

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office

31 NOV 1959

Date of writing Report 24th Nov 59 When handed in at Local Office 19 Port of Gdańsk
 No. in Survey held at Gdańsk Date, First Survey 7-4-59 Last Survey 4.9. 1959
 Reg. Book. (No. of Visits six) 473.04
 on the M.V. " ORLA " Tons { Gross 182.89
 Net 1959
 Built at Gdańsk By whom built Stocznia Gdańska Yard No. B51/011 When built 1959
 Owners Polish Government Port belonging to Szczecin
 Installation fitted by Stocznia Gdańska (Electrical Dep't) When fitted 1959
 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 Two Wire Voltage of Lighting 220V
 Heating None Power 220V D.C. or A.C., Lighting D.C. Power D.C. If A.C. state frequency -
 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 None 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 negative
 Have machines 100 kw. and over been inspected by the Surveyors during manufacture and testing None Have certificates of test for machines under 100 kw. been supplied and the results found as per Rule Yes Position of Generators Engine Room, Main Engine
 Starting Platform Level, s.s.f. p.s.f. outboard and inboard
 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 adjacent to Engine Room, forr'd Bulkhead, 'thwartships at 4, Main Engine Starting Platform Level
 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 Switchboard Fittings 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 Automatic Circuit Breakers with reverse and over-current release for Generators. Triple pole Breakers with one equalizing pole.

and the switch and fuse gear (or circuit breakers) for each outgoing circuit double pole, rotary spring loaded packet type switches with cartridge type fuses

Are compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 5
 ammeters 4 voltmeters - synchronising devices. For compound machines in parallel are the ammeters and reverse current protection devices connected on the pole opposite to the equaliser connection Yes Earth Testing, state means provided Volt-megohmmeter
 Preference Tripping, state if provided No, and tested -

Switches, Circuit Breakers and Fuses, are they as per Rule Yes, are the fuses an Approved Type Yes
 make of fuses B1-GS2(T) Bm. Wto. I&II are all fuses labelled Yes If circuit breakers are provided for the generators, at what overload do they operate 50% of full load current, and at what current do the reverse current protective devices operate 10-15% of full load current 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 1 volt 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 No, if so, are they adequately protected - State

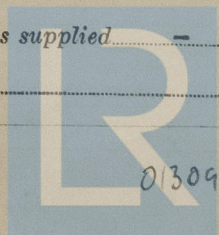
type of cables (if in conduit this should also be stated) in machinery spaces L.C.W.B., galleys L.C.W.B.
 and laundries None State how the cables are supported or protected Mains:- L.C.W.B. Cables clipped

to cable trays, protected by sheet steel casings thro' holds, Machinery Space:- L.C.W.B.
 cables clipped to cable trays. Accommodation:- L.C.W.B. and L.C. cables clipped to cable trays or woodwork.

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, lead Refrigerated chambers, are the cables and fittings as per Rule None for cargo

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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013094-013102-019312

Alternative Lighting, are the groups of lights in the engine and boiler rooms arranged as per Rule Yes Emergency Supply, state position
24 Volt, Accumulators in Steel Housing Bridge deck P.S. aft

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 100 Where required to do so does it comply with 1948 International Convention -

Lighting, is fluorescent lighting fitted No If so, state nominal lamp voltage - and compartments where lamps are fitted -

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 None whether fixed or portable - are they of the carbon arc or of the 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 None 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 None

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 None

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 within closed compartment at for'rd
end of E.R.

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				PRIME MOVER.	
			Kw. per Generator.	Volts.	Amps.	Revs. per Min.	TYPE.	MAKER.
MAIN GENERATOR	3	Gonz GmbH Hamburg	32	230	139	900	Diesel Motors	Klöckner-Humboldt Deutz AD.Köln
Generators Nos. 1.521.880, - 1.521.879- 1.521.877								
Copies of Certificates attached hereto, Originals sighted.								
EMERGENCY GENERATOR								
ROTARY TRANSFORMER MOTOR								

GENERATOR CABLES.

DESCRIPTION.	No. of	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) Metres	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of Cable sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	3	32	1	150	139	205	6	Rubber	L.C.W.B.
" EQUALISER	-	-	1	95	-	150	3	"	"
EMERGENCY GENERATOR									
ROTARY TRANSFORMER MOTOR									
" GENERATOR									

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

Circuit No.	DESCRIPTION.								
22	Engine Room Aux'l'y Panel	1	35	45	✓ 78	7	Rubber	L.C.W.B.	
23	Galley D.B.	1	95	86	✓ 150	13			
IV	Shore Connection Panel	1	70	68.7	✓ 125	16			
15	Forward Winch & Windlass Panel	1	95	97	✓ 150	49			
16	Aft Winch Panel	1	95	82.8	✓ 150	18			
27	Secondary Batteries Char'g Panel	1	4	13.6	✓ 22.5	10	Rubber	L.C.W.B.	

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

Circuit No.	DESCRIPTION.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) Metres	INSULATION.	PROTECTIVE COVERING.
		No. in Parallel per Pole.	Sectional Area of Cable sq. mm.	In the Circuit.	Rule.			
01	Accom.Ltg D.B.-Boat Deck	1	4	10.3	22.5	12	Rubber	L.C.W.B.
02	Deck Ltg D.B.	1	10	23.7	38	13		
03	Accom.Ltg D.B.-Main Deck	1	4	14.8	22.5	7		
04	Accom.Ltg D.B. and Engine Room	1	4	14.9	22.5	13		
05	Engine Room Lights	1	1.5	2.46	9.5	19		
06	Sockets in Engine Room	1	1.5	3.64	9.5	18.5		
10	Navigation Lts D.B.	1	1.5	1.37	9.5	14		
11	Navigation Equip't & Wireless D.B.	1	10	18.2	38	16		
13	E.R.& Hold vent fan D.B.	1	4	13.5	22.5	12		
14	Radar	1	4	6.8	22.5	15		
21	Accom.Vent fan D.B.	1	6	19.4	29	9		
25	Gyro Compass	1	4	4.55	22.5	12	Rubber	L.C.W.B.

Circuit No.

ALL IMPORTANT MOTORS TO BE ENUMERATED.		MOTOR CABLES.		K.W.		K.W.		INSULATION.	PROTECTIVE COVERING.
No.	K.W.	No.	K.W.	No.	K.W.	No.	K.W.		
07	Oil Purifier	1	0.6	1	2.5	2.8	15.5	16	Rubber L.C.W.B.
1501-02, 1601-02	Winches	4	14	1	35	63.6	78	6	
1503	Windlass	1	14.6	1	35	66.4	78	16	
17	Ballast Pump	1	16.1	1	70	73	125	12	
18	Air Compressor	1	4.8	1	10	21.8	38	13	
19	Bilge Pump	1	6.2	1	16	28.2	49	9	
20	Fire Pump	1	16.1	1	70	73	125	13	
2202	Fuel Oil Transfer Pump	1	1.32	1	2.5	6	15.5	20	
2203-04	Sanitary Pumps	2	1.32	1	2.5	6	15.5	4	
24	Steering Gear	1	2.10	1	6	9.6	29	30	
1303-04	Engine Room Vent Fans	2	0.74	1	1.5	3.36	9.5	20	Rubber L.C.W.B.

NOTE.—Use Rpt. 13 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.

DYREKTOR TECHNICZNY

mgr. inż. J. Zydoma

Electrical Contractors.

Date

26/xi/59

COMPASSES.

Have the compasses been adjusted under working conditions Yes.

DYREKTOR TECHNICZNY

mgr. inż. J. Zydoma

Builder's Signature.

Date

26/xi/59

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

Is this installation a duplicate of a previous case Yes. If so, state name of vessel M.V. "KRUTYNIA" B51/010

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 No. See note below x)

General Remarks. (State quality of workmanship and materials, opinions as to class, etc.) The electrical installation of this vessel has been fitted on board under Special Survey in accordance with the approved plans and Secretary's letters. It has been tested under working conditions and found satisfactory. The quality of materials and workmanship is good. The installation is in our opinion such as could be classed with the Society, in conjunction with the Main Propulsion and Auxiliary Machinery.

N.B. x)

It has been verified from identification markings that the 3 generators and all essential motors have been constructed in Western Europe (Western Germany & Denmark) to the requirements of the Society. The original certificates issued by the Society's Surveyors for generators and for essential Services motors have been viewed by us.

Total Capacity of Generators 96 Kilowatts.

The amount of Fee ... £ : : When applied for, 30/xi 19 59
ZŁ 6,768.- & £ 112.16.0.

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

Surveyor to Lloyd's Register of Shipping.

J. Manson and B. Langhammer

Committee's Minute FRIDAY 15 JAN 1960

Assigned

See Rpt. 1.



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