

12 OCT 1959

No. F.E.E. 007

13.

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office
G d a n s k

Date of writing Report Aug. 19 59 When handed in at Local Office 19 Port of Gdańsk

No. in Survey held at Gdańsk Date, First Survey 6.3.59 Last Survey 31.7.19 59 (No. of Visits 7) 472.95

40524 on the M.V. "KRUTYNIA" Tons Gross 472.95 Net 182.84

Built at Gdańsk By whom built Stocznia Gdańska Yard No. B51/010 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 220

Feating None Power 220 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 C, 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 mounted on insulated Bases, 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 B4-GSZ(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 volts. Are all paper insulated and varnished cambric insulated cables sealed at the ends. None

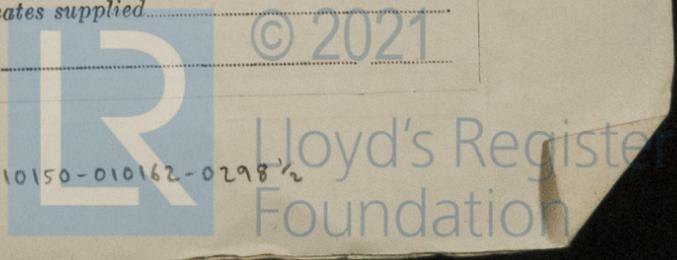
Are all the cable runs in accessible positions not exposed to drip or accumulation of water or oil, high temperatures or risk of mechanical damage Yes, are any cables laid under machines or floorplates No., if so, are they adequately protected - State type of cables (if in conduit this should also be 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 Cabletrays, protected by Sheet Steel Casings thro' Holds. Machinery Space: -L.C.W.B. Cables clipped to Cabletrays. 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 effectually 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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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				TYPE.	PRIME MOVER.
			Kw. per Generator	Volts.	Ampères.	Revs. per Min.		
MAIN	3	CONZ GmbH. Hamburg	32	230	139	900	Diesel Klückner-Humboldt-Motors - Deutz AG. Köln	
EMERGENCY ROTARY TRANSFORMER								

Generator Nos. 1521878, 1521876, 1521875
Certificates attached hereto

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 No. and Dia. of Strands 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									
EMERGENCY ROTARY TRANSFORMER MOTOR									

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

Circuit No.	DESCRIPTION.	No. in Parallel per Pole.	Sectional Area of No. and Dia. of Strands sq. mm.	MAXIMUM CURRENT IN AMPERES. In the Circuit.	Rule.	APPROX. LENGTH (lead plus return) Metres	INSULATION.	PROTECTIVE COVERING.
22	Engine Room Auxil'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 No. and Dia. of Strands sq. mm.	In the Circuit.	Rule.			
01	Accom. L ^{ts} D.B.-Boat Deck	1	4	10.3	22.5	12	Rubber	L.C.W.B.
02	Deck L ^{ts} D.B.	1	10	23.7	38	13		
03	Accom. L ^{ts} D.B.-Main Deck	1	4	14.8	22.5	7		
04	Accom. L ^{ts} 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 L ^{ts} D.B.	1	1.5	1.37	9.5	14		
11	Navigation Equipment and Wireless	1	10	18.2	38	16		
13	E.R. & Hold Vent Fan D.B. / 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.

MOTOR CABLES.

Circuit No. ENUMERATED.	No.	Kw.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return) Metres	INSULATION.	PROTECTIVE COVERING.
			No. in Parallel per Pole.	Sectional Area of No. and Dia. of Strands sq. mm.	In the Circuit.	Rule.			
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		
1502 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 Vents Fans	2	0.74	1	1.5	3.36	9.5	20	Rubber	L.C.W.B.

[Handwritten signature]
11/11/59

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.

[Signature]
inż. W. CZARNOWSKI
Dyrektor Techniczny

Electrical Contractors. Date

COMPASSES.

Have the compasses been adjusted under working conditions. Yes.

[Signature]
inż. W. CZARNOWSKI
Dyrektor Techniczny

Builder's Signature. Date

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. 2nd February, 1959

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 or 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 zŁ 6.768.- & £ 112.16.-
When applied for, 31/7 1959

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

B. Langhammer for J. Manson & self
Surveyor to Lloyd's Register of Shipping.
J. Manson & B. Langhammer

FRIDAY 13 NOV 1959

Committee's Minute

Assigned See Rpt. 1.

5m. 6.56 - Transfer. (MADE AND PRINTED IN ENGLAND)
(The Surveyors are requested not to write on or below the space for Committee Minutes.)

19.10.59



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Foundation