compass 22 Ft.

The nearest cables to the compasses are as follows:—

A cable carrying .4 Ampères 10 feet from standard compass 3 feet from steering compass.

A cable carrying .5 Ampères 10 feet from standard compass 2 feet from steering compass.

A cable carrying .5 Ampères 5 feet from standard compass 6 feet from steering compass.

Have the compasses been adjusted with and without the electric installation at work at full power

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted

The maximum deviation due to electric currents was found to be degrees on course in the case of the standard compass, and degrees on course in the case of the steering compass.

..... Builder's Signature. Date

Is this installation a duplicate of a previous case..... If so, state name of vessel

Plans. Are approved plans forwarded herewith..... If not, state date of approval.....

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

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

The Electrical installation as far as now seen, is efficient, the generators, motors switchboard cables and fittings have been examined and tried under working conditions with satisfactory results. The insulation has been tested and found in good order. The installation is such that in my opinion it is eligible for acceptance in a classed vessel. The workmanship is good.

Notes sent 12/7/49

Total Capacity of Generators 120 ✓ Kilowatts.

The amount of Fee	see Gen. Reg. 9 No. 2156	:	:	When applied for, 19.....
Travelling Expenses (if any)	£	:	:	When received, 19.....

Collection for self
 Surveyor to Lloyd's Register of Shipping.
+ L. O. Hansen.
J. A. Boater.

Committee's Minute **FRI. 15 JUL 1949**

Assigned.....

500.139.—Transferor. (MADE AND PRINTED IN ENGLAND.)
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)



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