

No. NWE 441

REPORT ON ELECTRICAL EQUIPMENT.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office. 7 AUG 1947

Writing Report. 30 - 7 - 1947 When handed in at Local Office. 19 Port of Hamburg

Survey held at Hamburg Date, First Survey 31 - 1 - 46 Last Survey 18 3 6 - 1947
(Number of Visits 15)

on the Single Screw Motor Vessel "EMPIRE MOWDDACH" ex "Pontos" Tons { Gross -
Net -

at Bremen-Vegesack By whom built Bremer Vulkan Yard No. 716 When built 1935

rs. Elders & Fyffes Ltd. Port belonging to London

cal Installation fitted by Allgemeine Elektrizitäts-Gesellschaft Contract No. - When fitted -

ssel fitted for carrying Petroleum in bulk no Is vessel equipped with D.F. yes E.S.D. yes Gy.C. - Sub.Sig. -

Plans been submitted and approved - System of Distribution single wire with hull return Voltage of supply for Lighting 220

220 Power 220 Direct or Alternating Current, Lighting D.C. Power D.C. If Alternating Current state periodicity - Prime Movers, -

governing been tested and found as per Rule when full load is suddenly thrown on and off Yes Are turbine emergency governors fitted with a -

itch as per Rule - Generators, are they compound wound Yes, are they level compounded under working conditions Yes,
compound wound state distance between generators - and from switchboard - Where more than one generator is fitted are they
ed to run in parallel Yes, are shunt field regulators provided Yes Is the compound winding connected to the negative or positive pole
gative - Have machines over 100 kw. been inspected by the Surveyors during manufacture and testing - Have certificates of
machines under 100 kw. been supplied - and the results found as per rule - Are the lubricating arrangements and the construction
generators as per rule Yes Position of Generators Main motor room, bottom platform, port side.

-, is the ventilation in way of generators satisfactory Yes are they clear of inflammable material Yes, if situated
e shap - unprotected combustible material state distance from same horizontally - and vertically -, are the generators protected from mechanical
en boll - and damage from water, steam and oil Yes, are the bedplates and frames earthed Yes and the prime movers and generators in metallic
dition - Yes Switchboards, where are main switchboards placed Main motor room, port side, approx. 6'-0" above bottom

om. -

ark - y in accessible positions, free from inflammable gases and acid fumes Yes, are they protected from mechanical injury and damage from water, steam
Yes, if situated near unprotected combustible material state distance from same horizontally - and vertically -, what insulation
il is used for the panels Italian Marble, if of synthetic insulating material is it an Approved Type -, if of
ulating material (slate or marble) are all conducting parts insulated therefrom as per Rule No Is the frame effectually earthed Yes

construction as per Rule Yes, including accessibility of parts Yes, absence of fuses on the back of the board Yes, individual fuses
C.O. and earth lamps, voltmeters, etc., Yes locking of screws and nuts Yes, labelling of apparatus and fuses Yes, fuses on the "dead"
ed with switches Yes Description of Main Switchgear for each generator and arrangement of equaliser switches single pole circuit

er with overload and reverse current trips with an interlocked single pole equaliser switch

each outgoing circuit a single pole fuse and switch on the insulated pole

modif -

ed u - compartments containing switchboards composed of fire-resisting material or lined as per Rule Yes Instruments on main switchboard 8

rs 4 voltmeters - synchronising devices. For compound machines in parallel is the ammeter connected on the pole opposite to the

register connection Yes Earth Testing, state means provided not provided

es, Circuit Breakers and Fuses, are they as per Rule Yes G.L. are the fuses an approved type Yes, are all fuses labelled as

e Yes If circuit breakers are provided for the generators, at what overload current did they open when tested 600/350, are the reversed current

on devices connected on the pole opposite to the equaliser connection Yes, have they been tested under working conditions, and at what current

y operate - Joint Boxes, Section Boards and Distribution Boards, is the construction and position as per Rule Yes G.L.

are they insulated and protected as per the appropriate Tables of the Rules No, if otherwise than as per Rule are they of an approved type No

aximum fall of pressure between bus bars and any point under maximum load 10 V light are the ends of all cables having a sectional area of 0.04

ch and above provided with soldering sockets Yes Are paper insulated and varnished cambric insulated cables sealed at the ends -

Please see report 13 (attached) re cable loading.

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

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 beams, etc., are the holes effectively bushed. Yes, and with what material. wood. Alternative Lig the groups of lights in the engine and boiler rooms arranged as per Rule. Emergency Supply, state position and method of control.

Navigation Lamps, are they separately wired. Yes controlled

double pole switches. Yes, and fuses. Yes. Are the switches and fuses in a position accessible only to the officers on watch. Yes automatic indicator fitted. Yes. Secondary Batteries, are they constructed and fitted as per Rule. Yes, are they adequately ventilated what is the battery capacity in ampere hours. 30 amp. hr. telephones

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, weatherproof. No, if so, how are they protected installed where readily combustible materials or inflammable or explosive dust or gases are likely to be present.

are all fittings suitably ventilated and where are the controlling switches fitted.

are all fittings and accessories constructed and installed as per Rule. Yes GL Searchlight Lamps, No. of one, whether fixed or portable

are their fittings as per Rule. Yes. Heating and Cooking, is the general construction as per Rule.

are the frames effectually earthed. Yes, are heaters in the accommodation of the convection type. Yes. Motors, are all motors installed as per Rule. Yes GL and placed in well-ventilated compartments in which inflammable gases cannot accumulate and free from damage

steam and oil. Yes, if situated near unprotected combustible material state minimum distance from same horizontally and vertically.

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

Have motors of 100 BHP and over been inspected by the Surveyors during manufacture and testing. No. Have certificates of test for 100 BHP intended for essential services been supplied and the results found as per Rule. No. Control Gear and Resistances, are they

100 BHP intended for essential services been supplied and the results found as per Rule. No. Ships carrying Oil having a fitted as per Rule. Yes GL. Lightning Conductors, where required are they fitted as per Rule.

less than 150° F. Have all the special requirements of the Rules for such ships been complied with.

are they of an approved type. Are the fittings for pump rooms, 'tween deck spaces, etc., in accordance with the special requirements

ships. Are the cables lead covered as per Rule. Spare Gear, if the vessel is for open sea service have spares been provided

Rule. are they suitably stored in dry situations. Insulation Tests, has the insulation resistance of all circuits and apparatus and found satisfactory. Yes.

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN COMBUSTION ENGINE
		Kilowatts.	Volts.	Ampères.	Revs. per Min.		
MAIN	No 1	130 220	230 220	566 910	475 570	Diesel motor	Diesel oil
	No 2	130	230	566	475	" "	
	No 3	130	230	566	475	" "	
	No 4	65	230	283	500	" "	
EMERGENCY							
ROTARY TRANSFORMER							

GENERATOR CABLES.

DESCRIPTION.	KILOWATTS.	CONDUCTORS.		MAXIMUM CURRENT IN AMPERES.		APPROX. LENGTH (lead plus return feet).	INSULATED WITH.	HOW PROTECTED.
		No. in Parallel Per Pole.	Sectional Area or No. and Dia. of Strands. Sq. ins. or sq. mm.	In the Circuit.	Rule.			
MAIN GENERATOR	130	2	185	578	700	49	rubber	lead covered and
" " EQUALISER		1	185		350	49		armoured
	65	1	185	289	350	49	"	"
		1	70		192	49	"	"
EMERGENCY GENERATOR								
ROTARY TRANSFORMER: MOTOR	4.65	1	16	54.6	60	33	"	"
" " GENERATOR		1	25		102	83	"	"

MAIN DISTRIBUTION CABLES.

DESCRIPTION.	CONDUCTORS.	No. in 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).	INSULATED WITH.	HOW PROTECTED.
				In the Circuit.	Rule.			
WITCHBOARDS AND SECTION BOARDS	II.	1	35	200	200	116	rubber	lead covered and
	V	1	35	200	200	165	"	armoured
	VI	1	25	60	102	49	"	"
	VIII	1	150	200	305	99	"	"
	X & VIII	1	70	300	300	360	"	"
	XI	1	70 + 25	200	230	280	"	"
	XV	1	150	300	305	66	"	"
	XVI	1	120	260	267	83	"	"
	XVII	1	120	260	267	116	"	"

LIGHTING AND HEATING, ETC., CABLES.

IS	1	16	25	77	128	rubber	lead covered and
ION LIGHTS	1	2.5	10	25		"	armoured
AND HEATING	1	70	200	192	280	"	"
	1	25	100	102	280	"	"
IV + V	1	35	80	125	165	"	"
IV	1	25	60	102	165	"	"
VIII	1	25	80	102	116	"	"
VII	1	10	35	58	116	"	"
X + XII	1	25	80	102	360	"	"
XIV	1	2.5	20	25	33	"	"

MOTOR CABLES.

IMPORTANT MOTORS TO BE ENUMERATED.	No.	B.H.P.	sq. mm	amps.	Rule	feet.		
water pump (seawater)	2	25	1	25	100	102	60	rubber lead covered and
" (fresh water)	2	16	1	16	60	77	43	" armoured
" port service	1	7.5	1	10	35	58	60	"
	1	10	1	10	50	58	23	"
	1	12	1	16	50	77	17	"
	1	16	1	25	80	102	27	"
	1	3	1	2.5	15	25	30	"
	1	3						"
lub. oil pump	1	10	1	10	50	58	46	"
ice fuel oil pump	1	10	1	10	50	58	27	"
separator	1	2.5	1	2.5	15	25	27	"
enser	2	75/100	1	185	350	350	116	"
oling water pump	1	8.5	1	10	35	58	83	"
	3	8.5		10	35	58	23	"
fan.	1	19	1	25	60	102	17	"
"	1	19	1	25	60	102	50	"
"	2	26	1	35	80	125	26	"
frig.	1	7	1	10	35	58	33	"
	1	10	1	10	50	80	50	"
otor	1	4	1	4	25	33	50	"
	1	45	1	50	250	262	27	"
es	8	25	1	16	100	104	26	"
ar	1	5	1	10	25	58	198	"

The Electrical Equipment is installed in accordance with the approved plans and the requirements of the Rules. of G
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

COMPASSES.

Minimum distance between electric generators or motors and standard compass

approx. 25 feet

" 20 feet

Minimum distance between electric generators or motors and steering compass

The nearest cables to the compasses are as follows:—

A cable carrying 10. Ampères 10. feet from standard compass 8. feet from steering compass.

A cable carrying 0.5 Ampères 6. feet from standard compass 1. feet from steering compass.

A cable carrying 0.2 Ampères .5 feet from standard compass .5 feet from steering compass. (compass lig

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

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 steering be

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. Yes

If so, state name of vessel

"EMPIRE MONDACH" ex

Plans. Are approved plans forwarded herewith as fitted

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.)

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

Total Capacity of Generators 455. 545 Kilowatts.

The amount of Fee ... £ 71 : 17 : 6

Travelling Expenses (if any) £ :

When applied for,

When received from London

Surveyor to Lloyd's Register of Shipping

Committee's Minute

Assigned

See F.E. mch. rpt.



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