

REPORT ON ELECTRICAL EQUIPMENT

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

Date of writing Report 19-10 1964 When handed in at Local Office 19 Port of Gdansk

No. in Survey held at Szczecin Date, First Survey 10-7-64 Last Survey 7/10 19 64
Reg. Book (No. of Visits 21) 6866

on the M.V. "JOHANNES LATUHARHARY" Tons { Gross 6866
Net

Built at Szczecin By whom built Stocznia Szczecińska Yard No. B454/6 When built 1964

Owners Djakarta Lloyd Port belonging to DJAKARTA

Installation fitted by Stocznia Szczecinska When fitted 1964

Is vessel equipped for carrying Petroleum in bulk No. Is vessel equipped with D.F. Yes E.S.D. Yes Gy.C Yes Sub.Sig. No Radar Yes

Plans, have they been submitted and approved Yes System of Distribution 3-wire 3-phase Voltage of Lighting 230V

Heating 230 V Power 380 V D.C. or A.C. Lighting A.C. Power A.C. If A.C. state frequency 50 c/sec

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 -

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 Engine room lower

platform forward. Port outboard, port inboard and starboard.

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 Engine room forward

on platform deck

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 Dead front panels, 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 triple pole circuit breakers with overload,

reverse power and under voltage tripping relays. Overload and reverse power relays with

delay setting, Automatic voltage regulator and synchronising lamps.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit triple pole circuit breakers with fuses and

overload relays. Preferential tripping for non-essential circuits with time setting.

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 14

ammeters 4 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 Ohmmeters

for 380V & 230V sections. 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 R 1240-1 and Bi-Wtnz Yes, are all fuses labelled Yes If circuit breakers are provided for the generators, at what

overload do they operate 17%, and at what current do the reverse current protective

devices operate 7% 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 5 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends -

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 State

type of cables (if in conduit this should also be stated) in machinery spaces R.I.L.C. & W.B., galleys R.I.L.C. & W.B.

and laundries R.I.L.C. & W.B. State how the cables are supported or protected on steel cable trays

or strong steel supporting brackets with clips. Cables suitably protected where

exposed. Cables below engine room platforms and to starters etc., in engine room in conduit.

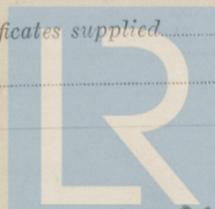
Are all lead sheaths, armouring and conduits effectually bonded and earthed Yes Are all cables passing through decks and watertight

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 -

Have refrigeration fan motors been constructed under survey - and test certificates supplied -

Are the motors accessible for maintenance at all times -



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Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule **Yes** Emergency Supply, state position
Accumulator room starboard/funnel compartment on boat 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 **140 A.hrs.** Where required to do so does it comply with 1948 International Convention.

Lighting, is fluorescent lighting fitted **Yes** If so, state nominal lamp voltage **230 V** and compartments where lamps are fitted **Engine room, alleyways and saloons.**

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 **1**, whether fixed or portable **fixed**, are they of the carbon arc or of the filament type **filament**

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 **Yes**

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 **Yes**, are all fuses of an Approved Cartridge Type **Yes**, make of fuse **Yes** Are the fittings for pump

rooms, tween deck spaces, etc., in accordance with the special requirements for such ships **Yes** Are all cables lead covered as per Rule **Yes**

E.S.D., if fitted state maker **Marconi** location of transmitter and receiver **Engine Room forward amidships**

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	KVA RATED AT				TYPE	PRIME MOVER
			Volts	Ampères	Revs. per Min.	Generator		
MAIN	3	Rade Koncar Zagreb	400	400	578	500	4 SCSA	H.Cegielski Poznań
EMERGENCY ROTARY TRANSFORMER								

GENERATOR CABLES

DESCRIPTION	No. of	KVA	CONDUCTORS		MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead 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	3	400	5	3x120	578	650	15	Rubber	Lead sheath & W.B.
" " EQUALISER									
EMERGENCY GENERATOR									
ROTARY TRANSFORMER: MOTOR									
" " GENERATOR									

MAIN DISTRIBUTION CABLES (to Auxiliary Switchboards, etc.)

DESCRIPTION	No. of	KVA	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
			No. in Parallel per Pole	In the Circuit	Rule		
Connection to Shore	2		3x95	200	220	30	Rubber Lead sheath & W.B.
Elect. htg. Group distr. box S16	1		3x35	57,3	60	13	" "
El. & Mech. Workshop " " S18	1		3x25	38,2	49	20	" "
Comp. fans Group " " S19	1		3x35	42,6	60	14	" "
El. galley stove " " S21	1		3x70	69,7	91	30	" "
Group distr. box dom. equip. S22	1		3x70	65,0	91	32	" "
Air Cond. distr. box S23	1		3x70	86,6	91	13	" "
Hold fans distr. box S24	1		3x70	79,7	91	14	" "
E.R. Aux. distr. box S27	1		3x16	31,8	37	15	" "
Cargo winch conv. distr. box S41	2		3x95	200	220	40	" "
" " " " " S42	2		3x95	200	220	28	" "
" " " " " S43	2		3x95	187	220	45	" "
" " " " " S44	2		3x95	200	220	55	" "

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

DESCRIPTION	No. of Parallel per Pole	Sectional Area or No. and Dia. of Strands Sq. ins. or sq. mm.	MAXIMUM CURRENT IN AMPERES		APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
			In the Circuit	Rule			
E.R. Auxiliaries distr. box S51	1	3x70	69,4	91	26	Rubber	Lead Sheath & W.B.
E.R. FANS Distr. box S55	1	3x4	15,2	16	16	"	"
E.R. Auxiliaries distr. box S62	1	3x35	57,2	60	15	"	"
" " " " S65	1	3x16	28,6	37	16	"	"
Distr. box of refrig. prov. store S67	1	3x16	33,1	37	24	"	"
E.R. Auxiliaries distr. box S69	1	3x50	65,7	75	10	"	"
Nav. lights distr. box S 01	1	2x1,5	2,1	10	37	"	"
Radar S 02	1	2x4	11,4	19	34	"	"
Distr. box special device S 03	1	3x2,5	5,3	11	37	"	"
El. Nav. equip. distr. box S 05	1	2x1,5	9,1	10	34	"	"
Radio comm. equip. distr. box S 06	1	3x4	14,7	16	38	"	"
E.R. lights Group distr. box S 08	1	3x10	21	28	7	"	"
E.R. & Main dk lights distr. box S 09	1	3x16	29,5	37	8	"	"
Comp. light distr. box S10	1	3x35	42,4	60	27	"	"
" " " " S 11	1	3x35	45,5	60	24	"	"
Outer light - Mast distr. box S13	1	3x6	13,2	21	15	"	"
" " group " " S 14	1	3x35	49,8	60	15	"	"
Distr. box sockets for dom. app. S 15	1	3x4	10,5	16	12	"	"
El. htg group distr. box S 16	1	3x35	57,3	60	13	"	"

MOTOR CABLES

ALL IMPORTANT MOTORS TO BE ENUMERATED	No.	KVA	CONDUCTORS	MAXIMUM CURRENT IN AMPERES	APPROX. LENGTH (lead plus return feet)	INSULATION	PROTECTIVE COVERING
			No. in Parallel per Pole	In the Circuit	Rule		
Lub. oil Circ. Pumps M.E.	2	81	1	3x150	145	145	15 Rubber Lead Covered & Wire Braided
M.E.S.W. Circ Pumps	2	36,7	1	3x70	75	91	15 " "
M.E.F.W. " "	2	38	1	3x70	77	91	18 " "
Injector oil water pumps	2	4,5	1	3x2,5	9,9	11	20 " "
M.E. Fuel oil Booster pps	2	3	1	3x1,5	6,7	8	20 " "
Starting air compressor	2	55	1	3x95	95	110	8 " "
Fire extinguishing pps	2	53	1	3x95	101	110	8 " "
Ballast pump	1	24	1	3x25	48,2	49	22 " "
Bilge pump	1	16,2	1	3x16	33,1	37	20 " "
M.E. turning gear	1	9,6	1	3x10	20	28	17 " "
Aux Clg water pumps	3	9	1	3x6	19,3	21	26 " "
Fuel transfer pumps	2	10	1	3x6	20,2	21	17 " "
Fuel service pumps	2	2,5	1	3x1,5	5,9	8	16 " "
Lub. oil transfer pump	1	4,5	1	3x2,5	9,9	11	10 " "
Boiler firing	1	1,5	1	3x1,5	4	8	12 " "
Boiler feed pumps	2	7	1	3x4	15,3	16	30 " "
La Mont Circ. pump	1	5,5	1	3x4	11,5	16	12 " "
Evap. sea water pump	1	5,5	1	3x6	16,3	21	20 " "
Windlass	1	55	1	3x95	104	110	80 " "
Steering gear pump	2	22	1	3x25	43	49	90 " "
Capstans	2	21	1	3x35	53,5	60	100 " "
Boat winches	4	22	1	3x25	45	60	40 " "
Ward Leonard arrgt conv- 2	72	2	3x50	138	150	35	" "
" " " " ertar	7	53	1	3x95	100	110	20 " "
Domestic refrig. compr's	2	6,6	1	3x4	14,2	16	8 " "
Air cond. compressor	1	48	1	3x95	95	110	20 " "
Air Cond. fan supply	1	10	1	3x10	21,2	28	20 " "
" " " exhaust	2	7	1	3x4	14,8	16	20 " "
" " " supply	1	7	1	3x4	14,8	16	20 " "

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.

GŁÓWNY INŻYNIER
 I z-ca Dyrektora Stoczni

Electrical Contractors.

Date

inż. Z. Hrut

COMPASSES

Have the compasses been adjusted under working conditions

GŁÓWNY INŻYNIER
 I z-ca Dyrektora Stoczni

Builder's Signature.

Date

inż. Z. Hrut

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... Yes If not, state date of approval...

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

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) The electrical installation of this ship has installed under Special Survey in accordance with the requirements of the Rules, approved plans and Secretary's letters.

The materials and workmanship are good.

On completion the installation was tested in accordance with Rule requirements and under sea trial conditions with satisfactory results.

The circuits having Siemens R 1240-1 fuses fitted were tested for temperature rise in accordance with the requirements of M 621 and found satisfactory.

This installation is eligible in our opinion to be classed with the Society.

Total Capacity of Generators... 1200 Kilowatts. (KVA)

The amount of Fee £ 254.17.6 - 10% = £ 229.10.0
 z/ 13,170.-

When applied for, 19

When received, 19

Travelling Expenses (if any) £ : :

F.G. Burn Surveyor to Lloyd's Register of Shipping

FRIDAY 8 JAN 1965

Committee's Minute

Assigned... See Rpt. 1

3m.5.60-Transfer. (MADE AND PRINTED IN ENGLAND) (The Surveyors are requested not to write on or below the space for Committee Minute.)



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