

REPORT ON ELECTRIC FITTINGS.

(OTHER THAN FOR THE PROPULSION OF THE VESSEL)

Received at London Office DEC 1930

Date of writing Report 19 When handed in at Local Office *Nov 28 1930* Port of *Trieste*

No. in Survey held at *Monfalcone* Date, First Survey *Oct 3* Last Survey *Nov 20 1930*
Reg. Book. (Number of Visits *1*)

91057 on the *M/S J. A. Mowinkel*

Tons { Gross *12323*
Net *6971*

Built at *Monfalcone* By whom built *Cant. Arm. dell' Adriatico* Card No. *236* When built *1930*

Owners *Baltich-Amerik. Petroleum Import* Port belonging to *Tanjig*

Electric Light Installation fitted by *Cantieri Rimiti dell' Adriatico* Contract No. When fitted *1930*

Is the Vessel fitted for carrying Petroleum in bulk *yes see letter 1.8.30 and 5.9.30*

System of Distribution *Two wire*

Pressure of supply for Lighting *110* volts, Heating *220* volts, Power *220* volts.

Direct or Alternating Current, Lighting *Direct* Power *Direct*

If alternating current system, state frequency of periods per second *—*

Has the Automatic Governor been tested and found efficient when the whole load is suddenly thrown on or off *yes*

Generators, do they comply with the requirements regarding rating *yes*, are they compound wound *yes*

are they over compounded 5 per cent. *yes*, if not compound wound state distance between each generator *—*

Where more than one generator is fitted are they arranged to run in parallel *no*, is an adjustable regulating resistance fitted in series with each shunt field *yes*

Are all terminals accessible, clearly marked, and furnished with sockets *yes*, are they so spaced or shielded that they cannot be accidentally earthed, short circuited, or touched *yes*

Are the lubricating arrangements of the generators as per Rule *yes*

Position of Generators *One port one starboard side in E. R.*

is the ventilation in way of the generators satisfactory *yes*, are they clear of all inflammable material *yes*

if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the generators

— and *—*, are the generators protected from mechanical injury and damage from water, steam or oil *yes*

are their axes of rotation fore and aft *yes*

Earthing, are the bedplates and frames of the generating plant efficiently earthed *yes* are the prime movers and their respective generators in metallic contact *yes*

Main Switch Boards, where placed *in Engine room*

If the generators and main switchboard are not placed in the same compartment, is each generator provided with a fuse on each insulated pole as near as possible to the terminals of the generator, additional to that provided on the main switchboard *—*

Switchboards, are they placed in accessible positions, free from inflammable gases and acid fumes *yes*

are they protected from mechanical injury and damage from water, steam or oil *yes*, if situated near unprotected woodwork or other combustible material, state distance of same horizontally from or vertically above the switchboards *—* and *—*

are they constructed wholly of durable, non-ignitable non-absorbent materials *yes (Slate)*, is all insulation of high dielectric strength and of permanently high insulation resistance *yes*

if semi-insulating material is used, are all conducting parts insulated from the slab with mica or micanite or other non-hygroscopic insulating material, and the slab similarly insulated from its framework *yes*

and is the frame effectively earthed *yes*. Are the fittings as per Rule regarding:— spacing or shielding of live parts

yes, accessibility of all parts *yes*, absence of fuses on back of board *see letter 1.8.30* proportion of omnibus bars *yes*

yes, individual fuses to voltmeter, pilot or earth lamp *yes*, connections of switches *yes*

Main Switchgear, description of switchgear for each generator and each outgoing circuit, and arrangement of equalizer switches *Double pole*

link switches with fuse to each pole for generators and for all outgoing circuits (Change over switch)

Instruments on main switchboard *4* ammeters *7* voltmeters *—* synchronising device for paralleling purposes.

Earth Testing, state what means are provided at the main switchboard for indicating the state of the insulation of the system *Lamp connections*

tions

Switches, Circuit Breakers and Fusible Cut-outs, do these comply with the requirements of the Rules *yes*

Joint Boxes Section and Distribution Boards, is the construction, protection, insulation, material, and position of these as per rule *yes*



Cables: Single, twin, concentric, or multicore single are the cables insulated and protected as per Tables IV or V of the Rules yes

Fall of Pressure, state maximum between bus bars and any point of the installation under maximum load yes

Cable Sockets and other connections, are the ends of all cables having a sectional area of 0.04 square inch and above provided with soldering sockets yes

Paper Insulated Cables, If cables are paper covered, is the dielectric at the exposed ends of the conductor protected from moisture by being suitably sealed with insulating compound —

Cable Runs, are the cables fixed as far as possible in accessible positions not exposed to drip or accumulation of water or oil, or to high temperature from boilers, steam pipes, uptakes or other hot objects, or to avoidable risk of mechanical damage yes

Support and Protection of Cables, state how the cables are supported and protected Lead covered and braided supports fed by clips; part in tubes
If cables are run in wood casings, are the casings and caps secured by screws —, are the cap screws of brass —, are the cables run in separate grooves —. If armoured and lead covered cables are secured by metal clips, are the clips spaced as per Table VIII yes

Refrigerated Chambers, if lights are fitted, are the cables and fittings in accordance with the special requirements none

Joints in Cables, state if any, and how made, insulated, and protected none

Watertight Glands and Deck Tubes, are all cables passing through decks and watertight bulkheads provided with deck tubes or watertight glands yes

Bushes in Beams and Non-watertight Partitions, where unarmoured cables pass through beams and non-watertight partitions, are the holes efficiently bushed yes state the material of which the bushes are made lead

Earthing Connections, state what earthing connections are fitted and their respective sectional areas —, are their connections made as per Rule —

Alternative Lighting, are the groups of lights in the propelling machinery space arranged as per Rule yes

Emergency Supply, state position and method of control of the emergency supply and how the generator is driven none

Navigation Lamps, are these separately wired yes, controlled by separate switch and separate fuses yes, are the fuses double pole yes, are the switches and fuses grouped in a position accessible only to the officers on watch yes, has each navigation lamp an automatic indicator as per Rule yes

Secondary Batteries, are they constructed and fitted as per Rule none

Fittings, are all fittings on weather decks, in stokeholds and engine rooms and wherever exposed to drip or condensed moisture, watertight yes
are any fittings placed in spaces in which goods are liable to be stacked in close proximity to them; if so, how are they protected iron plate
are any fittings placed in spaces where inflammable or explosive dust or gases are liable to be present, if so, how are they protected —, how are the cables led —, where are the controlling switches situated —

Searchlight Lamps, No. of one, whether fixed or portable fixed, are their fittings as per Rule yes

Arc Lamps, other than searchlight lamps, No. of —, are their live parts insulated from the frame or case —, are their fittings as per Rule —

Motors, are their working parts readily accessible yes, are the coils self-contained and readily removable for replacement yes, are the brushes, brush holders, terminals and lubricating arrangements as per Rule yes, are the motors placed in well-ventilated compartments in which inflammable gases cannot accumulate and clear of all inflammable material yes, are they protected from mechanical injury and damage from water, steam or oil yes, are their axes of rotation fore and aft yes, if situated near unprotected woodwork or other combustible material, are the motors of the totally enclosed, pipe ventilated, forced draught, drip or flame proof type —, if not of this type, state distance of the combustible material horizontally or vertically above the motors — and —

Control Gear and Resistances, are the generator field and motor speed regulators, starters and controllers constructed and fitted as per Rule yes

Lightning Conductors, where lightning conductors are required, are these fitted as per Rule steel marks

Ships carrying Oil having a Flash Point less than 150° F. Have the special requirements of the Rules been complied with regarding switches, joint boxes, section and distribution boards, protection of cables, method of distribution, lead of cables, lights and fittings yes
If portable lamps for use in dangerous spaces are supplied, are they of a type approved by the Home Office —

The steam oil driven set replaced by steam driven 11.41 100kw
by 41888
Port set removed 5.36 replaced by set by Smith
Dry oil by oil (Krupp)

PARTICULARS OF GENERATING PLANT.

DESCRIPTION OF GENERATOR.	No. of	RATED AT				DRIVEN BY	WHERE DRIVEN BY AN INTERNAL COMBUSTION ENGINE.	
		Kilowatts.	Volts.	Amps.	Revs. per Min.		Fuel Used.	Flash Point of Fuel.
MAIN ...	2	100	220	435	270	Diesel Engine	Diesel oil	
AUXILIARY ...	1	45	220	200	500	Steam Engine		
EMERGENCY ...								
ROTARY TRANSFORMER	2	25/38 ^{HP}	110/220	227/146	1600	Electric Motor		

GENERATOR, LIGHTING AND HEATING CONDUCTORS.

No.	DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
	MAIN GENERATOR ...	2	181x2	37	2.5	435	231x2	40	rubber	Lead covered (braided)
	EQUALISER CONNECTIONS ...									
	AUXILIARY GENERATOR ...	1	147	37	2.25	200	202	40	"	"
	EMERGENCY GENERATOR ...									
	ROTARY TRANSFORMER MOTOR ...	1	100	37	1.85	146	155	20	"	"
	ROTARY TRANSFORMER GENERATOR ...	1	181	37	2.5	227	231	20	"	"
	1 ENGINE ROOM...S.B. ...	1	4.5	7	0.90	23	24	15	"	"
	2 BOILER ROOM...S.B. ...	1	4.5	7	0.90	23	24	40	"	"
	AUXILIARY SWITCHBOARDS in									
	3 Poop Deck cabins	1	21.5	19	1.2	51	57	120	"	"
	4 Poop Deck Crew	1	21.5	19	1.2	57	57	90	"	"
	6 Bridge Deck	1	2.5	19	1.3	22	64	530	"	"
	7 Bridge Deck	1	3.8	19	1.6	29	83	500	"	"
	8 Shore connection	1	51	19	1.85	100	120	350	"	"
	5 ACCOMMODATION Boat Deck	1	2.5	19	1.3	24	64	50	"	"
	WIRELESS ...	1	11.5	7	1.4	14	44	550	"	"
	SEARCHLIGHT ...	1	14	7	1.6	9	46	600	"	"
	5 MASTHEAD LIGHT ...	1	1.3	3	0.75	0.22	7.8	800	"	"
	5 SIDE LIGHTS ...	1	1.3	3	0.75	0.22	7.8	500	"	"
	5 COMPASS LIGHTS ...	1	0.97	1	1.1	0.17	6		"	"
	5 POOP LIGHTS ...	1	1.3	3	0.75	0.26	7.8	150	"	"
	CARGO LIGHTS ...								"	"
	ARC LAMPS ...								"	"
	HEATERS in Galley ...								"	"

MOTOR CONDUCTORS.

No.	DESCRIPTION.	CONDUCTORS.		COMPOSITION OF STRAND.		TOTAL MAXIMUM CURRENT AMPERES.		Approximate Length (Lead and Return) Feet.	Insulated with	HOW PROTECTED.
		No. per Pole.	Total Effective Area per Pole Sq. Ins.	No.	Diameter.	In Circuit.	Rule.			
	58 BALLAST PUMP ...									
	1 MAIN BILGE LINE PUMPS ...	1	14	7	1.6	44	46	30	"	"
	GENERAL SERVICE PUMP ...	1	60	19	2	104	113	40	"	"
	5 REFRIGERATOR PUMP ...	1	1.3	3	0.75	4	7.8	120	"	"
	1 SANITARY PUMP ...	1	4.5	7	0.90	12	24	35	"	"
	CIRC. SEA WATER PUMPS ...	2	147	37	2.25	192	202	60	"	"
	CIRC. FRESH WATER PUMPS ...	1	128	37	2.1	173	184	70	"	"
	5 AMMONIA COMPRESSOR ...	1	4.5	7	0.9	20	24	120	"	"
	1 FRESH WATER PUMP ...	1	4.5	7	0.9	7	24	40	"	"
	2 ENGINE TURNING GEAR ...	2	6.5	7	1.1	30	31	150	"	"
	LUBRIC. OIL Purified ENGINE REVERSING GEAR ...	1	4.5	7	0.9	8	24	175	"	"
	3 LUBRICATING OIL PUMPS ...	1	14	7	1.6	42	46	170	"	"
	1 OIL FUEL TRANSFER PUMP ...	2	4.5	7	0.9	10	24	40	"	"
	WINDLASS ...									
	WINCHES, FORWARD ...									
	To Fuse Board in the Galley	7	242	61	2.25	252	271	150	"	"
	WINCHES, AFT ...									
	Shore Connect. 220V	—	147	37	2.25	200	202	—	"	"
	STEERING GEAR—									
	1/2 h.r. (a) MOTOR GENERATOR ...	2	7.5	37	1.6	154	156	40	"	"
	" (b) MAIN MOTOR ...	1	7.5	37	1.6	150	156	160	"	"
	6 WORKSHOP MOTORS ...	4	2x4.5	7x3	0.9x0.75	12x4	24x8	80	"	"
	4 VENTILATING FANS ...	2	4.5	7	0.9	12	24	150	"	"
	To Fuse Board No. 1	5	51	19	1.85	83	120	20	"	"
	To Fuse Board No. 2	2	2.5	19	1.3	60	64	150	"	"
	To Fuse Board No. 3	2	2.5	19	1.3	50	64	160	"	"
	To Fuse Board No. 4	2	6.5	7	1.1	24	31	130	"	"
	To Fuse Board No. 5	2	11.5	7	1.4	24	44	120	"	"
	To Fuse Board No. 6	4	11.5	7	1.4	32	44	70	"	"

All Conductors are of annealed copper conforming to British Standard Specification No. 7.
 The Insulated Conductors are guaranteed to withstand the immersion and resistance tests specified in the Rules.
 The foregoing is a correct description.

Cantieri Riuniti Dell' Adriatico
 GANTIERE MONTALCONE
ing. Federico Bartuoli Electrical Engineers. Date _____

COMPASSES.

Distance between electric generators or motors and standard compass 270'

Distance between electric generators or motors and steering compass 270'

The nearest cables to the compasses are as follows:—

A cable carrying 9 Ampères 15 feet from standard compass 12 feet from steering compass.

A cable carrying 3 Ampères 15 feet from standard compass 12 feet from steering compass.

A cable carrying _____ Ampères _____ feet from standard compass _____ feet from steering compass.

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

Has the effect of switching on and off circuits, motors and other electro-magnetic apparatus within the vicinity of the compasses been noted yes

The maximum deviation due to electric currents was found to be none degrees on _____ course in the case of the standard compass, and _____ degrees on _____ course in the case of the steering compass.

Cantieri Riuniti Dell' Adriatico
 GANTIERE MONTALCONE
ing. Federico Bartuoli Builder's Signature. Date _____

Is this installation a duplicate of a previous case no If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c. _____)

This installation have been made under special survey in accordance with the Rules and Secretary letters. It has been tested as per Sect. 16 and found satisfactory.

It is submitted that
 this vessel is eligible for
 THE RECORD *Elec. Light*
DM. 4/18/30.

Total Capacity of Generators 200 ~~245~~ Kilowatts.

The amount of Fee ... Lire 3499 } When applied for, 27/11/30

Travelling Expenses (if any) £ ✓ : } When received, 20/11/31

R. Luparini
 Surveyor to Lloyd's Register of Shipping

Committee's Minute _____

Assigned Elec Lt

Im. 12.28.—Transfer. (The Surveyors are requested not to write on or below the space for Committee's Minute.)