

# REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 8.9. 19 59 When handed in at Local Office 19 Port of SPLIT  
 No. in Survey held at SPLIT Date, First Survey 9.6.1959 Last Survey 31.8. 19 59  
 Reg. Book. (No. of Visits 18)  
 on the M/S "CHOPIN" Tons { Gross 9147.85  
 Net 6194.14  
 Built at SPLIT By whom built Brodogradilište "SPLIT" Yard No. 152 When built 1959  
 Owners POLSKIE LINIE OCEANIEZNE Port belonging to GDYNIA  
 Installation fitted by Brodogradilište "SPLIT" When fitted 1959  
 Is vessel equipped for carrying Petroleum in bulk - Is vessel equipped with D.F. 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 110 V  
 Heating 220 V Power 380 V ~~xxx~~ or A.C., Lighting 110 V Power 380 V If A.C. state frequency 50 c/s  
 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 Yes, and level compounded under working conditions Yes,  
 Are the generators arranged to run in parallel Yes Is the compound winding connected to the negative or positive pole -  
 Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing Yes Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Eng. r. one port s. aft and two stbd. s. forw. and aft. Emergency generator Mast house No. 3 Port s.  
 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 Platform E.R. forward 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 melamin, 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 - 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 Three pole automatic circuit breakers with over current under voltage relay, overload time relay and reverse power relay.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit Three pole circuit breaker w. o/c relay 3 pole switch with fuses

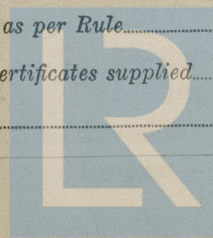
Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 14  
 ammeters 3 voltmeters 3 synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection - Earth Testing, state means provided -  
 Preference Tripping, state if provided Yes, and tested Yes

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes  
 make of fuses Siemens-Schuckert, are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 15 %, 500 A, and at what current do the reverse current protective devices operate 8 %, 35 A

Cables, are they insulated and protected as per Rule 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 - volts. 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 No, if so, are they adequately protected - State type of cables (if in conduit this should also be stated) in machinery spaces V.I.R. L.C.A., galleys V.I.R. L.C.A. and laundries V.I.R. L.C.A. State how the cables are supported or protected In engine room, gangways and in some other places cables are supported on perforated steel plates; in cargo holds cable are led in closed iron ducts

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  
 Have refrigeration fan motors been constructed under survey - and test certificates supplied -  
 Are the motors accessible for maintenance at all times Yes



Lloyd's Register  
Foundation

010797-010804.0071 1/2



Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule. Yes Emergency Supply, state position Accumulator battery located in locker on bridge 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, fitted and adequately ventilated as per Rule. Yes, state battery capacity in ampere hours. 145 Ah Where required to do so does it comply with 1948 International Convention. Yes

Lighting, is fluorescent lighting fitted. Yes If so, state nominal lamp voltage. 110 V and compartments where lamps are fitted. engine room, galley, pantries.

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

Searchlights, No. of 9, 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. Yes 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

Lightning Conductors, where required are they fitted as per Rule. -

Ships carrying Oil having a Flash Point of less than 150° F. Have all the special requirements of the Rules for such ships been complied with. -, are all fuses of an Approved Cartridge Type. -, make of fuse. - Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements for such ships. - Are all cables lead covered as per Rule. -

E.S.D., if fitted state maker. Kelvin Hughes location of transmitter and receiver. Pump room betw. fr. 126-127 - Chart room

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 GENERATOR.	No. of	MAKER.	RATED AT				TYPE.	PRIME MOVER.
			Kw. per Generator.	Volts.	Ampères.	Revs. per Min.		
MAIN	3	Siemens - Schuckert AG	240	400	435	500	V6A536	Klockner-Humboldt-Deutz AG
EMERGENCY ROTARY TRANSFORMER	1	Siemens - Schuckert AG	52	400	94	1000	A6M517	Klockner-Humboldt-Deutz AG

#### GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in feet.	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	3	240	3	3 x 95	435	492	18	varnished cambric	L.C.S.
" " EQUALISER									
EMERGENCY GENERATOR	1	52	2	3 x 50	94	107	6	varnished cambric	L.C.S.
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

#### MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.).

DESCRIPTION.	No. of	Kw.	No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. sq. mm.	MAXIMUM CURRENT IN AMPERES.	APPROX. LENGTH (lead plus return) in feet.	INSULATION.	PROTECTIVE COVERING.
SB Engine Room fans	P1	1	3 x 70	51.4	63	10	V.I.R.	L.C.S.
SB Heavy oil service pump	P2	1	3 x 10	18.4	20	30	"	"
SB Transfer pumps	P3	1	3 x 35	35.6	40	20	"	"
SB Boiler	P4	1	3 x 25	31.8	32	25	"	"
SB Separators Plant	P5	1	3 x 70	52.8	63	10	"	"
SB Separators Elec. heaters	P6	1	3 x 95	72.6	76	18	"	"
SB Auxiliary machines	P7	1	3 x 70	56.8	63	28	"	"
SB Hydrophor pumps - aft	P8	1	3 x 35	35.3	40	40	"	"
SB Water pumps - aft	P9	1	3 x 70	111.7	135	25	varnished cambric	"
SB Workshop	P10	1	3 x 25	24.5	32	15	V.I.R.	"
SB Refrigerating plant	P11	1	3 x 25	28	32	80	"	"
SB Hydrophor pumps-midship	P12	1	3 x 35	30.9	40	160	"	"
SB Water pumps - midship	P13	1	3 x 70	123	148	160	varnished cambric	"
SB Cargo winches - foreship	P14	1	3 x 70	121.6	148	200	"	"
SB Cargo winches - midship	P15	1	3 x 95	150.5	180	120	"	"

#### DISTRIBUTION CABLES (to Section-Boards and Distribution-Fuse-Boards, etc.).

DESCRIPTION.		No. in Parallel per Pole.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in met.	INSULATION.	PROTECTIVE COVERING.
			Sectional Area or No. and Dia. of Strands. sq. mm.		In the Circuit.	Rule.			
SB Cargo winches - aft	P16	1	3 x 70	121.6	148	60	V.I.R.	L.C.S.	
SB Hold Fans	P17	1	3 x 25	30.15	44	100	"	"	
SB Hi Press fan aft	P18	1	3 x 50	95	118	60	varnish. cambric	"	
SB Galley	P19	1	3 x 50	60.8	69	40	V.I.R.	"	
SB Heaters - midship	P20	1	3 x 70	71	87	110	"	"	
SB Heaters - midship	P21	1	3 x 70	71	87	120	"	"	
SB Hi Press fan midship	P22	1	3 x 50	49.6	69	90	"	"	
SB Boat winches	P23	1	3 x 10	20	27	55	"	"	
SB Pantry - aft	P24	1	3 x 10	21	27	50	"	"	
SB Pantry - midship	P25	1	3 x 4	10.5	16	120	"	"	
Battery charging board	EL	1	3 x 4	9.2	16	110	"	"	
Main lighting switchboard	L1	2	3 x 70	225	296	60	varnish. cambric	"	
Lighting Engine Room	L1A	1	3 x 10	19.4	27	35	V.I.R.	"	
Lighting Engine Room	L1B	1	3 x 10	19.4	27	35	"	"	
Lighting Power Deck	L1C	1	3 x 16	21.1	33	15	"	"	
Lighting Boat deck left	L1D	1	3 x 16	21.1	33	15	"	"	
Lighting Boat deck right	L1E	1	3 x 16	21.1	33	15	"	"	
Lighting Upper deck left	L1F	1	3 x 16	21.1	33	15	"	"	
Lighting Upper deck right	L1G	1	3 x 16	21.1	33	15	"	"	
Lighting Poop deck right	L1H	1	3 x 16	21.1	33	15	"	"	
Lighting switchboard midship	L2	1	3 x 70	109	148	140	varnish. cambric	"	
Light. Nav. Upp. Bridge dk.	L2A	1	3 x 16	21.5	33	30	V.I.R.	"	
Light. Lower Bridge dk	L2B	1	3 x 16	17.2	27	30	"	"	
Light. Mast	L2C	1	3 x 10	15.1	27	30	"	"	
Light. Special Equipment	L2D	1	3 x 10	12.6	27	30	"	"	
Light. Deck house foreship	L2E	1	3 x 10	16.8	27	30	"	"	
Light. Deck house aft	L2F	1	3 x 10	16.8	27	30	"	"	
Light. Cargo Holds	L2G	1	3 x 10	18.5	27	30	"	"	
Light. Upper deck midship	L2H	1	3 x 10	18.5	27	30	"	"	
SB Navigating lights	NL	1	2 x 2.5	2.6	15.5	33	"	"	
Suez canal searchlight		1	2 x 10	27	28	120	"	"	

#### MOTOR CABLES.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		No.	B.H.P.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) in feet.	INSULATION.	PROTECTIVE COVERING.
				No. in Parallel per Pole.	Sectional Area or No. and Dia. of Strands. sq. mm.	In the Circuit.	Rule.			
Windlass		1	54	1	3 x 95	88	105	160	V.I.R.	L.C.S.
Warping winch		1	54	1	3 x 95	88	105	60	"	"
Steering gear		2	20	1	3 x 50	34	69	50	"	"
Compressor		2	60	2	3 x 50	97	102	25	"	"
Main eng. R.W. cooling pump		2	34.5	1	3 x 50	51	51	20	"	"
Main eng. S.W. - " - "		2	34.5	1	3 x 50	51	51	20	"	"
Main eng. lubr. oil pump		2	116	1	3 x 95	164	164	18	varnished cambric	"
Heavy oil booster pump		2	3.5	1	3 x 2.5	5.6	10	6	V.I.R.	"
Heavy oil service pump		2	2.9	1	3 x 1.5	3.6	5	6	"	"
Fuel oil transfer pump		2	18.5	1	3 x 25	29	32	6	"	"
Boiler feed water pump		2	3	1	3 x 2.5	5.3	10	30	"	"
Boiler water circ. pump		2	7	1	3 x 4	10.5	12	8	"	"
Heavy oil purifier		2	10.6	1	3 x 10	18	20	10	"	"
Heavy oil clarifier		2	7.5	1	3 x 6	11.5	15	10	"	"
Lub. oil separator		2	7.5	1	3 x 6	11.5	15	40	"	"
Diesel oil separator		1	3.5	1	3 x 2.5	6	10	10	"	"
Turning gear		1	10.6	1	3 x 10	18.9	20	30	"	"
Evaporator brine pump		1	8.2	1	3 x 6	12	15	40	"	"
- " - destilate pump		1	6.2	1	3 x 4	10.1	12	40	"	"
- " - air pump		1	6.7	1	3 x 4	10.4	12	40	"	"
SW & RW circul. pump		1	17	1	3 x 25	26	32	8	"	"
General service pump		1	50	1	3 x 95	74	76	8	"	"
Bilge pump		2	26	1	3 x 35	38	40	20	"	"
Ballast pump		2	31	1	3 x 50	44	59	25	"	"
Engine room fan		4	8.2	1	3 x 6	11.4	15	50	"	"
Hi Press compressor		1	20	1	3 x 25	42.5	44	12	"	"
Hi Press compressor		1	40	1	3 x 50	63	69	30	"	"
S.W. Hi Press Pump		1	10	1	3 x 10	24	27	45	"	"
S.W. Hi Press pump		1	4	1	3 x 2.5	6.3	13	25	"	"
Hi Press Fan		3	7	1	3 x 2.5	11	13	8	"	"
Vegetable oil pump		1	65	1	3 x 95	94	105	20	"	"

NOTE.—Use Rpt. 43 Continuation Sheet if the above space is insufficient.



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.



*Wmm*

Electrical Contractors.

Date

15. 9. 1957

#### COMPASSES.

Have the compasses been adjusted under working conditions.



*Wmm*

Builder's Signature.

Date

15. 9. 1957

Have the foregoing descriptions and schedules been verified and found correct. Yes

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

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

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.)

The electrical equipment of this vessel has been installed under special survey in accordance with the Rules for Electrical Equipment, approved plans and Secretary's letters. The materials and workmanship are good.

On completion, the installation was examined under full working conditions, the circuits megger tested, generators paralleled, reverse current trips, overload trips, all tested and found in order. The governors were tried under full load and found satisfactory.

This equipment is, in my opinion suitable for a vessel to be classed with this Society.

Total Capacity of Generators 772 Kilowatts.

The amount of Fee ... £ 168-12-10  
and Din. 94.552.

When applied for,

10

When received,

10

Travelling Expenses (if any) £

(Ing. M. Brajnović)

Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRIDAY 23 OCT 1959

Assigned

See Rpt. 1